KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Robert Prendergast

1. Refer to Kentucky-American's Response to Staff's First Request for Information (Staff's First Request), Item 1, KAWC Rate Case – KAW O&M Growth Factor Workpaper.xlsx.

   a. Provide the budgeted and actuals for each expense category listed in column A for the years 2021-2024.

   b. Confirm that Kentucky-American uses a Three-Year Average Operating & Maintenance Growth Factor to calculate its budget for each year. If confirmed, provide the years used. If not confirmed, explain how the growth factor was calculated.

   c. Explain why Kentucky-American chose to use a Three-Year Average Operating & Maintenance Growth Factor.

Response:

a. Please see KAW_R_PSCDR2_NUM_001_070725_Attachment.
b. The Company does not use the specific Three-Year Average O&M Growth Factor applied in the case in its budgeting process. However, the Company utilizes a similar approach in calculating its budget for each year. The Company utilizes a 3 or 5 Year historical period analysis dependent on individual expense categories to calculate its budget. The budgeting process also includes coordination with Operations to add any anticipated spend and remove any non-recurring or dated expenses, as well as coordination with the rate case filing so that the budgeted expenses are materially the same.
c. In the PSC Order for Case No. 2023-00191, the Commission stated, "The Commission has previously held a general CPI inflation factor is not an appropriate forecasting method and even the granular inflation factors are not specific to Kentucky American's experience. Use of general inflation factors fails to satisfy Kentucky American's burden that its proposed rates are just and reasonable, as they are not, in and of themselves, reflective of Kentucky-American's costs. The Commission expects a utility such as Kentucky-American, with the shared resources of American Water, to develop and implement more robust forecasting methodologies for expenses than general CPI inflation factors with a review of specific factors impacting costs."
   The use of a Three-Year Average O&M Growth Factor based on Kentucky-American's historical costs would meet the Commission's criteria of being reflective of the Company's actual costs and price increases that the Company has seen in the past, while also utilizing an approach the resembles the Company's budgeting process.

Kentucky American Water Company
Case No. 2025-00122
KAW_R_PSCDR2_NUM001_Attachment

	2021		2022		2023		2024	
in 000's	**Actual**	**Budget**	**Actual**	**Budget**	**Actual**	**Budget**	**Actual**	**Budget**
Support Services	$12,044	$12,224	$11,450	$13,305	$11,978	$12,465	$13,278	$12,282
Contracted services	$930	$737	$831	$660	$1,584	$803	$1,672	$1,409
Building maintenance and services	$845	$680	$852	$667	$1,094	$778	$1,160	$734
Telecommunication expenses	$235	$259	$256	$254	$274	$220	$351	$245
Office supplies and services	$228	$115	$293	$92	$231	$145	$224	$174
Employee related expense	$84	$46	$347	$88	$127	$104	$122	$51
Miscellaneous expenses	$994	$861	$723	$327	$1,239	$159	$791	$278
Rents	$30	$14	$44	$22	$46	$28	$59	$29
Customer accounting, other	$132	$136	$122	$134	$111	$129	$104	$567
Maintenance supplies and services	$2,101	$1,866	$2,171	$1,613	$2,878	$1,517	$2,736	$2,104
Total	**$17,623**	**$16,937**	**$17,088**	**$17,162**	**$19,560**	**$16,347**	**$20,497**	**$17,872**

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Michi Chao

2. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – Miscellaneous Expense Exhibit.xlsx. Explain why Kentucky-American is applying growth factor adjustments to negative amounts for Pumping and Customer Education Communication – Conservation.

Response:

Kentucky-American did not forecast Miscellaneous Expense at a detail transaction level therefore accounts within Miscellaneous Expense having negative amounts included the growth factor adjustment at the Miscellaneous Expense level.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Michi Chao

3. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – Office Supplies Exhibit.xlsx.

   a. Explain the $8,333 adjustment to Credit Line Fees.

   b. Explain why Kentucky-American is applying a Growth Factor to the Software Licenses expense if Kentucky-American has an agreement for $83,790 a year. Provide the agreement for the Software License as part of the response.

Response:

a. The credit line adjustment is to normalize projections for the full year 2025.

b. Please refer to KAW_R_AGDR1_NUM134 for a detailed response to Software Licenses. Please see KAW_R_AGDR1_NUM134_070725_Attachment for ARCOS agreement.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Robert Prendergast

4. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – Employee Related Expense.xlsx. Explain the $25,855 reallocation adjustment.

Response:

The Company's 5-year average for relocation expense is $51,709. The $25,855 adjustment to relocation expense manually adjusts the first half of the base year for the relocation expense that we would expect to incur based on the average of historical actuals.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Robert Prendergast

5. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – Fuel and Power Exhibit.xlsx. Explain how Kentucky-American calculated a 6.5 percent growth factor.

Response:

The 6.5 percent growth factor is based on the percentage bill increase from Kentucky Utilities Company (KU) approved by the Commission in Case No. 2020-00349.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Robert Prendergast

6. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – IOTG Exhibit.xlsx. Explain how Kentucky-American calculated the projected annual increases for its insurance policies.

Response:

The Company consults with their insurance brokers annually to determine projected increases. Projected annual increases were attributable to changes in market conditions and the underlying exposure and losses.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Michi Chao and Dominic DeGrazia

7. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – Maintenance Supplies & Services Exhibit.xlsx.

   a. Explain the $(13,514) adjustment to Deferred Maintenance – Transmission and Distribution.

   b. Identity and explain the equipment and services received for the $100,000 associated with the safety electrical mandate, $75,000 associated with the incline elevator care repair, and $50,000 associated with the UV treatment equipment.

Response:

a. The ($13,514) adjustment to Deferred Maintenance - Transmission and Distribution reflects a consolidated update for the 3 deferred maintenance amortization accounts (62510000, 62512300, and 62512400). The deferred maintenance amortization schedule consists of individual tank painting projects with specific terms and amortization amounts, therefore an adjustment is required to adhere to the amortization plans.

b. These projected expenses are related to contracted services for the installation, calibration, preventative maintenance and repair of critical water treatment assets.

   i. The estimated expense for repair and maintenance of medium and high voltage electrical equipment critical to the operation of the three treatment plants and pumping stations include substations, switchgear, motor control centers, and other electrical equipment with voltages of 4160 KVA and greater that require a level of worker certification and safety practices above and beyond those available within the current in-house workforce.
   ii. The estimated expense for the third-party repair and maintenance of the incline elevator located at the KRS1 water treatment plant is necessary to access the KRS1 Kentucky River intake that is nearly 400 feet below the existing water treatment plant. The elevator is a complex assembly of mechanical, hydraulic, electrical, and computerized controls that require constant maintenance to operate safely. Additionally, the equipment is located in an external environment, susceptible to extreme weather conditions.
   iii. The estimated expense for preventative maintenance of the newly constructed ultraviolet disinfection systems at the KRS2 and RRS water treatment plants is highly complex and can only be performed by the equipment manufacturer.

This maintenance is critical to the UV system operation and validation process necessary to meet the new Long Term Enhanced Surface Water Treatment Rule requirements for the disinfection of Cryptosporidium.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Michi Chao

8. Refer to Kentucky-American's Response to Staff's First Request, Item 1, KAWC 2025 Rate Case – Rents Exhibit.xlsx. Explain the $6,748 in adjustments to the base year rental accounts.

Response:

For the Rents Exhibit, the $6,748 adjustments were made to the base year to reflect what KAWC would normally see in a given year. The Rents-Equipment – Water Treatment account had a credit for the first half of the base year, and that account is normally zero for the year. The Rents Equipment - Admin & General adjustment is to bring that expense line item to a 3-year average.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Robert Prendergast

9. Confirm if Kentucky-American is making an adjustment pursuant to 807 KAR 5:066, Section 6(3), for expenses associated with water loss over 15 percent. If confirmed, describe where the adjustment is in the record. If not confirmed, explain why no adjustment is being made.

Response:

KAWC recognizes the applicability of the cited regulation and that the Commission denied KAWC's request for a deviation from the cited regulation in KAWC's last rate case. Having said that, the regulation itself does not require a utility to make an adjustment for expenses associated with unaccounted for water loss over 15 percent in its initial filing. Thus, KAWC did not do so in order to reflect the full amount of its production expenses.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Ann Bulkley

10. Refer to the Direct Testimony of Ann Bulkley (Bulkley Direct Testimony), generally.

    a. Provide an electronic copy of the return on equity (ROE) workpapers in Excel spreadsheet format with all formulas, columns, and rows intact and fully accessible.

    b. Provide each of the Value Line Investment Survey company profile sheets supporting the return on equity analyses.

Response:

    a. Please see KAW_R_PSC_DR2_NUM010_070725_Attachments 1 through 31, some which are marked Confidential, for the requested workpapers. An index is provided below.

Exhibit No./ Figure No.	**KAW_R_PSC_DR 2_NUM010_070725 Attachment #**
Exhibit AEB-1 Summary	1
Exhibit AEB-2 Proxy Selection	2-12
Exhibit AEB-3 CGDCF	13, 14, 15
Exhibit AEB-4 CAPM & ECAPM	13, 16, 17
Exhibit AEB-5 Long Term Beta	1
Exhibit AEB-6 Market Return	1
Exhibit AEB-7 Capital Expenditures	13, 18
Exhibit AEB-8 Regulatory Risk	2-12, 19-24 CONFIDENTIAL
Exhibit AEB-9 Flotation Costs	13, 14, 15, 25
Exhibit AEB-10 Capital Structure	26
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Figure 4: Comparison of Average Authorized ROEs Nationally for Water, Natural Gas Distribution, and Electric Distribution Utilities	29 CONFIDENTIAL
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Figure 8: CAPM Results	1
Figure 9: KAWC Earned v. Authorized ROE	31
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b. Please see KAW_R_PSC_DR2_NUM010_070725_Attachment_13.

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended September 30, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 1-10042

Atmos Energy Corporation

(Exact name of registrant as specified in its charter)

Texas and Virginia	**75-1743247**
(State or other jurisdiction of incorporation or organization)	*(IRS employer identification no.)*

1800 Three Lincoln Centre
5430 LBJ Freeway
Dallas, Texas 75240
(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code:

(972) 934-9227

Securities registered pursuant to Section 12(b) of the Act:

Table of each class	Trading Symbol	Name of each exchange on which registered
Common stock No Par Value	ATO	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☑ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of the common voting stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter, March 31, 2023, was $16,116,913,880.

As of November 6, 2023, the registrant had 148,496,108 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Definitive Proxy Statement to be filed for the Annual Meeting of Shareholders on February 7, 2024 are incorporated by reference into Part III of this report.

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GLOSSARY OF KEY TERMS

AEK	Atmos Energy Kansas Securitization I, LLC
AFUDC	Allowance for funds used during construction
AOCI	Accumulated Other Comprehensive Income
ARM	Annual Rate Mechanism
ATO	Trading symbol for Atmos Energy Corporation common stock on the NYSE
Bcf	Billion cubic feet
COSO	Committee of Sponsoring Organizations of the Treadway Commission
DARR	Dallas Annual Rate Review
EDIT	Excess Deferred Income Taxes
ERISA	Employee Retirement Income Security Act of 1974
FERC	Federal Energy Regulatory Commission
GAAP	Generally Accepted Accounting Principles
GRIP	Gas Reliability Infrastructure Program
GSRS	Gas System Reliability Surcharge
LTIP	1998 Long-Term Incentive Plan
Mcf	Thousand cubic feet
MDWQ	Maximum daily withdrawal quantity
Mid-Tex ATM Cities	Represents a coalition of 47 incorporated cities or approximately 10 percent of the Mid-Tex Division's customers.
Mid-Tex Cities	Represents all incorporated cities other than Dallas and Mid-Tex ATM Cities, or approximately 72 percent of the Mid-Tex Division's customers.
MMcf	Million cubic feet
Moody's	Moody's Investor Service, Inc.
NGPA	Natural Gas Policy Act of 1978
NYSE	New York Stock Exchange
PHMSA	Pipeline and Hazardous Materials Safety Administration
PPA	Pension Protection Act of 2006
PRP	Pipeline Replacement Program
RRC	Railroad Commission of Texas
RRM	Rate Review Mechanism
RSC	Rate Stabilization Clause
S&P	Standard & Poor's Corporation
SAVE	Steps to Advance Virginia Energy
SEC	United States Securities and Exchange Commission
Securitized Utility Tariff Bonds	Series 2023-A Senior Secured Securitized Utility Tariff Bonds
Securitized Utility Tariff Property	As defined in the financing order issued by the KCC in October 2022
SIP	System Integrity Program
SIR	System Integrity Rider
SOFR	Secured Overnight Financing Rate
SRF	Stable Rate Filing
SSIR	System Safety and Integrity Rider
TCJA	Tax Cuts and Jobs Act of 2017
WNA	Weather Normalization Adjustment

PART I

The terms "we," "our," "us," "Atmos Energy" and the "Company" refer to Atmos Energy Corporation and its subsidiaries, unless the context suggests otherwise.

ITEM 1. ***Business.***

Overview and Strategy

Atmos Energy Corporation, headquartered in Dallas, Texas, and incorporated in Texas and Virginia, is the country's largest natural-gas-only distributor based on number of customers. We safely deliver reliable, efficient and abundant natural gas through regulated sales and transportation arrangements to over 3.3 million residential, commercial, public authority and industrial customers in eight states located primarily in the South. We also operate one of the largest intrastate pipelines in Texas based on miles of pipe.

Atmos Energy's vision is to be the safest provider of natural gas services. We will be recognized for exceptional customer service, for being a great employer and for achieving superior financial results.

Since 2011, our operating strategy has focused on modernizing our business and infrastructure while reducing regulatory lag. This operating strategy supports continued investment in safety, innovation, environmental sustainability and our communities.

Operating Segments

As of September 30, 2023, we manage and review our consolidated operations through the following reportable segments:

- The *distribution segment* is primarily comprised of our regulated natural gas distribution and related sales operations in eight states.
- The *pipeline and storage segment* is comprised primarily of the pipeline and storage operations of our Atmos Pipeline-Texas division and our natural gas transmission operations in Louisiana.

Distribution Segment Overview

The following table summarizes key information about our six regulated natural gas distribution divisions, presented in order of total rate base.

Division	Service Areas	Communities Served	Customer Meters
Mid-Tex	Texas, including the Dallas/Fort Worth Metroplex	550	1,856,356
Kentucky/Mid-States	Kentucky	220	185,630
	Tennessee		165,267
	Virginia		25,083
Louisiana	Louisiana	270	378,483
West Texas	Amarillo, Lubbock, Midland	80	330,490
Mississippi	Mississippi	110	273,586
Colorado-Kansas	Colorado	170	129,197
	Kansas		142,292

We operate in our service areas under terms of non-exclusive franchise agreements granted by the various cities and towns that we serve. At September 30, 2023, we held 1,021 franchises having terms generally ranging from five to 35 years. A significant number of our franchises expire each year, which require renewal prior to the end of their terms. Historically, we have successfully renewed these franchises and believe that we will continue to be able to renew our franchises as they expire.

Revenues in this operating segment are established by regulatory authorities in the states in which we operate. These rates are intended to be sufficient to cover the costs of conducting business, including a reasonable return on invested capital. In addition, we transport natural gas for others through our distribution systems.

Rates established by regulatory authorities often include cost adjustment mechanisms for costs that (i) are subject to significant price fluctuations compared to our other costs, (ii) represent a large component of our cost of service and (iii) are generally outside our control.

Purchased gas cost adjustment mechanisms represent a traditional and common form of cost adjustment mechanism. Purchased gas cost adjustment mechanisms provide a method of recovering purchased gas costs on an ongoing basis without filing a rate case because they provide a dollar-for-dollar offset to increases or decreases in the cost of natural gas. Therefore, although substantially all of our distribution operating revenues fluctuate with the cost of gas that we purchase, distribution operating income is generally not affected by fluctuations in the cost of gas.

Additionally, some jurisdictions have performance-based ratemaking adjustments to provide incentives to minimize purchased gas costs through improved storage management and use of financial instruments to reduce volatility in gas costs. Under the performance-based ratemaking adjustments, purchased gas costs savings are shared between the Company and its customers.

Our supply of natural gas is provided by a variety of suppliers, including independent producers and marketers. The gas is delivered into our systems by various pipeline companies, withdrawals of gas from proprietary and contracted storage assets and base load and peaking arrangements, as needed.

Supply arrangements consist of both base load and peaking quantities and are contracted from our suppliers on a firm basis with various terms at market prices. Base load quantities are those that flow at a constant level throughout the month and peaking quantities provide the flexibility to change daily quantities to match increases or decreases in requirements related to weather conditions.

Except for local production purchases, we select our natural gas suppliers through a competitive bidding process by periodically requesting proposals from suppliers. We select these suppliers based on their ability to reliably deliver gas supply to our designated firm pipeline receipt points at the lowest reasonable cost. Major suppliers during fiscal 2023 were Cima Energy, LP, ConocoPhillips Company, EnLink Gas Marketing LP, Enterprise Navitas Midstream Midland Basin LLC, Hartree Partners, L.P., Sequent Energy Management LLC, Symmetry Energy Solutions, LLC, Targa Gas Marketing LLC, Texla Energy Management, Inc. and Twin Eagle Resource Management, LLC.

The combination of base load and peaking agreements, coupled with the withdrawal of gas held in storage, allows us the flexibility to adjust to changes in weather, which minimizes our need to enter into long-term firm commitments. We estimate our peak-day availability of natural gas supply to be approximately 5.3 Bcf. The peak-day demand for our distribution operations in fiscal 2023 was on December 23, 2022, when sales to customers reached approximately 4.2 Bcf.

Currently, our distribution divisions utilize 35 pipeline transportation companies, both interstate and intrastate, to transport our natural gas. The pipeline transportation agreements are firm and many of them have “pipeline no-notice” storage service, which provides for daily balancing between system requirements and nominated flowing supplies. These agreements have been negotiated with the shortest term necessary while still maintaining our right of first refusal. The natural gas supply for our Mid-Tex Division is delivered primarily by our APT Division.

To maintain our deliveries to high priority customers, we have the ability, and have exercised our right, to interrupt or curtail service to certain customers pursuant to contracts and applicable state regulations or statutes. Our customers’ demand on our system is not necessarily indicative of our ability to meet current or anticipated market demands or immediate delivery requirements because of factors such as the physical limitations of gathering, storage and transmission systems, the duration and severity of cold weather, the availability of gas reserves from our suppliers, the ability to purchase additional supplies on a short-term basis and actions by federal and state regulatory authorities. Interruption and curtailment rights provide us the flexibility to meet the human-needs requirements of our customers on a reliable basis. Priority allocations imposed by federal and state regulatory agencies, as well as other factors beyond our control, may affect our ability to meet the demands of some of our customers.

Pipeline and Storage Segment Overview

Our pipeline and storage segment consists of the pipeline and storage operations of APT and our natural gas transmission operations in Louisiana. APT is one of the largest intrastate pipeline operations in Texas with a heavy concentration in the established natural gas-producing areas of central, northern and eastern Texas, extending into or near the major producing areas of the Barnett Shale, the Texas Gulf Coast and the Permian Basin of West Texas. Through its system, APT provides transportation and storage services to our Mid-Tex Division, other third party local distribution companies, industrial and electric generation customers, marketers and producers. As part of its pipeline operations, APT owns and operates five underground storage facilities in Texas.

Revenues earned from transportation and storage services for APT are subject to traditional ratemaking governed by the RRC. Rates are updated through periodic filings made under Texas’ GRIP. GRIP allows us to include in our rate base annually approved capital costs incurred in the prior calendar year provided that we file a complete rate case at least once every five

years; the most recent of which was filed in May 2023. APT's existing regulatory mechanisms allow certain transportation and storage services to be provided under market-based rates.

Our natural gas transmission operations in Louisiana are comprised of a 21-mile pipeline located in the New Orleans, Louisiana area that is primarily used to aggregate gas supply for our distribution division in Louisiana under a long-term contract and, on a more limited basis, to third parties. The demand fee charged to our Louisiana distribution division for these services is subject to regulatory approval by the Louisiana Public Service Commission. We also manage two asset management plans that serve distribution affiliates of the Company, which have been approved by applicable state regulatory commissions. Generally, these asset management plans require us to share with our distribution customers a significant portion of the cost savings earned from these arrangements.

Ratemaking Activity

Overview

The method of determining regulated rates varies among the states in which our regulated businesses operate. The regulatory authorities have the responsibility of ensuring that utilities in their jurisdictions operate in the best interests of customers while providing utility companies the opportunity to earn a reasonable return on their investment. Generally, each regulatory authority reviews rate requests and establishes a rate structure intended to generate revenue sufficient to cover the costs of conducting business, including a reasonable return on invested capital.

Our rate strategy focuses on reducing or eliminating regulatory lag, obtaining adequate returns and providing stable, predictable margins, which benefit both our customers and the Company. As a result of our ratemaking efforts in recent years, Atmos Energy has:

- Formula rate mechanisms in place in four states that provide for an annual rate review and adjustment to rates.
- Infrastructure programs in place in all of our states that provide for an annual adjustment to rates for qualifying capital expenditures. Through our annual formula rate mechanisms and infrastructure programs, we have the ability to recover approximately 90 percent of our capital expenditures within six months and substantially all of our capital expenditures within twelve months.
- Authorization in tariffs, statute or commission rules that allows us to defer certain elements of our cost of service such as depreciation, ad valorem taxes and pension costs, until they are included in rates.
- WNA mechanisms in seven states that serve to minimize the effects of weather on approximately 96 percent of our distribution residential and commercial revenues.
- The ability to recover the gas cost portion of bad debts in five states which represents approximately 80 percent of our distribution residential and commercial revenues.

The following tables provides a jurisdictional rate summary for our regulated operations as of September 30, 2023. This information is for regulatory purposes only and may not be representative of our actual financial position.

Division	Jurisdiction	Effective Date of Last Rate/GRIP Action	Rate Base (thousands)[1]	Authorized Rate of Return[1]	Authorized Debt/ Equity Ratio[1]	Authorized Return on Equity[1]
Atmos Pipeline — Texas	Texas[5]	05/17/2023	$4,055,375	8.87%	47/53	11.50%
Colorado-Kansas	Colorado	05/14/2023	229,565	7.00%	42-45/55-58	9.3% - 9.6%
	Colorado SSIR	01/01/2023	31,993	7.00%	42-45/55-58	9.3% - 9.6%
	Kansas	05/09/2023	295,070	(4)	(4)	(4)
	Kansas SIP	04/01/2023	13,270	7.03%	44/56	9.10%
Kentucky/Mid-States	Kentucky	05/20/2022	568,506	6.82%	45/55	9.23%
	Kentucky-PRP	10/02/2022	14,375	6.94%	45/55	9.45%
	Tennessee	06/01/2023	499,447	7.58%	38/62	9.80%
	Virginia	04/01/2019	47,827	7.43%	42/58	9.20%
	Virginia-SAVE	10/01/2022	11,753	7.43%	42/58	9.20%
Louisiana	Louisiana	07/01/2023	1,094,373	7.30%	(4)	(4)
Mid-Tex	Mid-Tex Cities[7]	10/01/2022	5,234,981[6]	7.28%	42/58	9.80%
	Mid-Tex ATM Cities	06/09/2023	5,932,535[6]	7.97%	40/60	9.80%
	Mid-Tex Environs	06/01/2023	5,932,542[6]	7.97%	40/60	9.80%
	Mid-Tex — Dallas	09/01/2023	5,904,692[6]	7.43%	40/60	9.80%
Mississippi	Mississippi	11/01/2022	525,348	7.53%	(4)	(4)
	Mississippi - SIR	11/01/2022	390,276	7.53%	(4)	(4)
West Texas	West Texas Cities[8] [10]	10/01/2022	855,328[9]	7.28%	42/58	9.80%
	West Texas - ALDC	06/09/2023	960,622[9]	7.35%	41/59	(4)
	West Texas - Environs	06/01/2023	958,159[9]	7.97%	40/60	9.80%
	West Texas - Triangle	06/01/2023	56,279	7.71%	40/60	9.80%

Division	Jurisdiction	Bad Debt Rider[2]	Formula Rate	Infrastructure Mechanism	Performance Based Rate Program[3]	WNA Period
Atmos Pipeline — Texas	Texas	No	Yes	Yes	N/A	N/A
Colorado-Kansas	Colorado	No	No	Yes	No	N/A
	Kansas	Yes	No	Yes	Yes	October-May
Kentucky/Mid-States	Kentucky	Yes	No	Yes	Yes	November-April
	Tennessee	Yes	Yes	Yes	Yes	October-April
	Virginia	Yes	No	Yes	No	January-December
Louisiana	Louisiana	No	Yes	Yes	No	December-March
Mid-Tex Cities	Texas	Yes	Yes	Yes	No	November-April
Mid-Tex — Dallas	Texas	Yes	Yes	Yes	No	November-April
Mississippi	Mississippi	No	Yes	Yes	No	November-April
West Texas	Texas	Yes	Yes	Yes	No	October-May

(1) The rate base, authorized rate of return, authorized debt/equity ratio and authorized return on equity presented in this table are those from the most recent approved regulatory filing for each jurisdiction. These rate bases, rates of return, debt/equity ratios and returns on equity are not necessarily indicative of current or future rate bases, rates of return or returns on equity.
(2) The bad debt rider allows us to recover from customers the gas cost portion of customer accounts that have been written off.
(3) The performance-based rate program provides incentives to distribution companies to minimize purchased gas costs by allowing the companies and their customers to share the purchased gas costs savings.
(4) A rate base, rate of return, return on equity or debt/equity ratio was not included in the respective state commission's final decision.
(5) On October 24, 2023, APT and the intervening parties in its general rate case filed a Joint Notice of Settlement and Proposed Order. The settlement proposes a rate base of $4.3 billion, an authorized return of 8.49%, a debt/equity ratio of 40/60 and an authorized ROE of 11.45%. We anticipate the settlement agreement will be on the RRC's agenda for its December 13, 2023 meeting.
(6) The Mid-Tex rate base represents a "system-wide," or 100 percent, of the Mid-Tex Division's rate base.
(7) The Mid-Tex Cities approved the Formula Rate Mechanism filing with rates effective October 1, 2023, which included a rate base of $6.1 billion, an authorized return of 7.35%, a debt/equity ratio of 42/58 and an authorized ROE of 9.80%.
(8) The West Texas Cities includes all West Texas Division cities except Amarillo, Lubbock, Dalhart and Channing (ALDC).
(9) The West Texas rate base represents a "system-wide," or 100 percent, of the West Texas Division's rate base.
(10) The West Texas Cities approved the Formula Rate Mechanism filing with rates effective October 1, 2023, which included a rate base of $965.3 million, an authorized return of 7.35%, a debt/equity ratio of 42/58 and an authorized ROE of 9.80%.

Although substantial progress has been made in recent years to improve rate design and recovery of investment across our service areas, we are continuing to seek improvements in rate design to address cost variations and pursue tariffs that reduce regulatory lag associated with investments. Further, potential changes in federal energy policy, federal safety regulations and changing economic conditions will necessitate continued vigilance by the Company and our regulators in meeting the challenges presented by these external factors.

Recent Ratemaking Activity

The amounts described in the following sections represent the annual operating income that was requested or received in each rate filing, which may not necessarily reflect the stated amount referenced in the final order, as certain operating costs may have changed as a result of the commission's or other governmental authority's final ruling. Our ratemaking outcomes include the refund (return) of excess deferred income taxes (EDIT) resulting from previously enacted tax reform legislation and do not reflect the true economic benefit of the outcomes because they do not include the corresponding income tax benefit. The following tables summarize the annualized ratemaking outcomes we implemented in each of the last three fiscal years.

Rate Action	Annual Increase (Decrease) in Operating Income	EDIT Impact	Annual Increase (Decrease) in Operating Income Excluding EDIT
		(In thousands)	
2023 Filings:			
Annual formula rate mechanisms	$ 258,824	$ (1,099)	$ 257,725
Rate case filings	2,940	6,791	9,731
Other ratemaking activity	1,320	—	1,320
Total 2023 Filings	$ 263,084	$ 5,692	$ 268,776
2022 Filings:			
Annual formula rate mechanisms	$ 169,354	$ 33,249	$ 202,603
Rate case filings	5,938	7,379	13,317
Other ratemaking activity	(370)	—	(370)
Total 2022 Filings	$ 174,922	$ 40,628	$ 215,550
2021 Filings:			
Annual formula rate mechanisms	$ 181,459	$ 39,306	$ 220,765
Rate case filings	5,119	1,168	6,287
Other ratemaking activity	(877)	—	(877)
Total 2021 Filings	$ 185,701	$ 40,474	$ 226,175

The following ratemaking efforts seeking $264.6 million in annual operating income were initiated during fiscal 2023 but had not been completed or implemented as of September 30, 2023:

Division	Rate Action	Jurisdiction	Operating Income Requested
			(In thousands)
Atmos Pipeline - Texas	Rate Case	Texas [1]	$ 107,417
Colorado-Kansas	Infrastructure Mechanism	Kansas [2]	1,755
Kentucky/Mid-States	Infrastructure Mechanism	Virginia [3]	672
Kentucky/Mid-States	Infrastructure Mechanism	Kentucky [4]	3,424
Kentucky/Mid-States	Rate Case	Virginia	2,752
Mid-Tex	Formula Rate Mechanism	Mid-Tex Cities [5]	113,768
Mississippi	Infrastructure Mechanism	Mississippi	10,969
Mississippi	Formula Rate Mechanism	Mississippi	13,793
West Texas	Formula Rate Mechanism	West Texas Cities [6]	10,085
			$ 264,635

(1) On October 24, 2023, APT and the intervening parties in its general rate case filed a Joint Notice of Settlement and Proposed Order. We anticipate the settlement agreement will be on the RRC's agenda for its December 13, 2023 meeting. If approved, the settlement would result in a $27.0 million increase in annual operating income, exclusive of the impact of the cessation of $36.9 million in excess deferred income tax refunds, which are substantially offset by a corresponding increase in income taxes. New rates are anticipated to be implemented on January 1, 2024.
(2) The Kansas Corporation Commission approved the GSRS filing on November 2, 2023, with rates effective November 2, 2023.
(3) On September 11, 2023, the State Corporation Commission of Virginia approved a rate increase of $0.6 million effective October 1, 2023.
(4) On September 29, 2023, the Kentucky Public Service Commission approved a rate increase of $2.9 million effective October 1, 2023.
(5) The Mid-Tex Cities approved a rate increase of $98.6 million. New rates were implemented on October 1, 2023.
(6) The West Texas Cities approved a rate increase of $8.6 million. New rates were implemented on October 1, 2023.

Our recent ratemaking activity is discussed in greater detail below.

Annual Formula Rate Mechanisms

As an instrument to reduce regulatory lag, formula rate mechanisms allow us to refresh our rates on an annual basis without filing a formal rate case. However, these filings still involve discovery by the appropriate regulatory authorities prior to the final determination of rates under these mechanisms. We currently have specific infrastructure programs in all of our distribution divisions with tariffs in place to permit the investment associated with these programs to have their surcharge rate adjusted annually to recover approved capital costs incurred in a prior test-year period. The following table summarizes our annual formula rate mechanisms by state.

	Annual Formula Rate Mechanisms	
State	Infrastructure Programs	Formula Rate Mechanisms
Colorado	System Safety and Integrity Rider (SSIR)	—
Kansas	Gas System Reliability Surcharge (GSRS), System Integrity Program (SIP)	—
Kentucky	Pipeline Replacement Program (PRP)	—
Louisiana	(1)	Rate Stabilization Clause (RSC)
Mississippi	System Integrity Rider (SIR)	Stable Rate Filing (SRF)
Tennessee	(1)	Annual Rate Mechanism (ARM)
Texas	Gas Reliability Infrastructure Program (GRIP), (1)	Dallas Annual Rate Review (DARR), Rate Review Mechanism (RRM)
Virginia	Steps to Advance Virginia Energy (SAVE)	—

(1) Infrastructure mechanisms in Texas, Louisiana and Tennessee allow for the deferral of all expenses associated with capital expenditures incurred pursuant to these rules, which primarily consists of interest, depreciation and other taxes (Texas only), until the next rate proceeding (rate case or annual rate filing), at which time investment and costs would be recoverable through base rates.

The following table summarizes our annual formula rate mechanisms with effective dates during the fiscal years ended September 30, 2023, 2022 and 2021:

Division	Jurisdiction	Test Year Ended	Increase (Decrease) in Annual Operating Income	EDIT Impact	Increase (Decrease) in Annual Operating Income Excluding EDIT	Effective Date
				(In thousands)		
2023 Filings:						
Louisiana	Louisiana	12/2022	$ 14,466	$ 17	$ 14,483	07/01/2023
Mid-Tex	DARR [1]	09/2022	17,345	51	17,396	06/14/2023
Mid-Tex	ATM Cities	12/2022	12,825	—	12,825	06/09/2023
West Texas	Amarillo, Lubbock, Dalhart and Channing	12/2022	6,938	—	6,938	06/09/2023
West Texas	Triangle	12/2022	717	—	717	06/01/2023
West Texas	Environs	12/2022	1,332	—	1,332	06/01/2023
Mid-Tex	Environs	12/2022	5,983	—	5,983	06/01/2023
Kentucky/Mid-States	Tennessee ARM	09/2022	14	(1,509)	(1,495)	06/01/2023
Atmos Pipeline - Texas	Texas	12/2022	84,931	—	84,931	05/17/2023
Colorado-Kansas	Kansas SIP	12/2022	772	—	772	04/01/2023
Colorado-Kansas	Colorado SSIR	12/2023	1,971	—	1,971	01/01/2023
Mississippi	Mississippi - SIR	10/2023	8,560	—	8,560	11/01/2022
Mississippi	Mississippi - SRF	10/2023	12,188	778	12,966	11/01/2022
Kentucky/Mid-States	Kentucky PRP	09/2023	1,588	—	1,588	10/02/2022
Mid-Tex	Mid-Tex Cities RRM	12/2021	81,402	(395)	81,007	10/01/2022
West Texas	West Texas Cities RRM	12/2021	7,315	(41)	7,274	10/01/2022
Kentucky/Mid-States	Virginia - SAVE	09/2023	477	—	477	10/01/2022
Total 2023 Filings			$ 258,824	$ (1,099)	$ 257,725	
2022 Filings:						
Kentucky/Mid-States	Tennessee ARM	09/2021	$ 2,466	$ —	$ 2,466	07/01/2022
Louisiana	Louisiana	12/2021	17,650	(10,389)	7,261	07/01/2022
West Texas	Amarillo, Lubbock, Dalhart and Channing	12/2021	6,122	—	6,122	06/11/2022
West Texas	Triangle	12/2021	1,549	—	1,549	06/11/2022
West Texas	Environs	12/2021	1,221	—	1,221	06/11/2022
Mid-Tex	ATM Cities	12/2021	12,815	—	12,815	06/10/2022
Mid-Tex	Environs	12/2021	5,646	—	5,646	06/10/2022
Mid-Tex	DARR [2]	09/2021	13,201	—	13,201	05/25/2022
Atmos Pipeline - Texas	Texas	12/2021	78,750	—	78,750	05/18/2022
Colorado-Kansas	Kansas SIP	12/2021	623	—	623	04/01/2022
Colorado-Kansas	Kansas GSRS	09/2021	1,820	—	1,820	02/01/2022
Colorado-Kansas	Colorado SSIR	12/2022	2,610	—	2,610	01/01/2022
Mid-Tex	Mid-Tex Cities RRM	12/2020	21,673	33,851	55,524	12/01/2021
West Texas	West Texas Cities RRM	12/2020	151	3,347	3,498	12/01/2021
Mississippi	Mississippi - SIR	10/2022	8,354	2,123	10,477	11/01/2021
Mississippi	Mississippi - SRF	10/2022	(5,624)	4,317	(1,307)	11/01/2021
Kentucky/Mid-States	Virginia - SAVE	09/2022	327	—	327	10/01/2021
Total 2022 Filings			$ 169,354	$ 33,249	$ 202,603	

2021 Filings:						
Mid-Tex	Environs	12/2020	$ 4,632	$ —	$ 4,632	09/01/2021
Louisiana	Louisiana	12/2020	(2,407)	24,192	21,785	07/01/2021
Mid-Tex	ATM Cities (3)	12/2020	11,085	—	11,085	06/11/2021
West Texas	Triangle (3)	12/2020	416	—	416	06/11/2021
West Texas	Environs (3)	12/2020	1,267	—	1,267	06/11/2021
Mid-Tex	DARR (3)	09/2020	1,708	15,114	16,822	06/09/2021
Kentucky/Mid-States	Tennessee ARM	09/2020	10,260	—	10,260	06/01/2021
Atmos Pipeline - Texas	Texas	12/2020	43,868	—	43,868	05/11/2021
Colorado-Kansas	Kansas GSRS	09/2020	1,695	—	1,695	02/01/2021
Colorado-Kansas	Colorado SSIR	12/2021	2,366	—	2,366	01/01/2021
Mid-Tex	Mid-Tex Cities RRM	12/2019	82,645	—	82,645	12/01/2020
West Texas	West Texas Cities RRM	12/2019	5,645	—	5,645	12/01/2020
Mississippi	Mississippi - SIR	10/2021	10,556	—	10,556	11/01/2020
Mississippi	Mississippi - SRF	10/2021	5,856	—	5,856	11/01/2020
Kentucky/Mid-States	Virginia - SAVE	09/2021	305	—	305	10/01/2020
Kentucky/Mid-States	Kentucky PRP	09/2021	1,562	—	1,562	10/01/2020
Total 2021 Filings			$ 181,459	$ 39,306	$ 220,765	

(1) The rate increase for this filing was approved based on the effective date herein; however, the new rates were implemented beginning September 1, 2023.
(2) The rate increase for this filing was approved based on the effective date herein; however, the new rates were implemented beginning September 1, 2022.
(3) The rate increases for these filings were approved based on the effective dates herein; however, the new rates were implemented beginning September 1, 2021.

Rate Case Filings

A rate case is a formal request from Atmos Energy to a regulatory authority to increase rates that are charged to customers. Rate cases may also be initiated when the regulatory authorities request us to justify our rates. This process is referred to as a "show cause" action. Adequate rates are intended to provide for recovery of the Company's costs as well as a reasonable rate of return to our shareholders and ensure that we continue to safely deliver reliable, reasonably priced natural gas service to our customers.

The following table summarizes our recent rate case activity during the fiscal years ended September 30, 2023, 2022 and 2021:

Division	State	Increase in Annual Operating Income	EDIT Impact	Increase in Annual Operating Income Excluding EDIT	Effective Date
			(In thousands)		
2023 Rate Case Filings:					
Colorado-Kansas	Colorado	$ 913	$ (54)	$ 859	05/14/2023
Colorado-Kansas	Kansas	2,027	6,845	8,872	05/09/2023
Total 2023 Rate Case Filings		$ 2,940	$ 6,791	$ 9,731	
2022 Rate Case Filings:					
Kentucky/Mid-States	Kentucky (1)	$ 5,938	$ 7,379	$ 13,317	05/20/2022
Total 2022 Rate Case Filings		$ 5,938	$ 7,379	$ 13,317	
2021 Rate Case Filings:					
West Texas (ALDC)	Texas	$ 5,119	$ 1,168	$ 6,287	06/01/2021
Total 2021 Rate Case Filings		$ 5,119	$ 1,168	$ 6,287	

(1) The rate case outcome for Kentucky is inclusive of the fiscal 2022 pipeline replacement program.

Other Ratemaking Activity

The following table summarizes other ratemaking activity during the fiscal years ended September 30, 2023, 2022 and 2021:

Division	Jurisdiction	Rate Activity	Increase (Decrease) in Annual Operating Income	Effective Date
			(In thousands)	
2023 Other Rate Activity:				
Colorado-Kansas	Kansas	Ad Valorem [1]	$ 1,320	02/01/2023
Total 2023 Other Rate Activity			$ 1,320	
2022 Other Rate Activity:				
Colorado-Kansas	Kansas	Ad Valorem [1]	$ (370)	02/01/2022
Total 2022 Other Rate Activity			$ (370)	
2021 Other Rate Activity:				
Colorado-Kansas	Kansas	Ad-Valorem [1]	$ (877)	02/01/2021
Total 2021 Other Rate Activity			$ (877)	

(1) The Ad Valorem filing relates to property taxes that are either over or undercollected compared to the amount included in our Kansas service area's base rates.

Other Regulation

We are regulated by various state or local public utility authorities. We are also subject to regulation by the United States Department of Transportation with respect to safety requirements in the operation and maintenance of our transmission and distribution facilities. In addition, our operations are also subject to various state and federal laws regulating environmental matters. From time to time, we receive inquiries regarding various environmental matters. We believe that our properties and operations comply with, and are operated in conformity with, applicable safety and environmental statutes and regulations. There are no administrative or judicial proceedings arising under environmental quality statutes pending or known to be contemplated by governmental agencies which would have a material adverse effect on us or our operations. The Pipeline and Hazardous Materials Safety Administration (PHMSA), within the U.S. Department of Transportation, develops and enforces regulations for the safe, reliable and environmentally sound operation of the pipeline transportation system. The PHMSA pipeline safety statutes provide for states to assume safety authority over intrastate natural transmission and distribution gas pipelines. State pipeline safety programs are responsible for adopting and enforcing the federal and state pipeline safety regulations for intrastate natural gas transmission and distribution pipelines.

The Federal Energy Regulatory Commission (FERC) allows, pursuant to Section 311 of the Natural Gas Policy Act (NGPA), gas transportation services through our APT assets “on behalf of” interstate pipelines or local distribution companies served by interstate pipelines, without subjecting these assets to the jurisdiction of the FERC under the NGPA. Additionally, the FERC has regulatory authority over the use and release of interstate pipeline and storage capacity. The FERC also has authority to detect and prevent market manipulation and to enforce compliance with FERC’s other rules, policies and orders by companies engaged in the sale, purchase, transportation or storage of natural gas in interstate commerce. We have taken what we believe are the necessary and appropriate steps to comply with these regulations.

The SEC and the Commodities Futures Trading Commission, pursuant to the Dodd–Frank Act, established numerous regulations relating to U.S. financial markets. We enacted procedures and modified existing business practices and contractual arrangements to comply with such regulations.

Competition

Although our regulated distribution operations are not currently in significant direct competition with any other distributors of natural gas to residential and commercial customers within our service areas, we do compete with other natural gas suppliers and suppliers of alternative fuels for sales to industrial customers. We compete in all aspects of our business with alternative energy sources, including, in particular, electricity. Electric utilities offer electricity as a rival energy source and compete for the space heating, water heating and cooking markets. Promotional incentives, improved equipment efficiencies and promotional rates all contribute to the acceptability of electrical equipment. The principal means to compete against alternative fuels is lower prices, and natural gas historically has maintained its price advantage in the residential, commercial and industrial markets.

Our pipeline and storage operations have historically faced competition from other existing intrastate pipelines seeking to provide or arrange transportation, storage and other services for customers. In the last few years, several new pipelines have been completed, which has increased the level of competition in this segment of our business.

Employees

The Corporate Responsibility, Sustainability, and Safety Committee of the Board of Directors oversees matters relating to equal employment opportunities, diversity, and inclusion; human workplace rights; employee health and safety; and the Company's vision, values, and culture. It oversees the Company's policies, practices and procedures relating to sustainability to support the alignment of the Company's sustainability strategy with the Company's corporate strategy.

Part of our vision is to create a culture that respects and appreciates diversity. For this reason, we strive to have a workforce that reflects the communities we serve. At September 30, 2023, we had 5,019 employees. We monitor our workforce data on a calendar year basis. As of December 31, 2022, the last date for which information is available, 61 percent of our employees worked in field roles and 39 percent worked in support/shared services roles. No employees are subject to a collective bargaining agreement.

To recruit and hire individuals with a variety of skills, talents, backgrounds and experiences, we value and cultivate our strong relationships with various community and diversity outreach sources. We also target jobs fairs including those focused on minority, veteran and women candidates and partner with local colleges and universities to identify and recruit qualified applicants in each of the cities and towns we serve. Finally, we believe we offer a competitive benefits program to help retain our employees.

We perform succession planning annually to ensure that we develop and sustain a strong bench of talent capable of performing at the highest levels. Not only is talent identified, but potential paths of development are discussed to ensure that employees have an opportunity to build their skills and are well-prepared for future roles. The strength of our succession planning process is evident through our long history of promoting our leaders from within the organization.

Available Information

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports, and amendments to those reports, and other forms that we file with or furnish to the Securities and Exchange Commission (SEC) at their website, *www.sec.gov*, are also available free of charge at our website, *www.atmosenergy.com/company/publications-and-sec-filings*, as soon as reasonably practicable, after we electronically file these reports with, or furnish these reports to, the SEC. We will also provide copies of these reports free of charge upon request to Shareholder Relations at the address and telephone number appearing below:

Shareholder Relations
Atmos Energy Corporation
P.O. Box 650205
Dallas, Texas 75265-0205
972-855-3729

Corporate Governance

In accordance with and pursuant to relevant related rules and regulations of the SEC as well as corporate governance-related listing standards of the New York Stock Exchange (NYSE), the Board of Directors of the Company has established and periodically updated our Corporate Governance Guidelines and Code of Conduct, which is applicable to all directors, officers and employees of the Company. In addition, in accordance with and pursuant to such NYSE listing standards, our Chief Executive Officer during fiscal 2023, John K. Akers, certified to the New York Stock Exchange that he was not aware of any violations by the Company of NYSE corporate governance listing standards. The Board of Directors also annually reviews and updates, if necessary, the charters for each of its Audit, Human Resources, Nominating and Corporate Governance and Corporate Responsibility, Sustainability and Safety Committees. All of the foregoing documents are posted on our website at *www.atmosenergy.com/company/corporate-responsiblity-reports*. We will also provide copies of all corporate governance documents free of charge upon request to Shareholder Relations at the address listed above.

ITEM 1A. *Risk Factors.*

Our financial and operating results are subject to a number of risk factors, many of which are not within our control. Investors should carefully consider the following discussion of risk factors as well as other information appearing in this report. These factors include the following, which are organized by category:

Regulatory and Legislative Risks

We are subject to federal, state and local regulations that affect our operations and financial results.

We are subject to regulatory oversight from various federal, state and local regulatory authorities in the eight states that we serve. Therefore, our returns are continuously monitored and are subject to challenge for their reasonableness by the appropriate regulatory authorities or other third-party intervenors. In the normal course of business, as a regulated entity, we often need to place assets in service and establish historical test periods before rate cases that seek to adjust our allowed returns to recover that investment can be filed. Further, the regulatory review process can be lengthy in the context of traditional ratemaking. Because of this process, we suffer the negative financial effects of having placed assets in service without the benefit of rate relief, which is commonly referred to as "regulatory lag."

Regulatory authorities in the states we serve have approved various infrastructure and annual rate adjustment mechanisms to effectively reduce the regulatory lag inherent in the ratemaking process. Regulatory lag could significantly increase if the regulatory authorities modify or terminate these rate mechanisms. The regulatory process also involves the risk that regulatory authorities may (i) review our purchases of natural gas and adjust the amount of our gas costs that we pass through to our customers or (ii) limit or disallow the costs we may have incurred from our cost of service that can be recovered from customers.

We are also subject to laws, regulations and other legal requirements enacted or adopted by federal, state and local governmental authorities relating to protection of the environment and health and safety matters, including those that govern discharges of substances into the air and water, the management and disposal of hazardous substances and waste, the clean-up of contaminated sites, groundwater quality and availability, plant and wildlife protection, as well as work practices related to employee health and safety. Environmental legislation also requires that our facilities, sites and other properties associated with our operations be operated, maintained, abandoned and reclaimed to the satisfaction of applicable regulatory authorities. Failure to comply with these laws, regulations, permits and licenses may expose us to fines, penalties or interruptions in our operations that could be significant to our financial results. In addition, existing environmental regulations may be revised or our operations may become subject to new regulations.

Some of our operations are subject to increased federal regulatory oversight that could affect our operations and financial results.

FERC has regulatory authority over some of our operations, including the use and release of interstate pipeline and storage capacity. FERC has adopted rules designed to prevent market power abuse and market manipulation and to promote compliance with FERC's other rules, policies and orders by companies engaged in the sale, purchase, transportation or storage of natural gas in interstate commerce. These rules carry increased penalties for violations. Although we have taken steps to structure current and future transactions to comply with applicable current FERC regulations, changes in FERC regulations or their

interpretation by FERC or additional regulations issued by FERC in the future could also adversely affect our business, financial condition or financial results.

We may experience increased federal, state and local regulation of the safety of our operations.

The safety and protection of the public, our customers and our employees is our top priority. We constantly monitor and maintain our pipeline and distribution systems to ensure that natural gas is delivered safely, reliably and efficiently through our network of more than 75,000 miles of distribution and transmission lines. As in recent years, natural gas distribution and pipeline companies are continuing to encounter increasing federal, state and local oversight of the safety of their operations. Although we believe these are costs ultimately recoverable through our rates, the costs of complying with new laws and regulations may have at least a short-term adverse impact on our operating costs and financial results.

Operational Risks

We may incur significant costs and liabilities resulting from pipeline integrity and other similar programs and related repairs.

PHMSA requires pipeline operators to develop integrity management programs to comprehensively evaluate certain areas along their pipelines and to take additional measures to protect pipeline segments located in "high consequence areas" where a leak or rupture could potentially do the most harm. As a pipeline operator, the Company is required to:

- perform ongoing assessments of pipeline integrity;
- identify and characterize applicable threats to pipeline segments that could impact a "high consequence area";
- improve data collection, integration and analysis;
- repair and remediate the pipeline as necessary; and
- implement preventative and mitigating actions.

The Company incurs significant costs associated with its compliance with existing PHMSA and comparable state regulations. Although we believe these are costs ultimately recoverable through our rates, the costs of complying with new laws and regulations may have at least a short-term adverse impact on our operating costs and financial results. For example, the adoption of new regulations requiring more comprehensive or stringent safety standards could require installation of new or modified safety controls, new capital projects, or accelerated maintenance programs, all of which could require a potentially significant increase in operating costs.

Distributing, transporting and storing natural gas involve risks that may result in accidents and additional operating costs.

Our operations involve a number of hazards and operating risks inherent in storing and transporting natural gas that could affect the public safety and reliability of our distribution system. While Atmos Energy, with the support from each of its regulatory commissions, is accelerating the replacement of pipeline infrastructure, operating issues such as leaks, accidents, equipment problems and incidents, including explosions and fire, could result in legal liability, repair and remediation costs, increased operating costs, significant increased capital expenditures, regulatory fines and penalties and other costs and a loss of customer confidence. We maintain liability and property insurance coverage in place for many of these hazards and risks. However, because some of our transmission pipeline and storage facilities are near or are in populated areas, any loss of human life or adverse financial results resulting from such events could be large. If these events were not fully covered by our general liability and property insurance, which policies are subject to certain limits and deductibles, our operations or financial results could be adversely affected.

If contracted gas supplies, interstate pipeline and/or storage services are not available or delivered in a timely manner, our ability to meet our customers' natural gas requirements may be impaired and our financial condition may be adversely affected.

In order to meet our customers' annual and seasonal natural gas demands, we must obtain a sufficient supply of natural gas, interstate pipeline capacity and storage capacity. If we are unable to obtain these, either from our suppliers' inability to deliver the contracted commodity or the inability to secure replacement quantities, our financial condition and results of operations may be adversely affected. If a substantial disruption to or reduction in interstate natural gas pipelines' transmission and storage capacity occurred due to operational failures or disruptions, legislative or regulatory actions, hurricanes, tornadoes, floods, extreme cold weather, terrorist or cyber-attacks or acts of war, our operations or financial results could be adversely affected.

Our operations are subject to increased competition.

In residential and commercial customer markets, our distribution operations compete with other energy products, such as electricity and propane. Our primary product competition is with electricity for heating, water heating and cooking. If customer

growth slows or existing customers choose to conserve their use of gas or choose another energy product, reduced gas purchases and customer billings could adversely impact our business.

In the case of industrial customers, such as manufacturing plants, adverse economic conditions, including higher gas costs, could cause these customers to use alternative sources of energy, such as electricity, or bypass our systems in favor of special competitive contracts with lower per-unit costs. Our pipeline and storage operations historically have faced limited competition from other existing intrastate pipelines and gas marketers seeking to provide or arrange transportation, storage and other services for customers. The completion of new pipelines in our service area may increase the competition in this segment of our business.

Failure to attract and retain a qualified workforce could adversely affect our results of operations.

The competition for talent has become increasingly intense and we may experience increased employee turnover due to a tightening labor market. If we are unable to recruit and retain an appropriately qualified workforce, the Company could encounter operating challenges primarily due to a loss of institutional knowledge and expertise, errors due to inexperience, or the lengthy time period typically required to adequately train replacement personnel. In addition, higher costs could result from loss of productivity, increased safety compliance issues, or cost of contract labor.

Additionally, our ability to operate is contingent on maintaining a healthy workforce and a safe working environment. As a provider of essential services, we have an obligation to provide natural gas services to customers. Incidents that impact the health and availability of our workforce could threaten the continuity of our business operations.

Natural disasters, terrorist activities or other significant events could adversely affect our operations or financial results.

Natural disasters are always a threat to our assets and operations. In addition, the threat of terrorist activities could lead to increased economic instability and volatility in the price of natural gas that could affect our operations. Also, companies in our industry may face a heightened risk of exposure to actual acts of terrorism, which could subject our operations to increased risks. As a result, the availability of insurance covering such risks may become more limited, which could increase the risk that an event could adversely affect our operations or financial results.

Technology and Cybersecurity Risks

Increased dependence on technology may hinder the Company's business operations and adversely affect its financial condition and results of operations if such technologies fail.

Over the last several years, the Company has implemented or acquired a variety of technological tools including both Company-owned information technology and technological services provided by outside parties. These tools and systems support critical functions including scheduling and dispatching of service technicians, automated meter reading systems, customer care and billing, operational plant logistics, management reporting and external financial reporting. The failure of these or other similarly important technologies, or the Company's inability to have these technologies supported, updated, expanded, or integrated into other technologies, could hinder its business operations and adversely impact its financial condition and results of operations.

Although the Company has, when possible, developed alternative sources of technology and built redundancy into its computer networks and tools, there can be no assurance that these efforts would protect against all potential issues related to the loss of any such technologies.

Cyber-attacks or acts of cyber-terrorism could disrupt our business operations and information technology systems or result in the loss or exposure of confidential or sensitive customer, employee or Company information.

Our business operations and information technology systems may be vulnerable to an attack by individuals or organizations intending to disrupt our business operations and information technology systems, even though the Company has implemented policies, procedures and controls to prevent and detect these activities. We use our information technology systems to manage our distribution and intrastate pipeline and storage operations and other business processes. Disruption of those systems could adversely impact our ability to safely deliver natural gas to our customers, operate our pipeline and storage systems or serve our customers timely. Accordingly, if such an attack or act of terrorism were to occur, our operations and financial results could be adversely affected.

In addition, we use our information technology systems to protect confidential or sensitive customer, employee and Company information developed and maintained in the normal course of our business. Any attack on such systems that would result in the unauthorized release of customer, employee or other confidential or sensitive data could have a material adverse effect on our business reputation, increase our costs and expose us to additional material legal claims and liability. Even though we have insurance coverage in place for many of these cyber-related risks, if such an attack or act of terrorism were to occur, our operations and financial results could be adversely affected to the extent not fully covered by such insurance coverage.

Compliance with and changes in cybersecurity requirements have a cost and operational impact on our business, and failure to comply with such laws and regulations could adversely impact our reputation, results of operations, financial condition and/or cash flows.

As cyber-attacks are becoming more sophisticated, U.S. government warnings have indicated that critical infrastructure assets, including pipeline infrastructure, may be specifically targeted by certain groups. In recent years, the U.S. government has issued directives that require critical pipeline owners to comply with mandatory reporting measures, designate a cybersecurity coordinator, provide vulnerability assessments and ensure compliance with certain cybersecurity requirements. Such directives or other requirements may require expenditure of significant additional resources to respond to cyber-attacks, to continue to modify or enhance protective measures, or to assess, investigate and remediate any critical infrastructure security vulnerabilities. Any failure to comply with such government regulations or failure in our cybersecurity protective measures may result in enforcement actions that may have a material adverse effect on our business, results of operations and financial condition. In addition, there is no certainty that costs incurred related to securing against threats will be recovered through rates.

Climate Risks

Adverse weather conditions could affect our operations or financial results.

We have weather-normalized rates for approximately 96 percent of our residential and commercial revenues in our distribution operations, which substantially mitigates the adverse effects of warmer-than-normal weather for meters in those service areas. However, there is no assurance that we will continue to receive such regulatory protection from adverse weather in our rates in the future. The loss of such weather-normalized rates could have an adverse effect on our operations and financial results. In addition, our operating results may continue to vary somewhat with the actual temperatures during the winter heating season. Additionally, sustained cold weather could challenge our ability to adequately meet customer demand in our operations.

Greenhouse gas emissions or other legislation or regulations intended to address climate change could increase our operating costs, adversely affecting our financial results, growth, cash flows and results of operations.

Six of the eight states in which we operate have passed legislation to prevent local governments from limiting the types of energy available to customers. However, federal, regional and/or state legislative and/or regulatory initiatives may attempt to control or limit the causes of climate change, including greenhouse gas emissions, such as carbon dioxide and methane. Such laws or regulations could impose costs tied to greenhouse gas emissions, operational requirements or restrictions, or additional charges to fund energy efficiency activities. They could also provide a cost advantage to alternative energy sources, impose costs or restrictions on end users of natural gas, or result in other costs or requirements, such as costs associated with the adoption of new infrastructure and technology to respond to new mandates. The focus on climate change could adversely impact the reputation of fossil fuel products or services. The occurrence of the foregoing events could put upward pressure on the cost of natural gas relative to other energy sources, increase our costs and the prices we charge to customers, reduce the demand for natural gas or cause fuel switching to other energy sources, and impact the competitive position of natural gas and the ability to serve new or existing customers, adversely affecting our business, results of operations and cash flows.

The operations and financial results of the Company could be adversely impacted as a result of climate change.

As climate change occurs, our businesses could be adversely impacted. To the extent climate change results in materially increasing temperatures, financial results could be adversely affected through lower gas volumes and revenues. Climate change could also cause shifts in population, including customers moving away from our service territories.

It could also result in more frequent and more severe weather events, such as hurricanes and tornadoes, which could increase our costs to repair damaged facilities and restore service to our customers or impact the cost of gas. If we were unable to deliver natural gas to our customers, our financial results would be impacted by lost revenues, and we generally would have to seek approval from regulators to recover restoration costs. To the extent we would be unable to recover those costs, or if higher rates resulting from our recovery of such costs would result in reduced demand for our services, our future business, financial condition or financial results could be adversely impacted.

Financial, Economic and Market Risks

Our growth in the future may be limited by the nature of our business, which requires extensive capital spending.

Our operations are capital-intensive. We must make significant capital expenditures on a long-term basis to modernize our distribution and transmission system and to comply with the safety rules and regulations issued by the regulatory authorities responsible for the service areas we operate. In addition, we must continually build new capacity to serve the growing needs of the communities we serve. The magnitude of these expenditures may be affected by a number of factors, including new policy and regulations, and the general state of the economy.

The liquidity required to fund our working capital, capital expenditures and other cash needs is provided from a combination of internally generated cash flows and external debt and equity financing. The cost and availability of borrowing funds from third party lenders or issuing equity is dependent on the liquidity of the credit markets, interest rates and other market conditions. This in turn may limit the amount of funds we can invest in our infrastructure.

The Company is dependent on continued access to the credit and capital markets to execute our business strategy.

Our long-term debt is currently rated as "investment grade" by Standard & Poor's Corporation and Moody's Investors Service, Inc. Similar to most companies, we rely upon access to both short-term and long-term credit and capital markets to satisfy our liquidity requirements. If adverse credit conditions were to cause a significant limitation on our access to the private credit and public capital markets, we could see a reduction in our liquidity. A significant reduction in our liquidity could in turn trigger a negative change in our ratings outlook or even a reduction in our credit ratings by one or more of the credit rating agencies. Such a downgrade could further limit our access to private credit and/or public capital markets and increase our costs of borrowing.

While we believe we can meet our capital requirements from our operations and the sources of financing available to us, we can provide no assurance that we will continue to be able to do so in the future. The future effects on our business, liquidity and financial results of a deterioration of current conditions in the credit and capital markets could be material and adverse to us, both in the ways described above or in other ways that we do not currently anticipate.

We are exposed to market risks that are beyond our control, which could adversely affect our financial results.

We are subject to market risks beyond our control, including (i) commodity price volatility caused by market supply and demand dynamics, counterparty performance or counterparty creditworthiness and (ii) interest rate risk. We are generally insulated from commodity price risk through our purchased gas cost mechanisms. With respect to interest rate risk, increases in interest rates could adversely affect our future financial results to the extent that we do not recover our actual interest expense in our rates.

The concentration of our operations in the State of Texas exposes our operations and financial results to economic conditions, weather patterns and regulatory decisions in Texas.

Approximately 70 percent of our consolidated operations are located in the State of Texas. This concentration of our business in Texas means that our operations and financial results may be significantly affected by changes in the Texas economy in general, weather patterns and regulatory decisions by state and local regulatory authorities in Texas.

A deterioration in economic conditions could adversely affect our customers and negatively impact our financial results.

Any adverse changes in economic conditions in the states in which we operate could adversely affect the financial resources of many domestic households. As a result, our customers could seek to use less gas and it may be more difficult for them to pay their gas bills. This would likely lead to slower collections and higher than normal levels of accounts receivable. This, in turn, could increase our financing requirements. Additionally, should economic conditions deteriorate, our industrial customers could seek alternative energy sources, which could result in lower transportation volumes.

Increased gas costs could adversely impact our customer base and customer collections and increase our level of indebtedness.

Rapid increases in the costs of purchased gas would cause us to experience a significant increase in short-term or long-term debt. We must pay suppliers for gas when it is purchased, which can be significantly in advance of when these costs may be recovered through the collection of monthly customer bills for gas delivered. Increases in purchased gas costs also slow our natural gas distribution collections as customers may delay the payment of their gas bills, leading to higher than normal accounts receivable. This could result in higher short-term debt levels, greater collection efforts and increased bad debt expense.

Our pension and other postretirement benefit plans are subject to investment and interest rate risk that could negatively impact our financial condition.

We have pension and other postretirement benefit plans that provide benefits to many of our employees and retirees. Costs of providing benefits and related- funding requirements of these plans are subject to changes in the market value of the assets that fund the plans. The funded status of the plans and the related costs reflected in the Company's financial statements are affected by various factors, which are subject to an inherent degree of uncertainty, including economic conditions, financial market performance, interest rates, life expectancies and demographics. Poor investment returns or lower interest rates may necessitate accelerated funding of the plans to meet minimum federal government requirements, which could have an adverse impact on the Company's financial condition and results of operations.

ITEM 1B. ***Unresolved Staff Comments.***

Not applicable.

ITEM 2. ***Properties.***

Distribution, transmission and related assets

In our distribution segment, we owned an aggregate of 73,689 miles of underground distribution and transmission mains throughout our distribution systems. These mains are located on easements or rights-of-way. We maintain our mains through a program of continuous inspection and repair and believe that our system of mains is in good condition. Through our pipeline and storage segment we owned 5,645 miles of gas transmission lines.

Storage Assets

We own underground gas storage facilities in several states to supplement the supply of natural gas in periods of peak demand. The following table summarizes certain information regarding our underground gas storage facilities at September 30, 2023:

State	Working Capacity (Mcf)	Base Gas (Mcf)[1]	Total Capacity (Mcf)	Maximum Daily Delivery Capability (Mcf)
Distribution Segment				
Kentucky	7,956,991	9,562,283	17,519,274	146,660
Kansas	3,239,000	2,300,000	5,539,000	32,000
Mississippi	1,907,571	2,442,917	4,350,488	29,136
Total	13,103,562	14,305,200	27,408,762	207,796
Pipeline and Storage Segment				
Texas	53,083,549	19,678,025	72,761,574	2,460,000
Louisiana	411,040	256,900	667,940	56,000
Total	53,494,589	19,934,925	73,429,514	2,516,000
Total	66,598,151	34,240,125	100,838,276	2,723,796

(1) Base gas represents the volume of gas that must be retained in a facility to maintain reservoir pressure.

Additionally, we contract for storage service in underground storage facilities on many of the interstate and intrastate pipelines serving us to supplement our proprietary storage capacity. The following table summarizes our contracted storage capacity at September 30, 2023:

Segment	Division/Company	Maximum Storage Quantity (MMBtu)	Maximum Daily Withdrawal Quantity (Mcf)[1]
Distribution Segment			
	Colorado-Kansas Division	6,343,728	147,692
	Kentucky/Mid-States Division	8,175,103	226,320
	Louisiana Division	2,594,875	177,765
	Mid-Tex Division	5,500,000	210,000
	Mississippi Division	5,799,536	222,764
	West Texas Division	5,000,000	161,000
Total		33,413,242	1,145,541
Pipeline and Storage Segment			
	Trans Louisiana Gas Pipeline, Inc.	1,000,000	47,500
Total Contracted Storage Capacity		34,413,242	1,193,041

(1) Maximum daily withdrawal quantity (MDWQ) amounts will fluctuate depending upon the season and the month. Unless otherwise noted, MDWQ amounts represent the MDWQ amounts as of November 1, which is the beginning of the winter heating season.

ITEM 3. ***Legal Proceedings.***

See Note 14 to the consolidated financial statements, which is incorporated in this Item 3 by reference.

ITEM 4. ***Mine Safety Disclosures.***

Not applicable.

PART II

ITEM 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.***

Our stock trades on the New York Stock Exchange under the trading symbol "ATO." The dividends paid per share of our common stock for fiscal 2023 and 2022 are listed below.

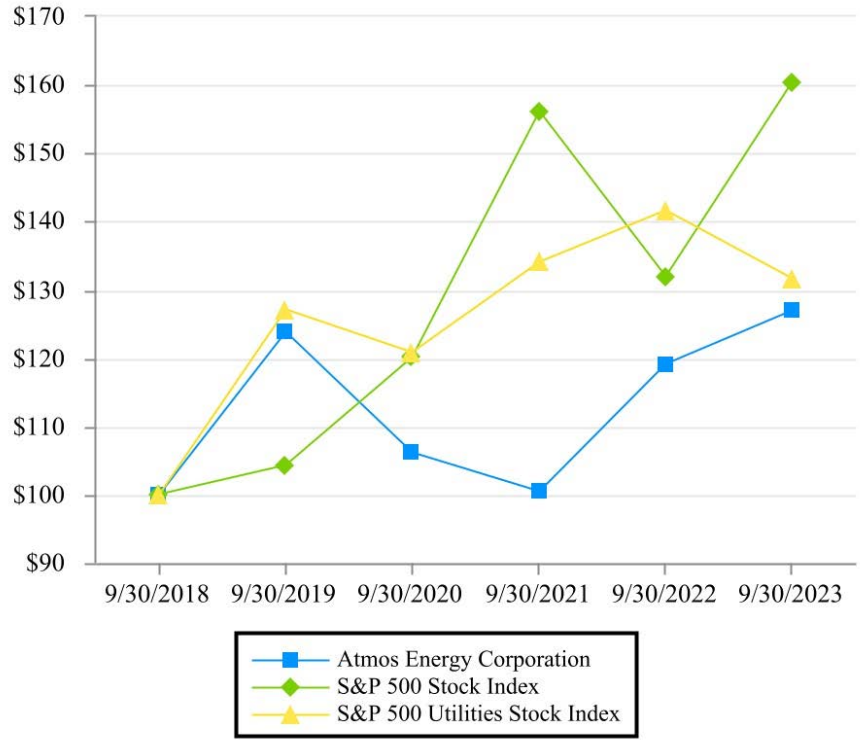
	Fiscal 2023	Fiscal 2022
Quarter ended:		
December 31	$ 0.74	$ 0.68
March 31	0.74	0.68
June 30	0.74	0.68
September 30	0.74	0.68
	$ 2.96	$ 2.72

Dividends are payable at the discretion of our Board of Directors out of legally available funds. The Board of Directors typically declares dividends in the same fiscal quarter in which they are paid. As of October 31, 2023, there were 9,543 holders of record of our common stock. Future payments of dividends, and the amounts of these dividends, will depend on our financial condition, results of operations, capital requirements and other factors. We sold no securities during fiscal 2023 that were not registered under the Securities Act of 1933, as amended.

Performance Graph

The performance graph and table below compares the yearly percentage change in our total return to shareholders for the last five fiscal years with the total return of the S&P 500 Stock Index (S&P 500) and the total return of the S&P 500 Utilities Industry Index. The graph and table below assume that $100.00 was invested on September 30, 2018 in our common stock, the S&P 500 and the S&P 500 Utilities Industry Index, as well as a reinvestment of dividends paid on such investments throughout the period.

Comparison of Five-Year Cumulative Total Return
among Atmos Energy Corporation, S&P 500 Index and
S&P 500 Utilities Industry Index



	Cumulative Total Return					
	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	9/30/2023
Atmos Energy Corporation	100.00	123.80	106.18	100.53	119.08	127.01
S&P 500 Stock Index	100.00	104.25	120.05	156.07	131.92	160.44
S&P 500 Utilities Stock Index	100.00	127.10	120.79	134.09	141.56	131.63

The following table sets forth the number of securities authorized for issuance under our equity compensation plans at September 30, 2023.

	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders:			
1998 Long-Term Incentive Plan	754,445 (1)	$ —	631,409
Total equity compensation plans approved by security holders	754,445	—	631,409
Equity compensation plans not approved by security holders	—	—	—
Total	754,445	$ —	631,409

(1) Comprised of a total of 298,748 time-lapse restricted stock units, 206,140 director share units and 249,557 performance-based restricted stock units at the target level of performance granted under our 1998 Long-Term Incentive Plan.

ITEM 6. ***Reserved.***

ITEM 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations.***

INTRODUCTION

This section provides management's discussion of the financial condition, changes in financial condition and results of operations of Atmos Energy Corporation and its consolidated subsidiaries with specific information on results of operations and liquidity and capital resources. It includes management's interpretation of our financial results, the factors affecting these results, the major factors expected to affect future operating results and future investment and financing plans. This discussion should be read in conjunction with our consolidated financial statements and notes thereto.

Several factors exist that could influence our future financial performance, some of which are described in Item 1A above, "Risk Factors". They should be considered in connection with evaluating forward-looking statements contained in this report or otherwise made by or on behalf of us since these factors could cause actual results and conditions to differ materially from those set out in such forward-looking statements.

Cautionary Statement for the Purposes of the Safe Harbor under the Private Securities Litigation Reform Act of 1995

The statements contained in this Annual Report on Form 10-K may contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements other than statements of historical fact included in this Report are forward-looking statements made in good faith by us and are intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. When used in this Report, or any other of our documents or oral presentations, the words "anticipate", "believe", "estimate", "expect", "forecast", "goal", "intend", "objective", "plan", "projection", "seek", "strategy" or similar words are intended to identify forward-looking statements. Such forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in the statements relating to our strategy, operations, markets, services, rates, recovery of costs, availability of gas supply and other factors. These risks and uncertainties include the following: federal, state and local regulatory and political trends and decisions, including the impact of rate proceedings before various state regulatory commissions; increased federal regulatory oversight and potential penalties; possible increased federal, state and local regulation of the safety of our operations; possible significant costs and liabilities resulting from pipeline integrity and other similar programs and related repairs; the inherent hazards and risks involved in distributing, transporting and storing natural gas; the availability and accessibility of contracted gas supplies, interstate pipeline and/or storage services; increased competition from energy suppliers and alternative forms of energy; failure to attract and retain a qualified workforce; natural disasters, terrorist activities or other events and other risks and uncertainties discussed herein, all of which are difficult to predict and many of which are beyond our control; increased dependence on technology that may hinder the Company's business if such technologies fail; the threat of cyber-attacks or acts of cyber-terrorism that could disrupt our business operations and information technology systems or result in the loss or exposure of confidential or sensitive customer, employee

or Company information; the impact of new cybersecurity compliance requirements; adverse weather conditions; the impact of greenhouse gas emissions or other legislation or regulations intended to address climate change; the impact of climate change; the capital-intensive nature of our business; our ability to continue to access the credit and capital markets to execute our business strategy; market risks beyond our control affecting our risk management activities, including commodity price volatility, counterparty performance or creditworthiness and interest rate risk; the concentration of our operations in Texas; the impact of adverse economic conditions on our customers; changes in the availability and price of natural gas; and increased costs of providing health care benefits, along with pension and postretirement health care benefits and increased funding requirements. Accordingly, while we believe these forward-looking statements to be reasonable, there can be no assurance that they will approximate actual experience or that the expectations derived from them will be realized. Further, we undertake no obligation to update or revise any of our forward-looking statements whether as a result of new information, future events or otherwise.

CRITICAL ACCOUNTING POLICIES

Our consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States. Preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosures of contingent assets and liabilities. We base our estimates on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from estimates.

Our significant accounting policies are discussed in Note 2 to our consolidated financial statements. The accounting policies discussed below are both important to the presentation of our financial condition and results of operations and require management to make difficult, subjective or complex accounting estimates. Accordingly, these critical accounting policies are reviewed periodically by the Audit Committee of the Board of Directors.

Critical Accounting Policy	Summary of Policy	Factors Influencing Application of the Policy
Regulation	Our distribution and pipeline operations meet the criteria of a cost-based, rate-regulated entity under accounting principles generally accepted in the United States. Accordingly, the financial results for these operations reflect the effects of the ratemaking and accounting practices and policies of the various regulatory commissions to which we are subject. As a result, certain costs that would normally be expensed under accounting principles generally accepted in the United States are permitted to be capitalized or deferred on the balance sheet because it is probable they can be recovered through rates. Further, regulation may impact the period in which revenues or expenses are recognized. The amounts expected to be recovered or recognized are based upon historical experience and our understanding of the regulations. Discontinuing the application of this method of accounting for regulatory assets and liabilities or changes in the accounting for our various regulatory mechanisms could significantly increase our operating expenses as fewer costs would likely be capitalized or deferred on the balance sheet, which could reduce our net income.	Decisions of regulatory authorities Issuance of new regulations or regulatory mechanisms Assessing the probability of the recoverability of deferred costs Continuing to meet the criteria of a cost-based, rate regulated entity for accounting purposes

Critical Accounting Policy	Summary of Policy	Factors Influencing Application of the Policy
Pension and other postretirement plans	Pension and other postretirement plan costs and liabilities are determined on an actuarial basis using a September 30 measurement date and are affected by numerous assumptions and estimates including the market value of plan assets, estimates of the expected return on plan assets, assumed discount rates and current demographic and actuarial mortality data. The assumed discount rate and the expected return are the assumptions that generally have the most significant impact on our pension costs and liabilities. The assumed discount rate, the assumed health care cost trend rate and assumed rates of retirement generally have the most significant impact on our postretirement plan costs and liabilities. The discount rate is utilized principally in calculating the actuarial present value of our pension and postretirement obligations and net periodic pension and postretirement benefit plan costs. When establishing our discount rate, we consider high quality corporate bond rates based on bonds available in the marketplace that are suitable for settling the obligations, changes in those rates from the prior year and the implied discount rate that is derived from matching our projected benefit disbursements with currently available high quality corporate bonds. The expected long-term rate of return on assets is utilized in calculating the expected return on plan assets component of our annual pension and postretirement plan costs. We estimate the expected return on plan assets by evaluating expected bond returns, equity risk premiums, asset allocations, the effects of active plan management, the impact of periodic plan asset rebalancing and historical performance. We also consider the guidance from our investment advisors in making a final determination of our expected rate of return on assets. To the extent the actual rate of return on assets realized over the course of a year is greater than or less than the assumed rate, that year's annual pension or postretirement plan costs are not affected. Rather, this gain or loss reduces or increases future pension or postretirement plan costs over a period of approximately ten to twelve years. The market-related value of our plan assets represents the fair market value of the plan assets, adjusted to smooth out short-term market fluctuations over a five-year period. The use of this methodology will delay the impact of current market fluctuations on the pension expense for the period. We estimate the assumed health care cost trend rate used in determining our postretirement net expense based upon our actual health care cost experience, the effects of recently enacted legislation and general economic conditions. Our assumed rate of retirement is estimated based upon our annual review of our participant census information as of the measurement date.	General economic and market conditions Assumed investment returns by asset class Assumed future salary increases Assumed discount rate Projected timing of future cash disbursements Health care cost experience trends Participant demographic information Actuarial mortality assumptions Impact of legislation Impact of regulation
Impairment assessments	We review the carrying value of our long-lived assets, including goodwill and identifiable intangibles, whenever events or changes in circumstance indicate that such carrying values may not be recoverable, and at least annually for goodwill, as required by U.S. accounting standards. The evaluation of our goodwill balances and other long-lived assets or identifiable assets for which uncertainty exists regarding the recoverability of the carrying value of such assets involves the assessment of future cash flows and external market conditions and other subjective factors that could impact the estimation of future cash flows including, but not limited to the commodity prices, the amount and timing of future cash flows, future growth rates and the discount rate. Unforeseen events and changes in circumstances or market conditions could adversely affect these estimates, which could result in an impairment charge.	General economic and market conditions Projected timing and amount of future discounted cash flows Judgment in the evaluation of relevant data

RESULTS OF OPERATIONS

Overview

Atmos Energy strives to operate its businesses safely and reliably while delivering superior financial results. Our commitment to modernizing our natural gas distribution and transmission systems requires a significant level of capital spending. We have the ability to begin recovering a significant portion of these investments timely through rate designs and mechanisms that reduce or eliminate regulatory lag and separate the recovery of our approved rate from customer usage patterns. The execution of our capital spending program, the ability to recover these investments timely and our ability to access the capital markets to satisfy our financing needs are the primary drivers that affect our financial performance.

The following table details our consolidated net income by segment during the last three fiscal years:

	For the Fiscal Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Distribution segment	$ 580,397	$ 521,977	$ 445,862
Pipeline and storage segment	305,465	252,421	219,701
Net income	$ 885,862	$ 774,398	$ 665,563

During fiscal 2023, we recorded net income of $885.9 million, or $6.10 per diluted share, compared to net income of $774.4 million, or $5.60 per diluted share in the prior year. The year-over-year increase in net income of $111.5 million largely reflects positive rate outcomes driven by safety and reliability spending, partially offset by increased line locating costs, system maintenance activities and an increase in depreciation expense and property taxes associated with increased capital investments.

During the year ended September 30, 2023, we implemented ratemaking regulatory actions which resulted in an increase in annual operating income of $263.1 million. Excluding the impact of the refund of excess deferred income taxes resulting from previously enacted tax reform legislation, our total fiscal 2023 rate outcomes were $268.8 million. Additionally, we had ratemaking efforts in progress at September 30, 2023, seeking a total increase in annual operating income of $264.6 million.

During fiscal year 2023, we refunded $160.3 million in excess deferred tax liabilities to customers. These refunds also reduced our income tax expense, resulting in an immaterial impact to our fiscal 2023 and 2022 results.

Capital expenditures for fiscal 2023 were $2.8 billion. Over 85 percent was invested to improve the safety and reliability of our distribution and transportation systems, with a significant portion of this investment incurred under regulatory mechanisms that reduce regulatory lag to six months or less.

During fiscal 2023, we completed approximately $1.6 billion of long-term debt and equity financing. As of September 30, 2023, our equity capitalization was 61.5 percent. As of September 30, 2023, we had approximately $2.7 billion in total liquidity, consisting of $15.4 million in cash and cash equivalents, $466.8 million in funds available through equity forward sales agreements and $2,252.5 million in undrawn capacity under our credit facilities.

Distribution Segment

The distribution segment is primarily comprised of our regulated natural gas distribution and related sales operations in eight states. The primary factors that impact the results of our distribution operations are our ability to earn our authorized rates of return, competitive factors in the energy industry and economic conditions in our service areas.

Our ability to earn our authorized rates is based primarily on our ability to improve the rate design in our various ratemaking jurisdictions to minimize regulatory lag and, ultimately, separate the recovery of our approved rates from customer usage patterns. Improving rate design is a long-term process and is further complicated by the fact that we operate in multiple rate jurisdictions. The “Ratemaking Activity” section of this Form 10-K describes our current rate strategy, progress towards implementing that strategy and recent ratemaking initiatives in more detail. During fiscal 2023, we completed regulatory proceedings in our distribution segment resulting in a $178.2 million increase in annual operating income. Excluding the impact of the refund of excess deferred income taxes resulting from previously enacted tax reform legislation, our total fiscal 2023 annualized rate outcomes in our distribution segment were $183.8 million.

Our distribution operations are also affected by the cost of natural gas. We are generally able to pass the cost of gas through to our customers without markup under purchased gas cost adjustment mechanisms; therefore, increases in the cost of gas are offset by a corresponding increase in revenues. Revenues in our Texas and Mississippi service areas include franchise fees and gross receipts taxes, which are calculated as a percentage of revenue (inclusive of gas costs). Therefore, the amount of

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these taxes included in revenues is influenced by the cost of gas and the level of gas sales volumes. We record the associated tax expense as a component of taxes, other than income.

The cost of gas typically does not have a direct impact on our operating income because these costs are recovered through our purchased gas cost adjustment mechanisms. However, higher gas costs may adversely impact our accounts receivable collections, resulting in higher bad debt expense. This risk is currently mitigated by rate design that allows us to collect from our customers the gas cost portion of our bad debt expense on approximately 80 percent of our residential and commercial revenues. Additionally, higher gas costs may require us to increase borrowings under our credit facilities, resulting in higher interest expense. Finally, higher gas costs, as well as competitive factors in the industry and general economic conditions may cause customers to conserve or, in the case of industrial consumers, to use alternative energy sources.

Review of Financial and Operating Results

Financial and operational highlights for our distribution segment for the fiscal years ended September 30, 2023, 2022 and 2021 are presented below.

	For the Fiscal Year Ended September 30				
	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
	(In thousands, unless otherwise noted)				
Operating revenues	$ 4,099,690	$ 4,035,194	$ 3,241,973	$ 64,496	$ 793,221
Purchased gas cost	2,061,920	2,210,302	1,501,695	(148,382)	708,607
Operating expenses	1,345,144	1,220,347	1,121,764	124,797	98,583
Operating income	692,626	604,545	618,514	88,081	(13,969)
Other non-operating income (expense)	24,988	6,946	(20,694)	18,042	27,640
Interest charges	77,185	49,921	36,629	27,264	13,292
Income before income taxes	640,429	561,570	561,191	78,859	379
Income tax expense	60,032	39,593	115,329	20,439	(75,736)
Net income	$ 580,397	$ 521,977	$ 445,862	$ 58,420	$ 76,115
Consolidated distribution sales volumes — MMcf	289,948	292,266	308,833	(2,318)	(16,567)
Consolidated distribution transportation volumes — MMcf	152,963	152,709	152,513	254	196
Total consolidated distribution throughput — MMcf	442,911	444,975	461,346	(2,064)	(16,371)
Consolidated distribution average cost of gas per Mcf sold	$ 7.11	$ 7.56	$ 4.86	$ (0.45)	$ 2.70

Fiscal year ended September 30, 2023 compared with fiscal year ended September 30, 2022

Operating income for our distribution segment increased 14.6 percent. Key drivers for the change in operating income include:

- a $166.4 million increase in rate adjustments, primarily in our Mid-Tex Division.
- an $18.4 million increase related to residential customer growth, primarily in our Mid-Tex Division, and increased industrial load.
- an $11.7 million increase in consumption, net of WNA.
- a $7.5 million decrease in refunds of excess deferred taxes to customers, which is substantially offset in income tax expense.

Partially offset by:

- a $65.4 million increase in depreciation expense and property taxes associated with increased capital investments.
- a $20.2 million increase in line locate spending, primarily in our Mid-Tex Division.
- a $4.9 million increase in bad debt expense primarily due to higher customer bills.
- a $21.6 million increase in other operation and maintenance expense primarily due to increased insurance premiums, travel spending, information technology spending and other administrative costs.

Other non-operating income increased $18.0 million primarily due to a higher allowance for funds used during construction (AFUDC) related to increased capital spending as well as unrealized gains on equity investments in the current

period compared to unrealized losses on equity investments in the prior period. Interest charges increased $27.3 million primarily due to the issuance of long-term debt during the first quarter of fiscal 2023.

The fiscal year ended September 30, 2022 compared with fiscal year ended September 30, 2021 for our distribution segment is described in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the fiscal year ended September 30, 2022.

The following table shows our operating income by distribution division, in order of total rate base, for the fiscal years ended September 30, 2023, 2022 and 2021. The presentation of our distribution operating income is included for financial reporting purposes and may not be appropriate for ratemaking purposes.

	For the Fiscal Year Ended September 30				
	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
	(In thousands)				
Mid-Tex	$ 345,545	$ 315,644	$ 310,293	$ 29,901	$ 5,351
Kentucky/Mid-States	87,258	84,098	73,259	3,160	10,839
Louisiana	80,942	73,486	72,388	7,456	1,098
West Texas	62,351	53,604	51,104	8,747	2,500
Mississippi	78,517	65,947	65,337	12,570	610
Colorado-Kansas	40,674	26,000	32,778	14,674	(6,778)
Other	(2,661)	(14,234)	13,355	11,573	(27,589)
Total	$ 692,626	$ 604,545	$ 618,514	$ 88,081	$ (13,969)

Pipeline and Storage Segment

Our pipeline and storage segment consists of the pipeline and storage operations of our Atmos Pipeline–Texas Division (APT) and our natural gas transmission operations in Louisiana. APT is one of the largest intrastate pipeline operations in Texas with a heavy concentration in the established natural gas producing areas of central, northern and eastern Texas, extending into or near the major producing areas of the Barnett Shale, the Texas Gulf Coast and the Permian Basin of West Texas. APT provides transportation and storage services to our Mid-Tex Division, other third-party local distribution companies, industrial and electric generation customers, as well as marketers and producers. Over 80 percent of this segment's revenues are derived from these APT services. As part of its pipeline operations, APT owns and operates five underground storage facilities in Texas.

Our natural gas transmission operations in Louisiana are comprised of a 21-mile pipeline located in the New Orleans, Louisiana area that is primarily used to aggregate gas supply for our distribution division in Louisiana under a long-term contract and, on a more limited basis, to third parties. The demand fee charged to our Louisiana distribution division for these services is subject to regulatory approval by the Louisiana Public Service Commission. We also manage two asset management plans, which have been approved by applicable state regulatory commissions. Generally, these asset management plans require us to share with our distribution customers a significant portion of the cost savings earned from these arrangements.

Our pipeline and storage segment is impacted by seasonal weather patterns, competitive factors in the energy industry and economic conditions in our Texas and Louisiana service areas. Natural gas prices do not directly impact the results of this segment as revenues are derived from the transportation and storage of natural gas. However, natural gas prices and demand for natural gas could influence the level of drilling activity in the supply areas that we serve, which may influence the level of throughput we may be able to transport on our pipelines. Further, natural gas price differences between the various hubs that we serve in Texas could influence the volumes of gas transported for shippers through our Texas pipeline system and rates for such transportation.

The results of APT are also significantly impacted by the natural gas requirements of its local distribution company customers. Additionally, its operations may be impacted by the timing of when costs and expenses are incurred and when these costs and expenses are recovered through its tariffs.

APT annually uses GRIP to recover capital costs incurred in the prior calendar year. On February 10, 2023, APT made a GRIP filing that covered changes in net property, plant and equipment investment from January 1, 2022 through December 31, 2022 with a requested increase in operating income of $84.9 million. On May 17, 2023, the Texas Railroad Commission (RRC) approved the Company's GRIP filing. Additionally, GRIP requires a utility to file a statement of intent at least once every five years to review its costs and expenses, including capital costs filed for recovery under GRIP. On May 19, 2023, APT filed its statement of intent seeking $107.4 million in additional annual operating income. On October 24, 2023, APT and the intervening parties in its general rate case filed a Joint Notice of Settlement and Proposed Order. See "Ratemaking Activity" above for further information.

The demand fee our Louisiana natural gas transmission pipeline charges to our Louisiana distribution division increases five percent annually and has been approved by the Louisiana Public Service Commission until September 30, 2027.

Review of Financial and Operating Results

Financial and operational highlights for our pipeline and storage segment for the fiscal years ended September 30, 2023, 2022 and 2021 are presented below.

	For the Fiscal Year Ended September 30				
	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
	(In thousands, unless otherwise noted)				
Mid-Tex / Affiliate transportation revenue	$ 621,987	$ 546,038	$ 497,730	$ 75,949	$ 48,308
Third-party transportation revenue	154,018	136,907	127,874	17,111	9,033
Other revenue	9,169	10,715	11,743	(1,546)	(1,028)
Total operating revenues	785,174	693,660	637,347	91,514	56,313
Total purchased gas cost	(1,220)	(1,583)	1,582	363	(3,165)
Operating expenses	411,873	378,806	349,281	33,067	29,525
Operating income	374,521	316,437	286,484	58,084	29,953
Other non-operating income	44,787	26,791	18,549	17,996	8,242
Interest charges	60,096	52,890	46,925	7,206	5,965
Income before income taxes	359,212	290,338	258,108	68,874	32,230
Income tax expense	53,747	37,917	38,407	15,830	(490)
Net income	$ 305,465	$ 252,421	$ 219,701	$ 53,044	$ 32,720
Gross pipeline transportation volumes — MMcf	834,847	776,608	799,724	58,239	(23,116)
Consolidated pipeline transportation volumes — MMcf	635,508	580,488	585,857	55,020	(5,369)

Fiscal year ended September 30, 2023 compared with fiscal year ended September 30, 2022

Operating income for our pipeline and storage segment increased 18.4 percent. Key drivers for the change in operating income include:

- an $87.3 million increase due to rate adjustments from GRIP filings approved in May 2022 and 2023. The increase in rates was driven by increased safety and reliability spending.
- a $5.2 million net increase in APT's through-system activities primarily associated with increased volumes.

Partially offset by:

- a $33.1 million increase in operating expenses primarily attributable to increased depreciation expense and property taxes associated with increased capital investments, employee-related costs, and pipeline inspection activities.

Other non-operating income increased $18.0 million primarily due to higher AFUDC largely as a result of increased capital spending. Interest charges increased $7.2 million primarily due to the issuance of long-term debt during the first quarter of fiscal 2023.

The fiscal year ended September 30, 2022 compared with fiscal year ended September 30, 2021 for our pipeline and storage segment is described in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the fiscal year ended September 30, 2022.

INFLATION REDUCTION ACT OF 2022

In August 2022, the U.S. government enacted the Inflation Reduction Act of 2022 (the Inflation Reduction Act) into law. The Inflation Reduction Act includes a new corporate alternative minimum tax (the Corporate AMT) of 15% on the adjusted financial statement income (AFSI) of corporations with average AFSI exceeding $1.0 billion over a three-year period. We currently anticipate this tax will apply to us within the next three years, and it could materially impact our cash tax payments. However, we don't anticipate any impact to our results of operations. Also, the Inflation Reduction Act imposes a methane emissions charge for methane emissions in excess of 25,000 metric tons carbon dioxide equivalent per year. Based on our preliminary evaluation of the regulations, we currently do not anticipate this provision of the Inflation Reduction Act will have a material impact on our financial position, results of operations or cash flows. Additionally, the Inflation Reduction Act

imposes an excise tax of 1% tax on the fair market value of net stock repurchases made after December 31, 2022. The impact of this provision will be dependent on the extent of share repurchases made in future periods.

LIQUIDITY AND CAPITAL RESOURCES

The liquidity required to fund our working capital, capital expenditures and other cash needs is provided from a combination of internally generated cash flows and external debt and equity financing. Additionally, we have a $1.5 billion commercial paper program and four committed revolving credit facilities with $2.5 billion in total availability from third-party lenders. The commercial paper program and credit facilities provide cost-effective, short-term financing until it can be replaced with a balance of long-term debt and equity financing that achieves the Company's desired capital structure. Additionally, we have various uncommitted trade credit lines with our gas suppliers that we utilize to purchase natural gas on a monthly basis.

We have a shelf registration statement on file with the Securities and Exchange Commission (SEC) that allows us to issue up to $5.0 billion in common stock and/or debt securities. As of the date of this report, $3.1 billion of securities remained available for issuance under the shelf registration statement, which expires March 31, 2026.

We also have an at-the-market (ATM) equity sales program that allows us to issue and sell shares of our common stock up to an aggregate offering price of $1.0 billion (including shares of common stock that may be sold pursuant to forward sale agreements entered into in connection with the ATM equity sales program), which expires March 31, 2026. At September 30, 2023, $760.5 million of equity is available for issuance under this ATM equity sales program. Additionally, as of September 30, 2023, we had $466.8 million in available proceeds from outstanding forward sale agreements.

On September 26, 2023, we settled $700 million of forward starting interest rate swaps associated with a debt issuance that was completed on October 10, 2023. The following table summarizes our existing forward starting interest rate swaps as of September 30, 2023.

Planned Debt Issuance Date	Amount Hedged	Effective Interest Rate
	(In thousands)	
Fiscal 2025	$ 600,000	1.75 %
Fiscal 2026	300,000	2.16 %
	$ 900,000	

The liquidity provided by these sources is expected to be sufficient to fund the Company's working capital needs and capital expenditures program. Additionally, we expect to continue to be able to obtain financing upon reasonable terms as necessary.

The following table presents our capitalization as of September 30, 2023 and 2022:

	September 30			
	2023		2022	
	(In thousands, except percentages)			
Short-term debt	$ 241,933	1.4 %	$ 184,967	1.1 %
Long-term debt [1]	6,555,701	37.1 %	7,962,104	45.3 %
Shareholders' equity [2]	10,870,064	61.5 %	9,419,091	53.6 %
Total capitalization, including short-term debt	$ 17,667,698	100.0 %	$ 17,566,162	100.0 %

(1) Inclusive of our finance leases, but exclusive of AEK's securitized long-term debt.
(2) Excluding the $2.2 billion of incremental financing issued to pay for the purchased gas costs incurred during Winter Storm Uri, our equity capitalization ratio would have been 61.3% at September 30, 2022.

Cash Flows

Our internally generated funds may change in the future due to a number of factors, some of which we cannot control. These factors include regulatory changes, the price for our services, the demand for such products and services, margin requirements resulting from significant changes in commodity prices, operational risks and other factors.

Cash flows from operating, investing and financing activities for the years ended September 30, 2023, 2022 and 2021 are presented below.

	For the Fiscal Year Ended September 30				
	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
	(In thousands)				
Total cash provided by (used in)					
Operating activities	$ 3,459,743	$ 977,584	$ (1,084,251)	$ 2,482,159	$ 2,061,835
Investing activities	(2,795,280)	(2,429,958)	(1,963,655)	(365,322)	(466,303)
Financing activities	(696,769)	1,387,205	3,143,821	(2,083,974)	(1,756,616)
Change in cash and cash equivalents and restricted cash and cash equivalents	(32,306)	(65,169)	95,915	32,863	(161,084)
Cash and cash equivalents and restricted cash and cash equivalents at beginning of period	51,554	116,723	20,808	(65,169)	95,915
Cash and cash equivalents and restricted cash and cash equivalents at end of period	$ 19,248	$ 51,554	$ 116,723	$ (32,306)	$ (65,169)

Cash flows for the fiscal year ended September 30, 2022 compared with fiscal year ended September 30, 2021 is described in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the fiscal year ended September 30, 2022.

Cash flows from operating activities

For the fiscal year ended September 30, 2023, cash flow provided by operating activities was $3,459.7 million compared with $977.6 million in the prior year. Fiscal 2023 operating cash flow included $2,021.9 million of cash received as a result of the conclusion of Texas securitization proceedings. Excluding this cash inflow, operating cash flow in fiscal 2023 was $1,437.8 million. The year-over-year increase in operating cash flow reflects the positive effects of successful rate case outcomes achieved in fiscal 2022 and 2023 and decreased purchases of gas stored underground.

Cash flows from investing activities

Our capital expenditures are primarily used to improve the safety and reliability of our distribution and transmission system through pipeline replacement and system modernization and to enhance and expand our system to meet customer needs. Over the last three fiscal years, approximately 87 percent of our capital spending has been committed to improving the safety and reliability of our system.

For the fiscal year ended September 30, 2023, we had $2.8 billion in capital expenditures compared with $2.4 billion for the fiscal year ended September 30, 2022. Capital spending increased by $361.6 million, or 15 percent, as a result of planned increases to modernize our system and improve pipeline system safety and reliability in Texas and further enhance the safety, reliability, versatility and supply diversification of APT's system.

Cash flows from financing activities

Our financing activities used $696.8 million of cash for fiscal year 2023 compared with $1,387.2 million of cash provided by financing activities for fiscal year 2022.

During the fiscal year ended September 30, 2023, we repaid $2.2 billion in long-term debt, and we received approximately $1.6 billion in net proceeds from the issuance of long-term debt and equity. We completed a public offering of $500 million of 5.75% senior notes due October 2052 and $300 million of 5.45% senior notes due October 2032, and received net proceeds from the offering, after the underwriting discount and offering expenses, of $789.4 million. Additionally, during the fiscal year ended September 30, 2023, we settled 7,272,261 shares that had been sold on a forward basis for net proceeds of $806.9 million. The net proceeds were used primarily to support capital spending and for other general corporate purposes. We also received $171.1 million from the settlement of forward starting interest rate swaps related to a debt issuance completed in October 2023. Cash dividends increased due to an 8.8 percent increase in our dividend rate and an increase in shares outstanding. Finally, Atmos Energy Kansas Securitization I, LLC, a special-purpose, wholly-owned subsidiary of Atmos Energy, issued $95 million in securitized long-term debt.

During the fiscal year ended September 30, 2022, we received $1.6 billion in net proceeds from the issuance of long-term debt and equity. We completed a public offering of $600 million of 2.85% senior notes due February 2052. We also completed a public offering of $200 million of 2.625% senior notes due September 2029 that were used to repay our $200 million floating-rate term loan. Additionally, during the year ended September 30, 2022, we settled 7,907,833 shares that had been sold on a forward basis for net proceeds of $776.8 million. The net proceeds were used primarily to support capital spending and for other general corporate purposes. We also received $197.1 million from the settlement of forward starting interest rate swaps related to a debt issuance completed in October 2022. Additionally, cash dividends increased due to an 8.8 percent increase in our dividend rate and an increase in shares outstanding.

The following table shows the number of shares issued for the fiscal years ended September 30, 2023, 2022 and 2021:

	For the Fiscal Year Ended September 30		
	2023	2022	2021
Shares issued:			
Direct Stock Purchase Plan	64,871	68,693	79,921
Retirement Savings Plan and Trust	69,716	72,339	84,265
1998 Long-Term Incentive Plan (LTIP)	189,337	427,929	242,216
Equity Issuance [1]	7,272,261	7,907,883	6,130,875
Total shares issued	7,596,185	8,476,844	6,537,277

(1) Share amounts do not include shares issued under forward sale agreements until the shares have been settled.

Credit Ratings

Our credit ratings directly affect our ability to obtain short-term and long-term financing, in addition to the cost of such financing. In determining our credit ratings, the rating agencies consider a number of quantitative factors, including but not limited to, debt to total capitalization, operating cash flow relative to outstanding debt, operating cash flow coverage of interest and operating cash flow less dividends to debt. In addition, the rating agencies consider qualitative factors such as consistency of our earnings over time, the risks associated with our business and the regulatory structures that govern our rates in the states where we operate.

Our debt is rated by two rating agencies: Standard & Poor's Corporation (S&P) and Moody's Investors Service (Moody's). As of September 30, 2023, our outlook and current debt ratings, which are all considered investment grade are as follows:

	S&P	Moody's
Senior unsecured long-term debt	A-	A1
Short-term debt	A-2	P-1
Outlook	Stable	Stable

A significant degradation in our operating performance or a significant reduction in our liquidity caused by more limited access to the private and public credit markets as a result of deteriorating global or national financial and credit conditions could trigger a negative change in our ratings outlook or even a reduction in our credit ratings by the two credit rating agencies. This would mean more limited access to the private and public credit markets and an increase in the costs of such borrowings.

A credit rating is not a recommendation to buy, sell or hold securities. The highest investment grade credit rating is AAA for S&P and Aaa for Moody's. The lowest investment grade credit rating is BBB- for S&P and Baa3 for Moody's. Our credit ratings may be revised or withdrawn at any time by the rating agencies, and each rating should be evaluated independently of any other rating. There can be no assurance that a rating will remain in effect for any given period of time or that a rating will not be lowered, or withdrawn entirely, by a rating agency if, in its judgment, circumstances so warrant.

Debt Covenants

We were in compliance with all of our debt covenants as of September 30, 2023. Our debt covenants are described in Note 8 to the consolidated financial statements.

Contractual Obligations and Commercial Commitments

The following table provides information about contractual obligations and commercial commitments at September 30, 2023.

	Payments Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
			(In thousands)		
Contractual Obligations					
Long-term debt [1]	$ 6,560,000	$ —	$ 10,000	$ 650,000	$ 5,900,000
Short-term debt [1]	241,933	241,933	—	—	—
Securitized long-term debt	95,000	9,922	16,842	18,647	49,589
Interest charges [2]	4,981,621	265,077	532,354	514,413	3,669,777
Interest charges on securitized long-term debt	26,779	5,709	8,134	6,329	6,607
Finance leases [3]	69,880	3,375	6,940	7,203	52,362
Operating leases [4]	277,989	41,325	59,035	44,721	132,908
Financial instrument obligations [5]	15,408	14,584	824	—	—
Pension and postretirement benefit plan contributions [6]	310,710	31,784	80,759	52,600	145,567
Uncertain tax positions [7]	58,638	—	58,638	—	—
Total contractual obligations	$ 12,637,958	$ 613,709	$ 773,526	$ 1,293,913	$ 9,956,810

(1) Long-term and short-term debt excludes our finance lease obligations, which are separately reported within this table. See Note 8 to the consolidated financial statements for further details.
(2) Interest charges were calculated using the coupon rate for each debt issuance through the contractual maturity date.
(3) Finance lease payments shown above include interest totaling $19.5 million. See Note 7 to the consolidated financial statements.
(4) Operating lease payments shown above include interest totaling $47.7 million. See Note 7 to the consolidated financial statements.
(5) Represents liabilities for natural gas commodity financial instruments that were valued as of September 30, 2023. The ultimate settlement amounts of these remaining liabilities are unknown because they are subject to continuing market risk until the financial instruments are settled.
(6) Represents expected contributions to our defined benefit and postretirement benefit plans, which are discussed in Note 11 to the consolidated financial statements.
(7) Represents liabilities associated with uncertain tax positions claimed or expected to be claimed on tax returns. The amount does not include interest and penalties that may be applied to these positions. See Note 15 to the consolidated financial statements for further details.

We maintain supply contracts with several vendors that generally cover a period of up to one year. Commitments for estimated base gas volumes are established under these contracts on a monthly basis at contractually negotiated prices. Commitments for incremental daily purchases are made as necessary during the month in accordance with the terms of individual contracts. Our Mid-Tex Division also maintains a limited number of long-term supply contracts to ensure a reliable source of gas for our customers in its service area which obligate it to purchase specified volumes at market and fixed prices. At September 30, 2023, we were committed to purchase 65.5 Bcf within one year and 72.3 Bcf within two to three years under indexed contracts. At September 30, 2023, we were committed to purchase 20.6 Bcf within one year under fixed price contracts with a weighted average price of $2.80 per Mcf.

Risk Management Activities

In our distribution and pipeline and storage segments, we use a combination of physical storage, fixed physical contracts and fixed financial contracts to reduce our exposure to unusually large winter-period gas price increases. Additionally, we manage interest rate risk by entering into financial instruments to effectively fix the Treasury yield component of the interest cost associated with anticipated financings.

We record our financial instruments as a component of risk management assets and liabilities, which are classified as current or noncurrent based upon the anticipated settlement date of the underlying financial instrument. Substantially all of our financial instruments are valued using external market quotes and indices.

The following table shows the components of the change in fair value of our financial instruments for the fiscal year ended September 30, 2023 (in thousands):

Fair value of contracts at September 30, 2022	$	377,862
Contracts realized/settled		(174,107)
Fair value of new contracts		5,379
Other changes in value		161,122
Fair value of contracts at September 30, 2023		370,256
Netting of cash collateral		—
Cash collateral and fair value of contracts at September 30, 2023	$	370,256

The fair value of our financial instruments at September 30, 2023, is presented below by time period and fair value source:

	Fair Value of Contracts at September 30, 2023				
	Maturity in years				
Source of Fair Value	Less than 1	1-3	4-5	Greater than 5	Total Fair Value
	(In thousands)				
Prices actively quoted	$ (10,513)	$ 380,769	$ —	$ —	$ 370,256
Prices based on models and other valuation methods	—	—	—	—	—
Total Fair Value	$ (10,513)	$ 380,769	$ —	$ —	$ 370,256

RECENT ACCOUNTING DEVELOPMENTS

Recent accounting developments and their impact on our financial position, results of operations and cash flows are described in Note 2 to the consolidated financial statements.

ITEM 7A. ***Quantitative and Qualitative Disclosures About Market Risk.***

We are exposed to risks associated with commodity prices and interest rates. Commodity price risk is the potential loss that we may incur as a result of changes in the fair value of a particular instrument or commodity. Interest-rate risk is the potential increased cost we could incur when we issue debt instruments or to provide financing and liquidity for our business activities. Additionally, interest-rate risk could affect our ability to issue cost effective equity instruments.

We conduct risk management activities in our distribution and pipeline and storage segments. In our distribution segment, we use a combination of physical storage, fixed-price forward contracts and financial instruments, primarily over-the-counter swap and option contracts, in an effort to minimize the impact of natural gas price volatility on our customers during the winter heating season. Our risk management activities and related accounting treatment are described in further detail in Note 16 to the consolidated financial statements. Additionally, our earnings are affected by changes in short-term interest rates as a result of our issuance of short-term commercial paper and our other short-term borrowings.

Commodity Price Risk

We purchase natural gas for our distribution operations. Substantially all of the costs of gas purchased for distribution operations are recovered from our customers through purchased gas cost adjustment mechanisms. Therefore, our distribution operations have limited commodity price risk exposure.

Interest Rate Risk

Our earnings are exposed to changes in short-term interest rates associated with our short-term commercial paper program and other short-term borrowings. We use a sensitivity analysis to estimate our short-term interest rate risk. For purposes of this analysis, we estimate our short-term interest rate risk as the difference between our actual interest expense for the period and estimated interest expense for the period assuming a hypothetical average one percent increase in the interest rates associated with our short-term borrowings. Had interest rates associated with our short-term borrowings increased by an average of one percent, our interest expense would not have materially increased during 2023.

ITEM 8. ***Financial Statements and Supplementary Data.***

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All financial statement schedules are omitted because the required information is not present, or not present in amounts sufficient to require submission of the schedule or because the information required is included in the financial statements and accompanying notes thereto.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Atmos Energy Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Atmos Energy Corporation (the Company) as of September 30, 2023 and 2022, the related consolidated statements of comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at September 30, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2023, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of September 30, 2023, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated November 14, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulation

Description of the Matter

As discussed in Note 3 to the consolidated financial statements, the Company's distribution and pipeline and storage operations are subject to regulation with respect to rates, service, maintenance of accounting records and various other matters by the respective regulatory authorities in the states in which they operate. The Company's accounting policies recognize the financial effects of the ratemaking and accounting practices and policies of the various regulatory commissions and are subject to accounting principles for rate-regulated activities. As a result, certain costs are permitted to be capitalized rather than expensed because they can be recovered through rates. The Company records certain costs as regulatory assets when future recovery through customer rates is considered probable. Regulatory liabilities are recorded when it is probable that revenues will be reduced for amounts that will be credited to customers through the ratemaking process. The amounts to be recovered or recognized are based upon the Company's historical experience and understanding of the regulations. As described in Note 3, the proceeds received related to the securitization of the costs related to the Winter Storm Uri event reflected the recovery of the related regulatory asset. As of September 30, 2023, there were $554.9 million of deferred costs included in regulatory assets and $1,284.3 million of regulatory liabilities awaiting cash outflow or potential refund.

Auditing the effects of regulatory matters is complex as it requires specialized knowledge of rate-regulated activities and assessments as to matters that could affect the recording or updating of regulatory assets and liabilities, including the securitization of the costs related to Winter Storm Uri.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of internal controls over the Company's accounting for regulatory assets and liabilities, including, among others, controls over management's assessment of the likelihood of approval by regulators for new matters and controls over the evaluation on rulings with regulatory bodies on existing regulatory assets and liabilities, including factors that may affect the timing or nature of recoverability.

We performed audit procedures that included, among others, examining evidence of correspondence with regulatory bodies to test that the Company appropriately evaluated information obtained from regulatory rulings. For example, we assessed the recoverability and completeness of various regulatory assets and liabilities, considering information obtained from regulatory rulings. In addition, we tested that amortization of regulatory assets and liabilities corresponded to relevant regulatory rulings.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1983.

Dallas, Texas
November 14, 2023

ATMOS ENERGY CORPORATION

CONSOLIDATED BALANCE SHEETS

	September 30	
	2023	2022
	(In thousands, except share data)	
ASSETS		
Property, plant and equipment	$ 21,958,447	$ 19,402,271
Construction in progress	939,927	835,868
	22,898,374	20,238,139
Less accumulated depreciation and amortization	3,291,791	2,997,900
Net property, plant and equipment	19,606,583	17,240,239
Current assets		
Cash and cash equivalents	15,404	51,554
Restricted cash and cash equivalents (See Note 10)	3,844	—
Cash and cash equivalents and restricted cash and cash equivalents	19,248	51,554
Accounts receivable, less allowance for uncollectible accounts of $40,840 in 2023 and $49,993 in 2022	328,654	363,708
Gas stored underground	245,830	357,941
Other current assets (See Note 3)	292,036	2,274,490
Total current assets	885,768	3,047,693
Securitized intangible asset, less accumulated amortization of $1,398 in 2023 (See Note 10)	92,202	—
Goodwill	731,257	731,257
Deferred charges and other assets	1,201,158	1,173,800
	$ 22,516,968	$ 22,192,989
CAPITALIZATION AND LIABILITIES		
Shareholders' equity		
Common stock, no par value (stated at $0.005 per share); 200,000,000 shares authorized; issued and outstanding: 2023 — 148,492,783 shares; 2022 — 140,896,598 shares	$ 742	$ 704
Additional paid-in capital	6,684,120	5,838,118
Accumulated other comprehensive income	518,528	369,112
Retained earnings	3,666,674	3,211,157
Shareholders' equity	10,870,064	9,419,091
Long-term debt	6,554,133	5,760,647
Securitized long-term debt (See Note 10)	85,078	—
Total capitalization	17,509,275	15,179,738
Commitments and contingencies (See Note 14)		
Current liabilities		
Accounts payable and accrued liabilities	336,083	496,019
Other current liabilities	763,086	720,157
Short-term debt	241,933	184,967
Current maturities of long-term debt	1,568	2,201,457
Current maturities of securitized long-term debt (See Note 10)	9,922	—
Total current liabilities	1,352,592	3,602,600
Deferred income taxes	2,304,974	1,999,505
Regulatory excess deferred taxes (See Note 15)	253,212	385,213
Regulatory cost of removal obligation	497,017	487,631
Deferred credits and other liabilities	599,898	538,302
	$ 22,516,968	$ 22,192,989

See accompanying notes to consolidated financial statements.

ATMOS ENERGY CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended September 30		
	2023	2022	2021
	(In thousands, except per share data)		
Operating revenues			
Distribution segment	$ 4,099,690	$ 4,035,194	$ 3,241,973
Pipeline and storage segment	785,174	693,660	637,347
Intersegment eliminations	(609,507)	(527,192)	(471,830)
Total operating revenues	4,275,357	4,201,662	3,407,490
Purchased gas cost			
Distribution segment	2,061,920	2,210,302	1,501,695
Pipeline and storage segment	(1,220)	(1,583)	1,582
Intersegment eliminations	(608,527)	(526,063)	(470,560)
Total purchased gas cost	1,452,173	1,682,656	1,032,717
Operation and maintenance expense	764,906	710,161	679,019
Depreciation and amortization expense	604,327	535,655	477,977
Taxes, other than income	386,804	352,208	312,779
Operating income	1,067,147	920,982	904,998
Other non-operating income (expense)	69,775	33,737	(2,145)
Interest charges	137,281	102,811	83,554
Income before income taxes	999,641	851,908	819,299
Income tax expense	113,779	77,510	153,736
Net income	$ 885,862	$ 774,398	$ 665,563
Basic net income per share	$ 6.10	$ 5.61	$ 5.12
Diluted net income per share	$ 6.10	$ 5.60	$ 5.12
Weighted average shares outstanding:			
Basic	145,121	137,830	129,779
Diluted	145,166	138,096	129,834
Net income	$ 885,862	$ 774,398	$ 665,563
Other comprehensive income (loss), net of tax			
Net unrealized holding gains (losses) on available-for-sale securities, net of tax of $37, $(157) and $(55)	126	(542)	(191)
Cash flow hedges:			
Amortization and unrealized gains on interest rate agreements, net of tax of $43,148, $86,664 and $36,875	149,290	299,851	127,583
Total other comprehensive income	149,416	299,309	127,392
Total comprehensive income	$ 1,035,278	$ 1,073,707	$ 792,955

See accompanying notes to consolidated financial statements.

ATMOS ENERGY CORPORATION

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Common stock					
	Number of Shares	Stated Value	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total
	(In thousands, except share and per share data)					
Balance, September 30, 2020	125,882,477	$ 629	$ 4,377,149	$ (57,589)	$ 2,471,014	$ 6,791,203
Net income	—	—	—	—	665,563	665,563
Other comprehensive income	—	—	—	127,392	—	127,392
Cash dividends ($2.50 per share)	—	—	—	—	(323,904)	(323,904)
Common stock issued:						
Public offering	6,130,875	31	606,636	—	—	606,667
Direct stock purchase plan	79,921	—	7,715	—	—	7,715
Retirement savings plan	84,265	1	8,125	—	—	8,126
1998 Long-term incentive plan	242,216	1	3,091	—	—	3,092
Employee stock-based compensation	—	—	21,035	—	—	21,035
Balance, September 30, 2021	132,419,754	662	5,023,751	69,803	2,812,673	7,906,889
Net income	—	—	—	—	774,398	774,398
Other comprehensive income	—	—	—	299,309	—	299,309
Cash dividends ($2.72 per share)	—	—	—	—	(375,914)	(375,914)
Common stock issued:						
Public offering	7,907,883	40	776,765	—	—	776,805
Direct stock purchase plan	68,693	—	7,495	—	—	7,495
Retirement savings plan	72,339	—	7,908	—	—	7,908
1998 Long-term incentive plan	427,929	2	2,396	—	—	2,398
Employee stock-based compensation	—	—	19,803	—	—	19,803
Balance, September 30, 2022	140,896,598	704	5,838,118	369,112	3,211,157	9,419,091
Net income	—	—	—	—	885,862	885,862
Other comprehensive income	—	—	—	149,416	—	149,416
Cash dividends ($2.96 per share)	—	—	—	—	(430,345)	(430,345)
Common stock issued:						
Public offering	7,272,261	36	806,913	—	—	806,949
Direct stock purchase plan	64,871	—	7,429	—	—	7,429
Retirement savings plan	69,716	1	7,965	—	—	7,966
1998 Long-term incentive plan	189,337	1	2,107	—	—	2,108
Employee stock-based compensation	—	—	21,588	—	—	21,588
Balance, September 30, 2023	148,492,783	$ 742	$ 6,684,120	$ 518,528	$ 3,666,674	$ 10,870,064

See accompanying notes to consolidated financial statements.

ATMOS ENERGY CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended September 30		
	2023	2022	2021
	(In thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	$ 885,862	$ 774,398	$ 665,563
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Depreciation and amortization	604,327	535,655	477,977
Deferred income taxes	108,215	53,651	155,355
Stock-based compensation	10,178	10,743	11,255
Amortization of debt issuance costs	3,639	9,141	14,030
Equity component of AFUDC	(64,019)	(45,505)	(32,749)
Other	(591)	3,265	3,731
Changes in assets and liabilities:			
(Increase) decrease in accounts receivable	46,859	(34,325)	(113,665)
(Increase) decrease in gas stored underground	112,111	(179,825)	(66,166)
(Increase) decrease in Winter Storm Uri current regulatory asset (see Note 3)	2,021,889	—	(2,003,659)
Increase in other current assets	(36,041)	(65,979)	(84,705)
Increase in Winter Storm Uri long-term regulatory asset (see Note 3)	—	—	(76,652)
(Increase) decrease in deferred charges and other assets	(172,586)	13,287	136,809
Increase (decrease) in accounts payable and accrued liabilities	(132,575)	40,394	104,242
Increase (decrease) in other current liabilities	30,687	(152,274)	(166,268)
Increase (decrease) in deferred credits and other liabilities	41,788	14,958	(109,349)
Net cash provided by (used in) operating activities	3,459,743	977,584	(1,084,251)
CASH FLOWS USED IN INVESTING ACTIVITIES			
Capital expenditures	(2,805,973)	(2,444,420)	(1,969,540)
Purchases of debt and equity securities	(46,789)	(28,285)	(49,879)
Proceeds from sale of debt and equity securities	25,134	4,872	14,957
Maturities of debt securities	13,340	27,586	28,850
Other, net	19,008	10,289	11,957
Net cash used in investing activities	(2,795,280)	(2,429,958)	(1,963,655)

See accompanying notes to consolidated financial statements.

ATMOS ENERGY CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(continued)

	Year Ended September 30		
	2023	2022	2021
	(In thousands)		
CASH FLOWS FROM FINANCING ACTIVITIES			
Net increase in short-term debt	56,966	184,967	—
Proceeds from issuance of long-term debt, net of premium/discount	797,258	798,802	2,797,346
Proceeds from issuance of securitized long-term debt by AEK	95,000	—	—
Net proceeds from equity offering	806,949	776,805	606,667
Issuance of common stock through stock purchase and employee retirement plans	15,395	15,403	15,841
Settlement of interest rate swaps	171,145	197,073	62,159
Proceeds from term loan	2,020,000	—	—
Repayment of term loan	(2,020,000)	—	—
Repayment of long-term debt	(2,200,000)	(200,000)	—
Cash dividends paid	(430,345)	(375,914)	(323,904)
Debt issuance costs	(7,864)	(8,196)	(14,288)
Securitized debt issuance costs	(1,273)	—	—
Other	—	(1,735)	—
Net cash provided by (used in) financing activities	(696,769)	1,387,205	3,143,821
Net increase (decrease) in cash and cash equivalents and restricted cash and cash equivalents	(32,306)	(65,169)	95,915
Cash and cash equivalents and restricted cash and cash equivalents at beginning of year	51,554	116,723	20,808
Cash and cash equivalents and restricted cash and cash equivalents at end of year	$ 19,248	$ 51,554	$ 116,723

See accompanying notes to consolidated financial statements.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Business

Atmos Energy Corporation (Atmos Energy or the "Company") and its subsidiaries are engaged in the regulated natural gas distribution and pipeline and storage businesses. Through our distribution business, we deliver natural gas through sales and transportation arrangements to over 3.3 million residential, commercial, public-authority and industrial customers through our six regulated distribution divisions in the service areas described below:

Division	Service Area
Atmos Energy Colorado-Kansas Division	Colorado, Kansas
Atmos Energy Kentucky/Mid-States Division	Kentucky, Tennessee, Virginia
Atmos Energy Louisiana Division	Louisiana
Atmos Energy Mid-Tex Division	Texas, including the Dallas/Fort Worth metropolitan area
Atmos Energy Mississippi Division	Mississippi
Atmos Energy West Texas Division	West Texas

In addition, we transport natural gas for others through our distribution system. Our distribution business is subject to federal and state regulation and/or regulation by local authorities in each of the states in which our distribution divisions operate. Our corporate headquarters and shared-services function are located in Dallas, Texas, and our customer support centers are located in Amarillo and Waco, Texas.

Our pipeline and storage business, which is also subject to federal and state regulation, consists of the pipeline and storage operations of our Atmos Pipeline–Texas (APT) Division and our natural gas transmission business in Louisiana. The APT division provides transportation and storage services to our Mid-Tex Division, other third-party local distribution companies, industrial and electric generation customers, as well as marketers and producers. As part of its pipeline operations, APT manages five underground storage facilities in Texas. We also provide ancillary services customary to the pipeline industry including parking arrangements, lending and sales of inventory on hand. Our natural gas transmission operations in Louisiana are comprised of a 21-mile pipeline located in the New Orleans, Louisiana area that is primarily used to aggregate gas supply for our distribution division in Louisiana under a long-term contract and on a more limited basis, to third parties.

2. Summary of Significant Accounting Policies

Principles of consolidation — The accompanying consolidated financial statements include the accounts of Atmos Energy Corporation and its wholly-owned subsidiaries. All material intercompany transactions have been eliminated; however, we have not eliminated intercompany profits when such amounts are probable of recovery under the affiliates' rate regulation process.

Reclassification — Certain reclassifications have been made to prior period amounts to conform to current period presentation.

Use of estimates — The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. The most significant estimates include the allowance for doubtful accounts, unbilled revenues, contingency accruals, pension and postretirement obligations, deferred income taxes, risk management and trading activities and fair value measurements. Actual results could differ from those estimates.

Regulation — Our distribution and pipeline and storage operations are subject to regulation with respect to rates, service, maintenance of accounting records and various other matters by the respective regulatory authorities in the states in which we operate. Our accounting policies recognize the financial effects of the ratemaking and accounting practices and policies of the various regulatory commissions. Accounting principles generally accepted in the United States require cost-based, rate-regulated entities that meet certain criteria to reflect the authorized recovery of costs due to regulatory decisions in their financial statements. As a result, certain costs are permitted to be capitalized rather than expensed because they can be recovered through rates. We record certain costs as regulatory assets when future recovery through customer rates is considered probable. Regulatory liabilities are recorded when it is probable that revenues will be reduced for amounts that will be credited to customers through the ratemaking process. The amounts to be recovered or recognized are based upon historical experience and our understanding of the regulations. Further, regulation may impact the period in which revenues or expenses are recognized.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Revenue recognition

Distribution Revenues

Distribution revenues represent the delivery of natural gas to residential, commercial, industrial and public authority customers at prices based on tariff rates established by regulatory authorities in the states in which we operate. Revenue is recognized and our performance obligation is satisfied over time when natural gas is delivered and simultaneously consumed by our customers. We have elected to use the invoice practical expedient and recognize revenue for volumes delivered that we have the right to invoice our customers. We bill our customers on a monthly cycle basis. Accordingly, we estimate volumes from the last meter read to the balance sheet date and accrue revenue for gas delivered but not yet billed.

In our Texas and Mississippi jurisdictions, we pay franchise fees and gross receipt taxes to operate in these service areas. These franchise fees and gross receipts taxes are required to be paid regardless of our ability to collect from our customers. Accordingly, we account for these amounts on a gross basis in revenue and we record the associated tax expense as a component of taxes, other than income.

Pipeline and Storage Revenues

Pipeline and storage revenues primarily represent the transportation and storage of natural gas on our APT system and the transmission of natural gas through our 21-mile pipeline in Louisiana. APT provides transportation and storage services to our Mid-Tex Division, other third party local distribution companies and certain industrial customers under tariff rates approved by the RRC. APT also provides certain transportation and storage services to industrial and electric generation customers, as well as marketers and producers, under negotiated rates. Our pipeline in Louisiana is primarily used to aggregate gas supply for our Louisiana Division under a long-term contract and on a more limited basis to third parties. The demand fee charged to our Louisiana Division is subject to regulatory approval by the Louisiana Public Service Commission. We also manage two asset management plans with distribution affiliates of the Company at terms that have been approved by the applicable state regulatory commissions. The performance obligations for these transportation customers are satisfied by means of transporting customer-supplied gas to the designated location. Revenue is recognized and our performance obligation is satisfied over time when natural gas is delivered to the customer. Management determined that these arrangements qualify for the invoice practical expedient for recognizing revenue. For demand fee arrangements, revenue is recognized and our performance obligation is satisfied by standing ready to transport natural gas over the period of each individual month.

Alternative Revenue Program Revenues

In our distribution segment, we have weather-normalization adjustment mechanisms that serve to minimize the effects of weather on our residential and commercial revenues. APT has a regulatory mechanism that requires that we share with its tariffed customers 75% of the difference between the total non-tariffed revenues earned during a test period and a revenue benchmark of $69.4 million that was established in its most recent rate case. Differences between actual revenues and revenues calculated under these mechanisms adjust the amount billed to customers. These mechanisms are considered to be alternative revenue programs under accounting standards generally accepted in the United States as they are deemed to be contracts between us and our regulator. Accordingly, revenue under these mechanisms are excluded from revenue from contracts with customers.

Purchased gas costs — Rates established by regulatory authorities are adjusted for increases and decreases in our purchased gas costs through purchased gas cost adjustment mechanisms. There is no margin generated through purchased gas cost adjustments, but they provide a dollar-for-dollar offset to increases or decreases in our distribution segment's gas costs. The effects of these purchased gas cost adjustment mechanisms are recorded as deferred gas costs on our consolidated balance sheets.

Cash and cash equivalents — We consider all highly liquid investments with an original maturity of three months or less to be cash equivalents.

Restricted cash and cash equivalents — Restricted cash and cash equivalents consists of funds that are contractually or legally restricted as to usage or withdrawal and have been presented separately from cash and cash equivalents on our consolidated balance sheets. Restricted cash and cash equivalents accounts were established for payment of Securitized Utility Tariff Bonds issuance costs and payment of debt service on those bonds as well as certain ongoing costs of Atmos Energy Kansas Securitization I, LLC (AEK).

Accounts receivable and allowance for uncollectible accounts — Accounts receivable arise from natural gas sales to residential, commercial, industrial, public authority and other customers. Our accounts receivable balance includes unbilled amounts which represent a customer's consumption of gas from the date of the last cycle billing through the last day of the month. The receivable balances are short term and generally do not extend beyond one month.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Credit losses on our accounts receivable are measured using an expected credit loss model over the entire contractual term from the date of initial recognition. To minimize credit risk, we assess the credit worthiness of new customers, require deposits where necessary, assess late fees, pursue collection activities and disconnect service for nonpayment. After disconnection, accounts are written off when deemed uncollectible. At each reporting period, we assess the allowance for uncollectible accounts based on historical experience, current conditions and consideration of expected future conditions. Circumstances which could affect our estimates include, but are not limited to, customer credit issues, the level of natural gas prices, customer deposits and general economic conditions.

Gas stored underground — Our gas stored underground is comprised of natural gas injected into storage to support the winter season withdrawals for our distribution operations. The average cost method is used for all of our distribution operations. Gas in storage that is retained as cushion gas to maintain reservoir pressure is classified as property, plant and equipment and is valued at cost.

Securitized intangible asset — Our securitized intangible asset is recorded on AEK and represents the Securitized Utility Tariff Property acquired from Atmos Energy in fiscal 2023. See Note 10 to the consolidated financial statements. The securitized intangible asset is stated at cost, net of accumulated amortization, and is amortized over the life of the asset in proportion to the pattern of economic benefit based on expected future undiscounted cash flows. At the end of its life, this securitized intangible asset will have no residual value.

Property, plant and equipment — Regulated property, plant and equipment is stated at original cost, net of contributions in aid of construction. The cost of additions includes direct construction costs, payroll related costs (taxes, the service cost portion of pension expense and other benefits), administrative and general costs and an allowance for funds used during construction (AFUDC). AFUDC represents the capitalizable total cost of funds used to finance the construction of major projects.

The following table details amounts capitalized for the fiscal year ended September 30.

Component of AFUDC	Statement of Comprehensive Income Location	2023	2022	2021
		(In thousands)		
Debt	Interest charges	$ 15,808	$ 12,153	$ 11,414
Equity	Other non-operating income (expense)	64,019	45,505	32,749
		$ 79,827	$ 57,658	$ 44,163

Major renewals, including replacement pipe, and betterments that are recoverable through our regulatory rate base are capitalized while the costs of maintenance and repairs that are not capitalizable are charged to expense as incurred. The costs of large projects are accumulated in construction in progress until the project is completed. When the project is completed, tested and placed in service, the balance is transferred to the regulated plant in service account included in the rate base and depreciation begins.

Regulated property, plant and equipment is depreciated at various rates on a straight-line basis. These rates are approved by our regulatory commissions and are comprised of two components: one based on average service life and one based on cost of removal. Accordingly, we recognize our cost of removal expense as a component of depreciation expense. The related cost of removal accrual is reflected as a regulatory liability on the consolidated balance sheet. At the time property, plant and equipment is retired, removal expenses less salvage, are charged to the regulatory cost of removal accrual. The composite depreciation rate was 3.0 percent for the fiscal years ended September 30, 2023, 2022 and 2021.

Other property, plant and equipment is stated at cost. Depreciation is generally computed on the straight-line method for financial reporting purposes based upon estimated useful lives.

Impairment of long-lived assets — We evaluate whether events or circumstances have occurred that indicate that other long-lived assets may not be recoverable or that the remaining useful life may warrant revision. When such events or circumstances are present, we assess the recoverability of long-lived assets by determining whether the carrying value will be recovered through the expected future cash flows. In the event the sum of the expected future cash flows resulting from the use of the asset is less than the carrying value of the asset, an impairment loss equal to the excess of the asset's carrying value over its fair value is recorded. No impairment losses were recorded for our long-lived assets during the fiscal years ended September 30, 2023, 2022 and 2021.

Goodwill — We annually evaluate our goodwill balances for impairment during our second fiscal quarter or more frequently as impairment indicators arise. During the second quarter of fiscal 2023, we completed our annual goodwill impairment assessment. We test goodwill for impairment at the reporting unit level on an annual basis and between annual tests

if an event occurs or circumstances change that would more likely than not reduce the fair value of the reporting unit. Based on the assessment performed, we determined that our goodwill was not impaired. Although not applicable for the fiscal 2023 analysis, if a qualitative goodwill assessment resulted in impairment indicators, we would then use a present value technique based on discounted cash flows to estimate the fair value of our reporting units. These calculations are dependent on several subjective factors including the timing of future cash flows, future growth rates and the discount rate. An impairment charge is recognized if the carrying value of a reporting unit's goodwill exceeds its fair value.

Lease accounting — We determine if an arrangement is a lease at the inception of the agreement based on the terms and conditions in the contract. A contract contains a lease if there is an identified asset and we have the right to control the asset. We are the lessee for substantially all of our leasing activities, which primarily includes operating leases for office and warehouse space, tower space, vehicles and heavy equipment used in our operations. We are also a lessee in finance leases for certain service centers.

We record a lease liability and a corresponding right of use (ROU) asset for all of our leases with a term greater than 12 months. For lease contracts containing renewal and termination options, we include the option period in the lease term when it is reasonably certain the option will be exercised. We most frequently assume renewal options at the inception of the arrangement for our tower and fleet leases, based on our anticipated use of the assets. Real estate leases that contain a renewal option are evaluated on a lease-by-lease basis to determine if the option period should be included in the lease term. Currently, we have not included material renewal options for real estate leases in our ROU asset or lease liability.

The lease liability represents the present value of all lease payments over the lease term. We do not include short-term leases in the calculation of our lease liabilities. The discount rate used to determine the present value of the lease liability is the rate implicit in the lease unless that rate cannot be readily determined. We use the implicit rate stated in the agreement to determine the lease liability for our fleet leases. We use our corporate collateralized incremental borrowing rate as the discount rate for all other lease agreements. This rate is appropriate because we believe it represents the rate we would have incurred to borrow funds to acquire the leased asset over a similar term. We calculated this rate using a combination of inputs, including our current credit rating, quoted market prices of interest rates for our publicly traded unsecured debt, observable market yield curve data for peer companies with a credit rating one notch higher than our current credit rating and the lease term.

The ROU asset represents the right to use the underlying asset for the lease term, and is equal to the lease liability, adjusted for prepaid or accrued lease payments and any lease incentives that have been paid to us or when we are reasonably certain to incur costs equal to or greater than the allowance defined in the contract. We bundle our lease and non-lease components as a single component for all asset classes.

Variable payments included in our leasing arrangements are expensed in the period in which the obligation for these payments is incurred. Variable payments are dependent on usage, output or may vary for other reasons. Most of our variable lease expense is related to tower leases that have escalating payments based on changes to a stated CPI index, and usage of certain office equipment.

We have not provided material residual value guarantees for our leases, nor do our leases contain material restrictions or covenants.

Marketable securities — As of September 30, 2023, we hold marketable securities classified as either equity or debt securities. Changes in fair value of our equity securities are recorded in net income, while debt securities, which are considered available-for-sale securities, are reported at market value with unrealized gains and losses shown as a component of accumulated other comprehensive income (loss).

We regularly evaluate the performance of our available-for-sale debt securities on an investment by investment basis for impairment, taking into consideration the securities' purpose, volatility and current returns. If a determination is made that a security will likely be sold before the recovery of its cost, the related investment is written down to its estimated fair value.

Financial instruments and hedging activities — We use financial instruments to mitigate commodity price risk in our distribution and pipeline and storage segments and to mitigate interest rate risk. The objectives and strategies for using financial instruments have been tailored to our business and are discussed in Note 16 to the consolidated financial statements.

We record all of our financial instruments on the balance sheet at fair value, with the exception of normal purchases and normal sales that are expected to result in physical delivery, with changes in fair value ultimately recorded in the statement of comprehensive income. These financial instruments are reported as risk management assets and liabilities and are classified as current or noncurrent other assets or liabilities based upon the anticipated settlement date of the underlying financial instrument. We record the cash flow impact of our financial instruments in operating cash flows based upon their balance sheet classification.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The timing of when changes in fair value of our financial instruments are recorded in the statement of comprehensive income depends on whether the financial instrument has been designated and qualifies as a part of a hedging relationship or if regulatory rulings require a different accounting treatment. Changes in fair value for financial instruments that do not meet one of these criteria are recognized in the statement of comprehensive income as they occur.

Financial Instruments Associated with Commodity Price Risk

In our distribution segment, the costs associated with and the realized gains and losses arising from the use of financial instruments to mitigate commodity price risk are included in our purchased gas cost adjustment mechanisms in accordance with regulatory requirements. Therefore, changes in the fair value of these financial instruments are initially recorded as a component of deferred gas costs and recognized in the consolidated statements of comprehensive income as a component of purchased gas cost when the related costs are recovered through our rates and recognized in revenue in accordance with accounting principles generally accepted in the United States. Accordingly, there is no earnings impact on our distribution segment as a result of the use of these financial instruments.

Financial Instruments Associated with Interest Rate Risk

In connection with the planned issuance of long-term debt, we may use financial instruments to manage interest rate risk. We currently manage this risk through the use of forward starting interest rate swaps to fix the Treasury yield component of the interest cost associated with anticipated financings. We designate these financial instruments as cash flow hedges at the time the agreements are executed. Unrealized gains and losses associated with the instruments are recorded as a component of accumulated other comprehensive income (loss). When the instruments settle, the realized gain or loss is recorded as a component of accumulated other comprehensive income (loss) and recognized as a component of interest charges over the life of the related financing arrangement. As of September 30, 2023 and 2022, no cash was required to be held in margin accounts.

Fair Value Measurements — We report certain assets and liabilities at fair value, which is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). We primarily use quoted market prices and other observable market pricing information in valuing our financial assets and liabilities and minimize the use of unobservable pricing inputs in our measurements.

Fair-value estimates also consider our own creditworthiness and the creditworthiness of the counterparties involved. Our counterparties consist primarily of financial institutions and major energy companies. This concentration of counterparties may materially impact our exposure to credit risk resulting from market, economic or regulatory conditions. We seek to minimize counterparty credit risk through an evaluation of their financial condition and credit ratings and the use of collateral requirements under certain circumstances.

Amounts reported at fair value are subject to potentially significant volatility based upon changes in market prices, including, but not limited to, the valuation of the portfolio of our contracts, maturity and settlement of these contracts and newly originated transactions and interest rates, each of which directly affect the estimated fair value of our financial instruments. We believe the market prices and models used to value these financial instruments represent the best information available with respect to closing exchange and over-the-counter quotations, time value and volatility factors underlying the contracts. Values are adjusted to reflect the potential impact of an orderly liquidation of our positions over a reasonable period of time under then current market conditions.

Authoritative accounting literature establishes a fair value hierarchy that prioritizes the inputs used to measure fair value based on observable and unobservable data. The hierarchy categorizes the inputs into three levels, with the highest priority given to unadjusted quoted prices in active markets for identical assets and liabilities (Level 1) and the lowest priority given to unobservable inputs (Level 3). The levels of the hierarchy are described below:

Level 1 — Represents unadjusted quoted prices in active markets for identical assets or liabilities. An active market for the asset or liability is defined as a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. Prices actively quoted on national exchanges are used to determine the fair value of most of our assets and liabilities recorded on our balance sheet at fair value.

Our Level 1 measurements consist primarily of our debt and equity securities. The Level 1 measurements for investments in the Atmos Energy Corporation Master Retirement Trust (the Master Trust), Supplemental Executive Benefit Plan and postretirement benefit plan consist primarily of exchange-traded financial instruments.

Level 2 — Represents pricing inputs other than quoted prices included in Level 1 that are either directly or indirectly observable for the asset or liability as of the reporting date. These inputs are derived principally from, or corroborated by, observable market data. Our Level 2 measurements primarily consist of non-exchange-traded financial instruments, such as over-the-counter options and swaps and municipal and corporate bonds where market data for pricing is observable. The Level

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

2 measurements for investments in our Master Trust, Supplemental Executive Benefit Plan and postretirement benefit plan consist primarily of non-exchange traded financial instruments such as corporate bonds and government securities.

Level 3 — Represents generally unobservable pricing inputs which are developed based on the best information available, including our own internal data, in situations where there is little if any market activity for the asset or liability at the measurement date. The pricing inputs utilized reflect what a market participant would use to determine fair value. We currently do not have any Level 3 investments.

Pension and other postretirement plans — Pension and other postretirement plan costs and liabilities are determined on an actuarial basis and are affected by numerous assumptions and estimates including the market value of plan assets, estimates of the expected return on plan assets, assumed discount rates and current demographic and actuarial mortality data. Our measurement date is September 30. The assumed discount rate and the expected return are the assumptions that generally have the most significant impact on our pension costs and liabilities. The assumed discount rate, the assumed health care cost trend rate and assumed rates of retirement generally have the most significant impact on our postretirement plan costs and liabilities.

The discount rate is utilized principally in calculating the actuarial present value of our pension and postretirement obligation and net pension and postretirement cost. When establishing our discount rate, we consider high quality corporate bond rates based on bonds available in the marketplace that are suitable for settling the obligations, changes in those rates from the prior year and the implied discount rate that is derived from matching our projected benefit disbursements with currently available high quality corporate bonds.

The expected long-term rate of return on assets is utilized in calculating the expected return on plan assets component of the annual pension and postretirement plan cost. We estimate the expected return on plan assets by evaluating expected bond returns, equity risk premiums, asset allocations, the effects of active plan management, the impact of periodic plan asset rebalancing and historical performance. We also consider the guidance from our investment advisors when making a final determination of our expected rate of return on assets. To the extent the actual rate of return on assets realized over the course of a year is greater than or less than the assumed rate, that year's annual pension or postretirement plan cost is not affected. Rather, this gain or loss is amortized over the expected future working lifetime of the plan participants.

The expected return on plan assets is then calculated by applying the expected long-term rate of return on plan assets to the market-related value of the plan assets. The market-related value of our plan assets represents the fair market value of the plan assets, adjusted to smooth out short-term market fluctuations over a five-year period. The use of this calculation will delay the impact of current market fluctuations on the pension expense for the period.

We use a corridor approach to amortize actuarial gains and losses. Under this approach, net gains or losses in excess of ten percent of the larger of the pension benefit obligation or the market-related value of the assets are amortized on a straight-line basis. The period of amortization is the average remaining service of active participants who are expected to receive benefits under the plan.

We estimate the assumed health care cost trend rate used in determining our annual postretirement net cost based upon our actual health care cost experience, the effects of recently enacted legislation and general economic conditions. Our assumed rate of retirement is estimated based upon the annual review of our participant census information as of the measurement date.

We present only the current service cost component of the net benefit cost within operations and maintenance expense in the consolidated statements of comprehensive income. The remaining components of net benefit cost are recorded in other non-operating income (expense) in our consolidated statements of comprehensive income. Only the service cost component of net benefit cost is eligible for capitalization and we continue to capitalize these costs into property, plant and equipment. Additionally, we defer into a regulatory asset or liability the portion of non-service components of net periodic benefit cost that are capitalizable for regulatory purposes.

Income taxes — Income taxes are determined based on the liability method, which results in income tax assets and liabilities arising from temporary differences. Temporary differences are differences between the tax bases of assets and liabilities and their reported amounts in the financial statements that will result in taxable or deductible amounts in future years. The liability method requires the effect of tax rate changes on accumulated deferred income taxes to be reflected in the period in which the rate change was enacted. The liability method also requires that deferred tax assets be reduced by a valuation allowance unless it is more likely than not that the assets will be realized.

The Company may recognize the tax benefit from uncertain tax positions only if it is at least more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position should be measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon settlement with the taxing authorities. We recognize accrued interest

related to unrecognized tax benefits as a component of interest charges. We recognize penalties related to unrecognized tax benefits as a component of miscellaneous income (expense) in accordance with regulatory requirements.

Tax collections — We are allowed to recover from customers revenue-related taxes that are imposed upon us. We record such taxes as operating expenses and record the corresponding customer charges as operating revenues. However, we do collect and remit various other taxes on behalf of various governmental authorities, and we record these amounts in our consolidated balance sheets on a net basis. We do not collect income taxes from our customers on behalf of governmental authorities.

Contingencies — In the normal course of business, we are confronted with issues or events that may result in a contingent liability. These generally relate to lawsuits, claims made by third parties or the action of various regulatory agencies. For such matters, we record liabilities when they are considered probable and estimable, based on currently available facts and our estimates of the ultimate outcome or resolution of the liability in the future. We maintain liability insurance for various risks associated with the operation of our natural gas pipelines and facilities, including for property damage and bodily injury. These liability insurance policies generally require us to be responsible for the first $1.0 million (self-insured retention) of each incident. To the extent a loss contingency exceeds the self-insurance retention, we record an insurance receivable when recovery is considered probable. Upon reaching a settlement, the loss contingency is deemed resolved and recorded in accounts payable and accrued liabilities until paid. Loss contingencies and any related insurance recovery receivables reflect our best estimate of these amounts as of the date of this report. Actual results may differ from estimates, depending on actual outcomes or changes in the facts or expectations surrounding each potential exposure.

We record a liability at fair value for an asset retirement obligation when the legal obligation to retire the asset has been incurred with an offsetting increase to the carrying value of the related asset. We believe we have a legal obligation to retire our natural gas storage facilities. However, we have not recognized an asset retirement obligation associated with our storage facilities because we are not able to determine the settlement date of this obligation as we do not anticipate taking our storage facilities out of service permanently. Therefore, we cannot reasonably estimate the fair value of this obligation.

Subsequent events — Except as noted in Note 7 and Note 8 to the consolidated financial statements regarding the execution of a new lease and the public offering of senior notes, no events occurred subsequent to the balance sheet date that would require recognition or disclosure in the consolidated financial statements.

3. Regulation

Our distribution and pipeline and storage operations are subject to regulation with respect to rates, service, maintenance of accounting records and various other matters by the respective regulatory authorities in the states in which we operate, which creates regulatory assets and liabilities that are recovered from or refunded to customers over time through the ratemaking process. Substantially all of our regulatory assets are recorded as a component of other current assets and deferred charges and other assets and our regulatory liabilities are recorded as a component of other current liabilities and deferred credits and other liabilities. Deferred gas costs are recorded either in other current assets or liabilities and the long-term portion of regulatory excess deferred taxes and regulatory cost of removal obligation are reported separately. Significant regulatory assets and liabilities as of September 30, 2023 and 2022 included the following:

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	September 30	
	2023	2022
	(In thousands)	
Regulatory assets:		
Pension and postretirement benefit costs	$ 20,629	$ 31,122
Infrastructure mechanisms [1]	229,996	235,972
Winter Storm Uri incremental costs	32,115	2,109,454
Deferred gas costs	148,297	119,742
Regulatory excess deferred taxes [2]	47,549	47,311
Recoverable loss on reacquired debt	3,238	3,406
Deferred pipeline record collection costs	54,008	36,898
Other	19,096	21,467
	$ 554,928	$ 2,605,372
Regulatory liabilities:		
Regulatory excess deferred taxes [2]	$ 384,513	$ 545,021
Regulatory cost of removal obligation	582,867	568,307
Deferred gas costs	23,093	28,834
APT annual adjustment mechanism	49,894	31,138
Pension and postretirement benefit costs	215,913	156,857
Other	28,054	23,013
	$ 1,284,334	$ 1,353,170

(1) Infrastructure mechanisms in Texas, Louisiana and Tennessee allow for the deferral of all eligible expenses associated with capital expenditures incurred pursuant to these rules, including the recording of interest on the deferred expenses until the next rate proceeding (rate case or annual rate filing), at which time investment and costs would be recovered through base rates.

(2) Regulatory excess deferred taxes represent changes in our net deferred tax liability related to our cost of service ratemaking due to the enactment of the Tax Cuts and Jobs Act of 2017 (the "TCJA") and a Kansas legislative change enacted in fiscal 2020. See Notes 13 and 15 to the consolidated financial statements for further information.

Winter Storm Uri

A historic winter storm impacted supply, market pricing and demand for natural gas in our service territories in mid-February 2021. Due to the unprecedented level of purchased gas costs incurred during Winter Storm Uri, the Kansas Corporation Commission (KCC) and the Railroad Commission of Texas (RRC) issued orders in 2021 authorizing natural gas utilities to record regulatory assets to account for the extraordinary costs associated with the winter storm.

Kansas

In Kansas, we recorded a $92.3 million regulatory asset in fiscal 2021 for costs incurred during Winter Storm Uri. As further discussed in Note 10 to the consolidated financial statements, we relieved this regulatory asset through a securitization transaction that was completed in June 2023.

Texas

In Texas, we recorded a $2.02 billion regulatory asset in fiscal 2021 for costs incurred during Winter Storm Uri. In 2021, the Texas Legislature passed House Bill 1520, which authorized the RRC to issue a statewide securitization financing order directing the Texas Public Finance Authority (TPFA) to issue bonds (customer rate relief bonds) for gas utilities that chose to participate to recover extraordinary costs incurred to secure gas supply and to provide service during Winter Storm Uri, and to restore gas utility systems after that event, thereby providing rate relief to customers by extending the period during which these extraordinary costs would otherwise be recovered and supporting the financial strength and stability of gas utility companies.

In March 2023, the Texas Natural Gas Securitization Finance Corporation (the Finance Corporation), with the authority of the TPFA, issued $3.5 billion in customer rate relief bonds with varying scheduled final maturities from 12 to 18 years. The bonds are obligations of the Finance Corporation, payable from the customer rate relief charges and other bond collateral, and are not an obligation of Atmos Energy. We collected $2.02 billion of this amount and relieved the regulatory asset. U.S. GAAP does not provide comprehensive recognition and measurement guidance for many forms of government assistance received by

business entities. Accordingly, we accounted for the proceeds received from the Finance Corporation by analogy to International Accounting Standards No. 20, "Accounting for Government Grants and Disclosure of Government Assistance" consistent with a grant related to income. The proceeds received and the corresponding derecognition of the regulatory asset have been reflected in purchased gas cost and interest charges in our consolidated statements of comprehensive income. As the proceeds reflect the recovery of the regulatory asset, there was no impact to earnings. The proceeds are reflected in our consolidated statements of cash flow as an increase in operating cash flow.

We began collecting the customer rate relief charges on October 1, 2023, and any such property collected is solely owned by the Finance Corporation and not available to pay creditors of Atmos Energy.

Additionally, we deferred $32.4 million in carrying costs incurred after September 1, 2022. Effective October 1, 2023, we began recovering $21.2 million over a 12-month period. This amount is recorded as a current asset in other current assets as of September 30, 2023. We anticipate recovering the remaining $10.9 million in future regulatory filings and have recorded this amount as a long-term asset in deferred charges and other assets as of September 30, 2023.

4. Segment Information

As of September 30, 2023, we manage and review our consolidated operations through the following two reportable segments:

- The *distribution segment* is primarily comprised of our regulated natural gas distribution and related sales operations in eight states.
- The *pipeline and storage segment* is comprised primarily of the pipeline and storage operations of our Atmos Pipeline-Texas division and our natural gas transmission operations in Louisiana.

Our determination of reportable segments considers the strategic operating units under which we manage sales of various products and services to customers. Although our distribution segment operations are geographically dispersed, they are aggregated and reported as a single segment as each natural gas distribution division has similar economic characteristics. In addition, because the pipeline and storage operations of our Atmos Pipeline-Texas division and our natural gas transmission operations in Louisiana have similar economic characteristics, they have been aggregated and reported as a single segment.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. We evaluate performance based on net income or loss of the respective operating units. We allocate interest and pension expense to the pipeline and storage segment; however, there is no debt or pension liability recorded on the pipeline and storage segment balance sheet. All material intercompany transactions have been eliminated; however, we have not eliminated intercompany profits when such amounts are probable of recovery under the affiliates' rate regulation process. Income taxes are allocated to each segment as if each segment's income taxes were calculated on a separate return basis.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Income statements and capital expenditures by segment are shown in the following tables.

	Year Ended September 30, 2023			
	Distribution	Pipeline and Storage	Eliminations	Consolidated
	(In thousands)			
Operating revenues from external parties	$ 4,096,661	$ 178,696	$ —	$ 4,275,357
Intersegment revenues	3,029	606,478	(609,507)	—
Total operating revenues	4,099,690	785,174	(609,507)	4,275,357
Purchased gas cost	2,061,920	(1,220)	(608,527)	1,452,173
Operation and maintenance expense	565,179	200,707	(980)	764,906
Depreciation and amortization expense	434,721	169,606	—	604,327
Taxes, other than income	345,244	41,560	—	386,804
Operating income	692,626	374,521	—	1,067,147
Other non-operating income	24,988	44,787	—	69,775
Interest charges	77,185	60,096	—	137,281
Income before income taxes	640,429	359,212	—	999,641
Income tax expense	60,032	53,747	—	113,779
Net income	$ 580,397	$ 305,465	$ —	$ 885,862
Capital expenditures	$ 1,927,125	$ 878,848	$ —	$ 2,805,973

	Year Ended September 30, 2022			
	Distribution	Pipeline and Storage	Eliminations	Consolidated
	(In thousands)			
Operating revenues from external parties	$ 4,031,936	$ 169,726	$ —	$ 4,201,662
Intersegment revenues	3,258	523,934	(527,192)	—
Total operating revenues	4,035,194	693,660	(527,192)	4,201,662
Purchased gas cost	2,210,302	(1,583)	(526,063)	1,682,656
Operation and maintenance expense	518,443	192,847	(1,129)	710,161
Depreciation and amortization expense	387,858	147,797	—	535,655
Taxes, other than income	314,046	38,162	—	352,208
Operating income	604,545	316,437	—	920,982
Other non-operating income	6,946	26,791	—	33,737
Interest charges	49,921	52,890	—	102,811
Income before income taxes	561,570	290,338	—	851,908
Income tax expense	39,593	37,917	—	77,510
Net income	$ 521,977	$ 252,421	$ —	$ 774,398
Capital expenditures	$ 1,675,798	$ 768,622	$ —	$ 2,444,420

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Year Ended September 30, 2021			
	Distribution	Pipeline and Storage	Eliminations	Consolidated
	(In thousands)			
Operating revenues from external parties	$ 3,238,753	$ 168,737	$ —	$ 3,407,490
Intersegment revenues	3,220	468,610	(471,830)	—
Total operating revenues	3,241,973	637,347	(471,830)	3,407,490
Purchased gas cost	1,501,695	1,582	(470,560)	1,032,717
Operation and maintenance expense	501,209	179,080	(1,270)	679,019
Depreciation and amortization expense	345,481	132,496	—	477,977
Taxes, other than income	275,074	37,705	—	312,779
Operating income	618,514	286,484	—	904,998
Other non-operating income (expense)	(20,694)	18,549	—	(2,145)
Interest charges	36,629	46,925	—	83,554
Income before income taxes	561,191	258,108	—	819,299
Income tax expense	115,329	38,407	—	153,736
Net income	$ 445,862	$ 219,701	$ —	$ 665,563
Capital expenditures	$ 1,454,195	$ 515,345	$ —	$ 1,969,540

The following table summarizes our revenues from external parties, excluding intersegment revenues, by products and services for the fiscal years ended September 30.

	2023	2022	2021
	(In thousands)		
Distribution revenues:			
Gas sales revenues:			
Residential	$ 2,638,689	$ 2,492,116	$ 2,117,272
Commercial	1,112,236	1,126,189	838,382
Industrial	151,970	224,632	113,171
Public authority and other	62,476	66,956	50,369
Total gas sales revenues	3,965,371	3,909,893	3,119,194
Transportation revenues	119,371	110,905	105,554
Other gas revenues	11,919	11,138	14,005
Total distribution revenues	4,096,661	4,031,936	3,238,753
Pipeline and storage revenues	178,696	169,726	168,737
Total operating revenues	$ 4,275,357	$ 4,201,662	$ 3,407,490

Balance sheet information at September 30, 2023 and 2022 by segment is presented in the following tables.

	September 30, 2023			
	Distribution	Pipeline and Storage	Eliminations	Consolidated
	(In thousands)			
Property, plant and equipment, net	$ 14,402,578	$ 5,204,005	$ —	$ 19,606,583
Total assets	$ 21,716,467	$ 5,504,972	$ (4,704,471)	$ 22,516,968

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	September 30, 2022			
	Distribution	Pipeline and Storage	Eliminations	Consolidated
	(In thousands)			
Property, plant and equipment, net	$ 12,723,532	$ 4,516,707	$ —	$ 17,240,239
Total assets	$ 21,424,586	$ 4,797,206	$ (4,028,803)	$ 22,192,989

5. Earnings Per Share

We use the two-class method of computing earnings per share because we have participating securities in the form of non-vested restricted stock units with a nonforfeitable right to dividend equivalents, for which vesting is predicated solely on the passage of time. The calculation of earnings per share using the two-class method excludes income attributable to these participating securities from the numerator and excludes the dilutive impact of those shares from the denominator. Basic weighted average shares outstanding is calculated based upon the weighted average number of common shares outstanding during the periods presented. Also, this calculation includes fully vested stock awards that have not yet been issued as common stock. Additionally, the weighted average shares outstanding for diluted EPS includes the incremental effects of the forward sale agreements, discussed in Note 9 to the consolidated financial statements, when the impact is dilutive.

Basic and diluted earnings per share for the fiscal years ended September 30 are calculated as follows:

	2023	2022	2021
	(In thousands, except per share data)		
Basic Earnings Per Share			
Net income	$ 885,862	$ 774,398	$ 665,563
Less: Income allocated to participating securities	542	508	465
Net income available to common shareholders	$ 885,320	$ 773,890	$ 665,098
Basic weighted average shares outstanding	145,121	137,830	129,779
Net income per share — Basic	$ 6.10	$ 5.61	$ 5.12
Diluted Earnings Per Share			
Net income available to common shareholders	$ 885,320	$ 773,890	$ 665,098
Effect of dilutive shares	—	—	—
Net income available to common shareholders	$ 885,320	$ 773,890	$ 665,098
Basic weighted average shares outstanding	145,121	137,830	129,779
Dilutive shares	45	266	55
Diluted weighted average shares outstanding	145,166	138,096	129,834
Net income per share — Diluted	$ 6.10	$ 5.60	$ 5.12

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

6. Revenue and Accounts Receivable

The following tables disaggregates our revenue from contracts with customers by customer type and segment and provides a reconciliation to total operating revenues, including intersegment revenues, for the periods presented.

	Year Ended September 30, 2023	
	Distribution	Pipeline and Storage
	(In thousands)	
Gas sales revenues:		
Residential	$ 2,606,658	$ —
Commercial	1,100,773	—
Industrial	151,538	—
Public authority and other	61,345	—
Total gas sales revenues	3,920,314	—
Transportation revenues	121,420	811,968
Miscellaneous revenues	10,044	12,180
Revenues from contracts with customers	4,051,778	824,148
Alternative revenue program revenues	43,139	(38,974)
Other revenues	4,773	—
Total operating revenues	$ 4,099,690	$ 785,174

	Year Ended September 30, 2022	
	Distribution	Pipeline and Storage
Gas sales revenues:		
Residential	$ 2,472,461	$ —
Commercial	1,120,322	—
Industrial	224,427	—
Public authority and other	66,691	—
Total gas sales revenues	3,883,901	—
Transportation revenues	113,043	707,205
Miscellaneous revenues	10,282	13,679
Revenues from contracts with customers	4,007,226	720,884
Alternative revenue program revenues	26,041	(27,224)
Other revenues	1,927	—
Total operating revenues	$ 4,035,194	$ 693,660

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Year Ended September 30, 2021	
	Distribution	Pipeline and Storage
Gas sales revenues:		
Residential	$ 2,129,704	$ —
Commercial	841,145	—
Industrial	113,091	—
Public authority and other	50,565	—
Total gas sales revenues	3,134,505	—
Transportation revenues	107,822	646,416
Miscellaneous revenues	10,971	14,141
Revenues from contracts with customers	3,253,298	660,557
Alternative revenue program revenues	(13,303)	(23,210)
Other revenues	1,978	—
Total operating revenues	$ 3,241,973	$ 637,347

We have alternative revenue programs in each of our segments. In our distribution segment, we have weather-normalization adjustment mechanisms that serve to mitigate the effects of weather on our revenue. In our pipeline and storage segment, APT has a regulatory mechanism that requires that we share with its tariffed customers 75% of the difference between the total non-tariffed revenues earned during a test period and a revenue benchmark established by the RRC. Other revenues includes AEK revenues (see Note 10 to the consolidated financial statements) and other miscellaneous revenues.

Accounts receivable and allowance for uncollectible accounts

Rollforwards of our allowance for uncollectible accounts for the years ended September 30, 2023, 2022 and 2021 are presented in the table below.

In response to the COVID-19 pandemic, beginning in March 2020, regulators issued collection moratoriums, which required us to temporarily suspend our customer collection activities and charging late fees. After regulators lifted these moratoriums, we resumed customer collection activities during the third quarter of fiscal 2021. These regulatory orders influenced our bad debt expense and writeoffs from fiscal 2021 through 2023.

We actively work with our customers experiencing financial hardship to offer flexible payment options and to direct them to aid agencies for financial assistance. Our allowance for uncollectible accounts reflects the expected impact on our customers' ability to pay. Our allowance for uncollectible accounts also reflects the fact that we have the ability to recover the gas cost portion of uncollectible accounts through our gas cost recovery mechanisms in five states, which covers approximately 80 percent of our residential and commercial customers.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Allowance for uncollectible accounts
	(In thousands)
Balance, September 30, 2020	$ 29,949
Current period provisions	43,807
Write-offs charged against allowance	(11,019)
Recoveries of amounts previously written off	1,734
Balance, September 30, 2021	64,471
Current period provisions	16,576
Write-offs charged against allowance	(32,885)
Recoveries of amounts previously written off	1,831
Balance, September 30, 2022	49,993
Current period provisions	22,353
Write-offs charged against allowance	(33,595)
Recoveries of amounts previously written off	2,089
Balance, September 30, 2023	$ 40,840

7. Leases

We utilize operating leases for office and warehouse space, tower space, vehicles and heavy equipment used in our operations. We also have finance leases for certain build-to-suit service centers.

The following table presents our weighted average remaining lease term for our leases.

	September 30, 2023	September 30, 2022
Weighted average remaining lease term (years)		
Finance leases	17.7	18.7
Operating leases	10.1	9.7

The following table represents our weighted average discount rate:

	September 30, 2023	September 30, 2022
Weighted average discount rate		
Finance leases	4.0 %	4.0 %
Operating leases	3.5 %	2.9 %

Lease costs for the years ended September 30, 2023, 2022 and 2021 are presented in the table below. These costs include both amounts recognized in expense and amounts capitalized. For the years ended September 30, 2023, 2022 and 2021 we did not have material short-term lease costs or variable lease costs.

	Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Finance lease cost	$ 4,499	$ 4,314	$ 1,334
Operating lease cost	44,090	43,394	42,349
Total lease cost	$ 48,589	$ 47,708	$ 43,683

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Our ROU assets and lease liabilities are presented as follows on the consolidated balance sheets:

	Balance Sheet Classification	September 30, 2023	September 30, 2022
		(In thousands)	
Assets			
Finance leases	Net Property, Plant and Equipment	$ 47,472	$ 50,118
Operating leases	Deferred charges and other assets	223,366	214,663
Total right-of-use assets		$ 270,838	$ 264,781
Liabilities			
Current			
Finance leases	Current maturities of long-term debt	$ 1,568	$ 1,457
Operating leases	Other current liabilities	35,820	38,644
Noncurrent			
Finance leases	Long-term debt	48,825	50,393
Operating leases	Deferred credits and other liabilities	194,452	184,301
Total lease liabilities		$ 280,665	$ 274,795

One service center lease commenced in the first quarter of fiscal 2024 that impacts our future lease payments. The total future lease payments for this lease is $28.9 million, and is not included in the tables below.

Other pertinent information related to leases was as follows. During the years ended September 30, 2023, 2022 and 2021 amounts paid in cash for our finance leases were not material.

	Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Cash paid amounts included in the measurement of lease liabilities			
Operating cash flows used for operating leases	$ 45,463	$ 45,080	$ 42,013
Right-of-use assets obtained in exchange for lease obligations			
Finance leases	$ —	$ 33,833	$ 10,333
Operating leases	$ 29,976	$ 28,310	$ 25,690

Maturities of our lease liabilities as of September 30, 2023 were as follows by fiscal years:

	Total	Finance Leases	Operating Leases
		(In thousands)	
2024	$ 44,700	$ 3,375	$ 41,325
2025	35,635	3,438	32,197
2026	30,340	3,502	26,838
2027	27,835	3,568	24,267
2028	24,089	3,635	20,454
Thereafter	185,270	52,362	132,908
Total lease payments	347,869	69,880	277,989
Less: Imputed interest	67,204	19,487	47,717
Total	$ 280,665	$ 50,393	$ 230,272
Reported as of September 30, 2023			
Short-term lease liabilities	$ 37,388	$ 1,568	$ 35,820
Long-term lease liabilities	243,277	48,825	194,452
Total lease liabilities	$ 280,665	$ 50,393	$ 230,272

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

8. Debt

Long-term debt

Long-term debt at September 30, 2023 and 2022 consisted of the following:

	2023	2022
	(In thousands)	
Unsecured 0.625% Senior Notes, due March 2023	$ —	$ 1,100,000
Unsecured 3.00% Senior Notes, due June 2027	500,000	500,000
Unsecured 2.625% Senior Notes, due September 2029	500,000	500,000
Unsecured 1.50% Senior Notes, due January 2031	600,000	600,000
Unsecured 5.45% Senior Notes, due October 2032	300,000	—
Unsecured 5.95% Senior Notes, due October 2034	200,000	200,000
Unsecured 5.50% Senior Notes, due June 2041	400,000	400,000
Unsecured 4.15% Senior Notes, due January 2043	500,000	500,000
Unsecured 4.125% Senior Notes, due October 2044	750,000	750,000
Unsecured 4.30% Senior Notes, due October 2048	600,000	600,000
Unsecured 4.125% Senior Notes, due March 2049	450,000	450,000
Unsecured 3.375% Senior Notes, due September 2049	500,000	500,000
Unsecured 2.85% Senior Notes, due February 2052	600,000	600,000
Unsecured 5.75% Senior Notes, due October 2052	500,000	—
Floating-rate Senior Notes, due March 2023	—	1,100,000
Medium term Series A notes, 1995-1, 6.67%, due December 2025	10,000	10,000
Unsecured 6.75% Debentures, due July 2028	150,000	150,000
Finance lease obligations (see Note 7)	50,393	51,850
Total long-term debt	6,610,393	8,011,850
Less:		
Net original issue discount on unsecured senior notes and debentures	6,104	3,704
Debt issuance cost	48,588	46,042
Current maturities	1,568	2,201,457
	$ 6,554,133	$ 5,760,647

Maturities of long-term debt, excluding our finance lease obligations, at September 30, 2023 were as follows by fiscal years (in thousands):

2024	$ —
2025	—
2026	10,000
2027	500,000
2028	150,000
Thereafter	5,900,000
	$ 6,560,000

On October 10, 2023, we completed a public offering of $500 million of 6.20% senior notes due October 2053, with an effective interest rate of 5.56%, after giving effect to the estimated offering costs and settlement of our interest rate swaps, and $400 million of 5.90% senior notes due October 2033, with an effective interest rate of 4.35%, after giving effect to the estimated offering costs and settlement of our interest rate swaps. The net proceeds from the offering, after the underwriting discount and estimated offering expenses, of $889.2 million were used for general corporate purposes. In September 2023, we settled the designated interest rate swaps associated with this offering and received $171.1 million.

On October 3, 2022, we completed a public offering of $500 million of 5.75% senior notes due October 2052, with an effective interest rate of 4.50%, after giving effect to the offering costs and settlement of our interest rate swaps, and

$300 million of 5.45% senior notes due October 2032, with an effective interest rate of 5.57%, after giving effect to the offering costs. The net proceeds from the offering, after the underwriting discount and offering expenses, of $789.4 million were used for general corporate purposes. In September 2022, we settled the interest rate swaps associated with the $500 million offering and received $197.1 million.

On January 14, 2022, we completed a public offering of $200 million of 2.625% senior notes due September 2029, with an effective interest rate of 2.54%, after giving effect to the offering costs. The net proceeds from the offering, after the underwriting discount and offering expenses, of $200.8 million were used to repay our $200 million floating-rate term loan on January 18, 2022.

On October 1, 2021, we completed a public offering of $600 million of 2.85% senior notes due February 2052, with an effective interest rate of 2.58%, after giving effect to the offering costs and settlement of our interest rate swaps. The net proceeds from the offering, after the underwriting discount and offering expenses, of $589.8 million, were used for general corporate purposes. In September 2021, we settled the interest rate swaps associated with this offering and received $62.2 million.

Winter Storm Uri Financing

A historic winter storm impacted supply, market pricing and demand for natural gas in our service territories in mid-February 2021. We experienced unforeseeable and unprecedented market pricing for gas costs, which resulted in aggregated natural gas purchases in February 2021 of approximately $2.3 billion. These gas costs were paid using funds received from a public offering of debt securities completed in March 2021 of $2.2 billion. On March 3, 2023, we entered into a term loan agreement for a $2.02 billion senior unsecured term loan facility and used the proceeds, along with cash on hand, to repay at maturity the outstanding $2.2 billion senior notes that matured on March 9, 2023. On March 23, 2023, we received proceeds from the Finance Corporation in the amount of $2.02 billion and repaid the term loan.

Short-term Debt

We utilize short-term debt to provide cost-effective, short-term financing until it can be replaced with a balance of long-term debt and equity financing that achieves the Company's desired capital structure. Our short-term borrowing requirements are driven primarily by construction work in progress and the seasonal nature of the natural gas business.

Our short-term borrowing requirements are satisfied through a combination of a $1.5 billion commercial paper program and four committed revolving credit facilities with third-party lenders that provide $2.5 billion of total working capital funding.

The primary source of our funding is our commercial paper program, which is supported by a five-year unsecured $1.5 billion credit facility that expires on March 31, 2027. This facility bears interest at a base rate or at a SOFR-based rate for the applicable interest period, plus a margin ranging from zero percent to 0.25 percent for base rate advances or a margin ranging from 0.75 percent to 1.25 percent for SOFR-based advances, based on the Company's credit ratings. Additionally, the facility contains a $250 million accordion feature, which provides the opportunity to increase the total committed loan to $1.75 billion. At September 30, 2023, there was $241.9 million outstanding under our commercial paper program with a weighted average interest rate of 5.46% and weighted average maturities of less than one month. At September 30, 2022, there was $185.0 million outstanding under our commercial paper program.

We also have a $900 million three-year unsecured revolving credit facility, which expires March 31, 2025 and is used to provide additional working capital funding. This facility bears interest at a base rate or at a SOFR-based rate for the applicable interest period, plus a margin ranging from zero percent to 0.25 percent for base rate advances or a margin ranging from 0.75 percent to 1.25 percent for SOFR-based advances, based on the Company's credit ratings. Additionally, the facility contains a $100 million accordion feature, which provides the opportunity to increase the total committed loan to $1.0 billion. At September 30, 2023 and 2022, there were no borrowings outstanding under this facility.

Additionally, we have a $50 million 364-day unsecured facility, which was renewed April 1, 2023 and is used to provide working capital funding. There were no borrowings outstanding under this facility as of September 30, 2023 and 2022.

Finally, we have a $50 million 364-day unsecured revolving credit facility, which was renewed March 31, 2023 and is used to issue letters of credit and to provide working capital funding. At September 30, 2023, there were no borrowings outstanding under the new facility; however, outstanding letters of credit reduced the total amount available to us to $44.4 million.

Debt Covenants

The availability of funds under these credit facilities is subject to conditions specified in the respective credit agreements, all of which we currently satisfy. These conditions include our compliance with financial covenants and the continued accuracy

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

of representations and warranties contained in these agreements. We are required by the financial covenants in each of these facilities to maintain, at the end of each fiscal quarter, a ratio of total-debt-to-total-capitalization of no greater than 70 percent. At September 30, 2023, our total-debt-to-total-capitalization ratio, as defined, was 40 percent. In addition, both the interest margin and the fee that we pay on unused amounts under each of these facilities are subject to adjustment depending upon our credit ratings.

These credit facilities and our public indentures contain usual and customary covenants for our business, including covenants substantially limiting liens, substantial asset sales and mergers. Additionally, our public debt indentures relating to our senior notes and debentures, as well as certain of our revolving credit agreements, each contain a default provision that is triggered if outstanding indebtedness arising out of any other credit agreements in amounts ranging from in excess of $15 million to in excess of $100 million becomes due by acceleration or is not paid at maturity. We were in compliance with all of our debt covenants as of September 30, 2023. If we were unable to comply with our debt covenants, we would likely be required to repay our outstanding balances on demand, provide additional collateral or take other corrective actions.

9. Shareholders' Equity

Shelf Registration, At-the-Market Equity Sales Program and Equity Issuances

On March 31, 2023, we filed a shelf registration statement with the Securities and Exchange Commission (SEC) that allows us to issue up to $5.0 billion in common stock and/or debt securities, which expires March 31, 2026. This shelf registration statement replaced our previous shelf registration statement which was filed on June 29, 2021. As of the date of this report, $3.1 billion of securities remained available for issuance under the shelf registration statement.

On March 31, 2023, we filed a prospectus supplement under the shelf registration statement relating to an at-the-market (ATM) equity sales program under which we may issue and sell shares of our common stock up to an aggregate offering price of $1.0 billion through March 31, 2026 (including shares of common stock that may be sold pursuant to forward sale agreements entered into concurrently with the ATM equity sales program).

During the year ended September 30, 2023, we executed forward sales under our ATM equity sales programs with various forward sellers who borrowed and sold 4,207,126 shares of our common stock at an aggregate price of $496.5 million. During the year ended September 30, 2023, we also settled forward sale agreements with respect to 7,272,261 shares that had been borrowed and sold by various forward sellers under the ATM program for net proceeds of $806.9 million. As of September 30, 2023, $760.5 million of equity was available for issuance under our existing ATM program. Additionally, we had $466.8 million in available proceeds from outstanding forward sale agreements, as detailed below.

Maturity	Shares Available	Net Proceeds Available (In Thousands)	Forward Price
March 28, 2024	944,296	$ 112,238	$ 118.86
June 28, 2024	927,939	109,495	118.00
September 30, 2024	1,133,978	132,762	117.08
December 31, 2024	954,812	112,308	117.62
Total	3,961,025	$ 466,803	$ 117.85

Accumulated Other Comprehensive Income (Loss)

We record deferred gains (losses) in accumulated other comprehensive income (AOCI) related to available-for-sale debt securities and interest rate agreement cash flow hedges. Deferred gains (losses) for our available-for-sale debt securities are recognized in earnings upon settlement, while deferred gains (losses) related to our interest rate agreement cash flow hedges are recognized in earnings as a component of interest charges, as they are amortized. The following tables provide the components of our accumulated other comprehensive income (loss) balances, net of the related tax effects allocated to each component of other comprehensive income (loss).

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Available-for-Sale Securities	Interest Rate Agreement Cash Flow Hedges	Total
		(In thousands)	
September 30, 2022	$ (495)	$ 369,607	$ 369,112
Other comprehensive income before reclassifications	126	151,410	151,536
Amounts reclassified from accumulated other comprehensive income	—	(2,120)	(2,120)
Net current-period other comprehensive income	126	149,290	149,416
September 30, 2023	$ (369)	$ 518,897	$ 518,528

	Available-for-Sale Securities	Interest Rate Agreement Cash Flow Hedges	Total
		(In thousands)	
September 30, 2021	$ 47	$ 69,756	$ 69,803
Other comprehensive income (loss) before reclassifications	(542)	296,875	296,333
Amounts reclassified from accumulated other comprehensive income	—	2,976	2,976
Net current-period other comprehensive income (loss)	(542)	299,851	299,309
September 30, 2022	$ (495)	$ 369,607	$ 369,112

10. Variable Interest Entity

In 2021, the Kansas State Legislature enacted securitization legislation, which permitted a natural gas public utility, in its sole discretion, to apply to the KCC for a financing order for the recovery of qualified extraordinary costs through the issuance of bonds. In September 2021, we filed with the KCC an application to securitize extraordinary gas costs incurred during Winter Storm Uri, which was approved in October 2022.

Atmos Energy Kansas Securitization I, LLC (AEK), a special-purpose entity wholly owned by Atmos Energy, was formed for the purpose of issuing securitized bonds to recover extraordinary costs incurred during Winter Storm Uri. In June 2023, AEK completed a public offering of $95 million of 5.155% Series 2023-A Senior Secured Securitized Utility Tariff Bonds with a term of 10 years and semi-annual payments of principal and interest. The net proceeds from the offering, after the underwriting discount and offering expenses, of $93.7 million were primarily used to purchase the Securitized Utility Tariff Property from Atmos Energy for $92.3 million. The bonds are governed by an indenture between AEK and the indenture trustee. The indenture contains certain covenants that restrict AEK's ability to sell, transfer, convey, exchange or otherwise dispose of its assets. AEK's assets cannot be used to settle Atmos Energy's obligations, and the holders of the Securitized Utility Tariff Bonds have no recourse against Atmos Energy.

Because AEK's equity at risk is less than 1% of its total assets, it is considered to be a variable interest entity. Atmos Energy has the power to direct the most significant financial and operating activities of AEK, including billing, collections and remittance of customer cash receipts to enable AEK to service the principal and interest payments due under the Securitized Utility Tariff Bonds. Atmos Energy also has the obligation to absorb losses and rights to receive returns from AEK. Therefore, Atmos Energy is the primary beneficiary of AEK, and as a result, AEK is included in the consolidated financial statements of Atmos Energy. No gain or loss was recognized upon initial consolidation.

The Securitized Utility Tariff Property that was acquired by AEK is classified as a securitized intangible asset on our consolidated balance sheets. This securitized intangible asset will be amortized over 10 years, the estimated period needed to collect the required amounts from Atmos Energy's customers to service the Securitized Utility Tariff Bonds, with a remaining weighted average amortization period of 5.19 years as of September 30, 2023. The amortization expense related to the securitized intangible asset is included in depreciation and amortization expense in our consolidated statements of comprehensive income.

The following table summarizes the impact of AEK on our consolidated balance sheet, for the period indicated:

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	September 30, 2023
	(In thousands)
Restricted cash and cash equivalents	$ 3,844
Other current assets	$ 11
Securitized intangible asset, net	$ 92,202
Accrued interest	$ 1,374
Current maturities of securitized long-term debt	$ 9,922
Securitized long-term debt	$ 85,078

The following table summarizes the impact of AEK on our consolidated statement of comprehensive income, for the period indicated:

	Year Ended September 30, 2023
	(In thousands)
Operating revenues	$ 2,743
Amortization expense	(1,398)
Interest expense, net	(1,345)
Income before income taxes	$ —

The following table summarizes the maturities of the securitized long-term debt and the amortization expense related to the securitized intangible asset expected to be recognized in our consolidated statements of comprehensive income:

	Maturities of Securitized Long-Term Debt	Amortization Expense of Securitized Intangible Asset
For the fiscal year ending:	(In thousands)	
2024	$ 9,922	$ 8,159
2025	8,207	8,207
2026	8,635	8,635
2027	9,086	9,086
2028	9,561	9,561
Thereafter	49,589	48,554
Total	$ 95,000	$ 92,202

The securitized long-term debt is recorded at carrying value. The fair value of the securitized long-term debt is determined using third party market value quotations, which are considered Level 2 fair value measurements for debt instruments where fair value is determined using the most recent available quoted market price. The carrying value and fair value of the securitized long-term debt as of September 30, 2023 is $95.0 million and $92.3 million.

11. Retirement and Postretirement Employee Benefit Plans

We have both funded and unfunded noncontributory defined benefit plans that together cover most of our employees. We also maintain a postretirement plan that provides health care benefits to retired employees. Finally, we sponsor a defined contribution plan that covers substantially all employees. These plans are discussed in further detail below.

As a rate regulated entity, most of our net periodic pension and other postretirement benefits costs are recoverable through our rates over a period of up to 15 years. A portion of these costs are capitalized into our rate base or deferred as a regulatory asset or liability. The remaining costs are recorded as a component of operation and maintenance expense or other non-operating expense. Additionally, the amounts that have not yet been recognized in net periodic pension cost that have been recorded as regulatory assets or liabilities are as follows:

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Employee Pension Plan	Supplemental Executive Retirement Plans	Postretirement Plan	Total
		(In thousands)		
September 30, 2023				
Unrecognized prior service credit	$ —	$ —	$ (37,937)	$ (37,937)
Unrecognized actuarial (gain) loss	(72,129)	12,314	(118,161)	(177,976)
	$ (72,129)	$ 12,314	$ (156,098)	$ (215,913)
September 30, 2022				
Unrecognized prior service credit	$ (121)	$ —	$ (51,079)	$ (51,200)
Unrecognized actuarial (gain) loss	(32,159)	14,029	(87,527)	(105,657)
	$ (32,280)	$ 14,029	$ (138,606)	$ (156,857)

Defined Benefit Plans

Employee Pension Plan

As of September 30, 2023, we maintained one cash balance defined benefit plan, the Atmos Energy Corporation Pension Account Plan (the Pension Plan). The Pension Plan was established effective January 1999 and covers most of the employees of Atmos Energy that were hired on or before September 30, 2010. Effective October 1, 2010, the Pension Plan was closed to new participants. The assets of the Pension Plan are held within the Atmos Energy Corporation Master Retirement Trust (the Master Trust).

Opening account balances were established for participants as of January 1999 equal to the present value of their respective accrued benefits under the pension plans which were previously in effect as of December 31, 1998. The Pension Plan credits an allocation to each participant's account at the end of each year according to a formula based on the participant's age, service and total pay (excluding incentive pay). In addition, at the end of each year, a participant's account is credited with interest on the employee's prior year account balance. Participants are fully vested in their account balances after three years of service and may choose to receive their account balances as a lump sum or an annuity.

Generally, our funding policy is to contribute annually an amount in accordance with the requirements of the Employee Retirement Income Security Act of 1974 (ERISA), including the funding requirements under the Pension Protection Act of 2006 (PPA). However, additional voluntary contributions are made from time to time as considered necessary. Contributions are intended to provide not only for benefits attributed to service to date but also for those expected to be earned in the future.

During fiscal 2023 and 2022, we contributed $8.0 million and $8.5 million in cash to the Pension Plan to achieve a desired level of funding while maximizing the tax deductibility of this payment. Based upon market conditions at September 30, 2023, the current funded position of the Pension Plan and the funding requirements under the PPA, we do not anticipate a minimum required contribution for fiscal 2024. However, we may consider whether a voluntary contribution is prudent to maintain certain funding levels.

We make investment decisions and evaluate performance of the assets in the Master Trust on a medium-term horizon of at least three to five years. We also consider our current financial status when making recommendations and decisions regarding the Master Trust's assets. Finally, we strive to ensure the Master Trust's assets are appropriately invested to maintain an acceptable level of risk and meet the Master Trust's long-term asset investment policy adopted by the Qualified Retirement Plans and Trusts Committee, comprised of a group of executives appointed by the Board of Directors to oversee the Company's employee pension plan, defined contribution plan and postretirement benefit plan.

To achieve these objectives, we invest the Master Trust's assets in equity securities, fixed income securities, interests in commingled pension trust funds, other investment assets and cash and cash equivalents. Investments in equity securities are diversified among the market's various subsectors in an effort to diversify risk and maximize returns. Fixed income securities are invested in investment grade securities. Cash equivalents are invested in securities that either are short term (less than 180 days) or readily convertible to cash with modest risk.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table presents asset allocation information for the Master Trust as of September 30, 2023 and 2022.

Security Class	Targeted Allocation Range	Actual Allocation September 30	
		2023	2022
Domestic equities	35%-55%	42.9%	39.7%
International equities	10%-20%	16.0%	14.6%
Fixed income	5%-45%	19.8%	16.0%
Company stock	0%-15%	15.1%	15.3%
Other assets	0%-20%	6.2%	14.4%

At September 30, 2023 and 2022, the Pension Plan held 716,700 shares of our common stock which represented 15.1 percent and 15.3 percent of total Pension Plan assets. These shares generated dividend income for the Pension Plan of approximately $2.1 million and $1.9 million during fiscal 2023 and 2022.

Our Pension Plan expenses and liabilities are determined on an actuarial basis and are affected by numerous assumptions and estimates including the market value of plan assets, estimates of the expected return on plan assets and assumed discount rates and demographic data. We review the estimates and assumptions underlying our Pension Plan annually based upon a September 30 measurement date. The development of our assumptions is fully described in our significant accounting policies in Note 2 to the consolidated financial statements. The actuarial assumptions used to determine the pension liability for the Pension Plan was determined as of September 30, 2023 and 2022 and the actuarial assumptions used to determine the net periodic pension cost for the Pension Plan was determined as of September 30, 2022, 2021 and 2020.

Additional assumptions are presented in the following table:

	Pension Liability		Pension Cost		
	2023	2022	2023	2022	2021
Discount rate	6.10 %	5.66 %	5.66 %	2.97 %	2.80 %
Rate of compensation increase	3.50 %	3.50 %	3.50 %	3.50 %	3.50 %
Expected return on plan assets	6.25 %	6.25 %	6.25 %	6.25 %	6.25 %
Interest crediting rate	4.69 %	4.69 %	4.69 %	4.69 %	4.69 %

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table presents the Pension Plan's accumulated benefit obligation, projected benefit obligation and funded status as of September 30, 2023 and 2022:

	2023	2022
	(In thousands)	
Accumulated benefit obligation	$ 412,160	$ 428,629
Change in projected benefit obligation:		
Benefit obligation at beginning of year	$ 449,527	$ 596,029
Service cost	10,805	16,165
Interest cost	24,924	17,606
Actuarial gain	(16,085)	(141,567)
Benefits paid	(37,611)	(38,706)
Benefit obligation at end of year	431,560	449,527
Change in plan assets:		
Fair value of plan assets at beginning of year	479,025	596,806
Actual return on plan assets	52,998	(87,575)
Employer contributions	8,000	8,500
Benefits paid	(37,611)	(38,706)
Fair value of plan assets at end of year	502,412	479,025
Reconciliation:		
Funded status	70,852	29,498
Unrecognized prior service cost	—	—
Unrecognized net loss	—	—
Net amount recognized	$ 70,852	$ 29,498

Net periodic pension cost for the Pension Plan for fiscal 2023, 2022 and 2021 is presented in the following table.

	Fiscal Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Components of net periodic pension cost:			
Service cost	$ 10,805	$ 16,165	$ 17,369
Interest cost [1]	24,924	17,606	16,883
Expected return on assets [1]	(29,113)	(29,531)	(27,913)
Amortization of prior service credit [1]	(121)	(231)	(231)
Recognized actuarial loss [1]	—	4,638	8,686
Net periodic pension cost	$ 6,495	$ 8,647	$ 14,794

(1) The components of net periodic cost other than the service cost component are included in the line item other non-operating income (expense) in the consolidated statements of comprehensive income or are capitalized on the consolidated balance sheets as a regulatory asset or liability, as described in Note 2 to the consolidated financial statements.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following tables set forth by level, within the fair value hierarchy, the Pension Plan's assets at fair value as of September 30, 2023 and 2022. As required by authoritative accounting literature, assets are categorized in their entirety based on the lowest level of input that is significant to the fair value measurement. The methods used to determine fair value for the assets held by the Pension Plan are fully described in Note 2 to the consolidated financial statements. Investments in our common/collective trusts and limited partnerships that are measured at net asset value per share equivalent are not classified in the fair value hierarchy. The net asset value amounts presented are intended to reconcile the fair value hierarchy to the total investments. In addition to the assets shown below, the Pension Plan had net accounts receivable of $0.4 million and $2.4 million at September 30, 2023 and 2022, which materially approximates fair value due to the short-term nature of these assets.

	Assets at Fair Value as of September 30, 2023			
	Level 1	Level 2	Level 3	Total
	(In thousands)			
Investments:				
Common stocks	$ 243,600	$ —	$ —	$ 243,600
Money market funds	—	30,965	—	30,965
Registered investment companies	69,439	—	—	69,439
Government securities:				
Mortgage-backed securities	—	17,685	—	17,685
U.S. treasuries	8,461	27	—	8,488
Corporate bonds	—	23,357	—	23,357
Total investments measured at fair value	$ 321,500	$ 72,034	$ —	393,534
Investments measured at net asset value:				
Common/collective trusts [1]				88,122
Limited partnerships [1]				20,329
Total investments				$ 501,985

	Assets at Fair Value as of September 30, 2022			
	Level 1	Level 2	Level 3	Total
	(In thousands)			
Investments:				
Common stocks	$ 210,325	$ —	$ —	$ 210,325
Money market funds	—	14,490	—	14,490
Registered investment companies	53,401	—	—	53,401
Government securities:				
Mortgage-backed securities	—	14,175	—	14,175
U.S. treasuries	3,681	28	—	3,709
Corporate bonds	—	22,320	—	22,320
Total investments measured at fair value	$ 267,407	$ 51,013	$ —	318,420
Investments measured at net asset value:				
Common/collective trusts [1]				86,891
Limited partnerships [1]				71,331
Total investments				$ 476,642

(1) The fair value of our common/collective trusts and limited partnerships are measured using the net asset value per share practical expedient. There are no redemption restrictions, redemption notice periods or unfunded commitments for these investments. The redemption frequency is daily.

Supplemental Executive Retirement Plans

We have three nonqualified supplemental plans (the Supplemental Plans) which provide additional pension, disability and death benefits to our officers and certain other employees of the Company.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Supplemental Executive Benefits Plan (SEBP) covers our corporate officers and certain other employees of the Company who were employed on or before August 12, 1998. The SEBP is a defined benefit arrangement which provides a benefit equal to 75 percent of covered compensation under which benefits paid from the underlying qualified defined benefit plan are an offset to the benefits under the SEBP.

In August 1998, we adopted the Supplemental Executive Retirement Plan (SERP) (formerly known as the Performance-Based Supplemental Executive Benefits Plan), which covers all corporate officers selected to participate in the plan between August 12, 1998 and August 5, 2009. The SERP is a defined benefit arrangement which provides a benefit equal to 60 percent of covered compensation under which benefits paid from the underlying qualified defined benefit plan are an offset to the benefits under the SERP.

Effective August 5, 2009, we adopted a new defined benefit Supplemental Executive Retirement Plan (the 2009 SERP), for corporate officers or any other employees selected at the discretion of the Board. Under the 2009 SERP, a nominal account has been established for each participant, to which the Company contributes at the end of each calendar year an amount equal to ten percent (25 percent for members of the Management Committee appointed on or after January 1, 2016) of the total of each participant's base salary and cash incentive compensation earned during each prior calendar year, beginning December 31, 2009. The benefits vest after three years of service and attainment of age 55 and earn interest credits at the same annual rate as the Company's Pension Plan.

During fiscal 2023, we recognized a settlement charge of $1.0 million and paid a $5.6 million lump sum in relation to the retirement of certain executives. During fiscal 2021, we recognized a settlement charge of $9.2 million and paid a $25.7 million lump sum in relation to the retirements of certain executives.

We review the estimates and assumptions underlying our Supplemental Plans annually based upon a September 30 measurement date using the same techniques as our Pension Plan. The actuarial assumptions used to determine the pension liability for the Supplemental Plans were determined as of September 30, 2023 and 2022 and the actuarial assumptions used to determine the net periodic pension cost for the Supplemental Plans were determined as of September 30, 2022, 2021 and 2020. These assumptions are presented in the following table:

	Pension Liability		Pension Cost		
	2023	2022	2023	2022	2021
Discount rate [1]	6.17 %	5.71 %	5.50 %	2.57 %	2.90 %
Rate of compensation increase	3.50 %	3.50 %	3.50 %	3.50 %	3.50 %
Interest crediting rate	4.69 %	4.69 %	4.69 %	4.69 %	4.69 %

(1) Reflects a weighted average discount rate for pension cost for fiscal 2023 and 2021 due to the settlements during the year.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table presents the Supplemental Plans' accumulated benefit obligation, projected benefit obligation and funded status as of September 30, 2023 and 2022:

	2023	2022
	(In thousands)	
Accumulated benefit obligation	$ 75,687	$ 79,233
Change in projected benefit obligation:		
Benefit obligation at beginning of year	$ 80,775	$ 104,301
Service cost	845	1,129
Interest cost	4,227	2,647
Actuarial (gain) loss	6	(22,471)
Benefits paid	(4,368)	(4,831)
Settlements	(5,587)	—
Benefit obligation at end of year	75,898	80,775
Change in plan assets:		
Fair value of plan assets at beginning of year	—	—
Employer contribution	—	—
Benefits paid	—	—
Settlements	—	—
Fair value of plan assets at end of year	—	—
Reconciliation:		
Funded status	(75,898)	(80,775)
Unrecognized prior service cost	—	—
Unrecognized net loss	—	—
Accrued pension cost	$ (75,898)	$ (80,775)

Assets for the Supplemental Plans are held in separate rabbi trusts. At September 30, 2023 and 2022, assets held in the rabbi trusts consisted of equity securities of $31.5 million and $30.2 million, which are included in our fair value disclosures in Note 17 to the consolidated financial statements.

Net periodic pension cost for the Supplemental Plans for fiscal 2023, 2022 and 2021 is presented in the following table.

	Fiscal Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Components of net periodic pension cost:			
Service cost	$ 845	$ 1,129	$ 1,067
Interest cost [1]	4,227	2,647	3,180
Recognized actuarial loss [1]	691	3,166	3,560
Settlements [1]	1,030	—	9,151
Net periodic pension cost	$ 6,793	$ 6,942	$ 16,958

(1) The components of net periodic cost other than the service cost component are included in the line item other non-operating income (expense) in the consolidated statements of comprehensive income or are capitalized on the consolidated balance sheets as a regulatory asset or liability, as described in Note 2 to the consolidated financial statements.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Estimated Future Benefit Payments

The following benefit payments for our defined benefit plans, which reflect expected future service, as appropriate, are expected to be paid in the following fiscal years:

	Pension Plan	Supplemental Plans
	(In thousands)	
2024	$ 39,151	$ 9,660
2025	39,078	30,647
2026	40,537	6,705
2027	40,543	3,902
2028	40,108	4,658
2029-2033	192,754	31,740

Postretirement Benefits Plan

We sponsor the Retiree Medical Plan for Retirees and Disabled Employees of Atmos Energy Corporation (the Retiree Medical Plan). This plan provides medical and prescription drug protection to all qualified participants based on their date of retirement. The Retiree Medical Plan provides different levels of benefits depending on the level of coverage chosen by the participants and the terms of predecessor plans; however, we generally pay 80 percent of the projected net claims and administrative costs and participants pay the remaining 20 percent. Effective January 1, 2022, the Retiree Medical Plan was amended to change the post-65 retiree coverage to Via Benefits with an Atmos Energy funded Health Reimbursement Account. Eligible post-65 retirees and post-65 spouses will be able to elect coverage through Via Benefits, including those that previously deferred or declined retiree coverage.

Generally, our funding policy is to contribute annually an amount in accordance with the requirements of ERISA. However, additional voluntary contributions are made annually as considered necessary. Contributions are intended to provide not only for benefits attributed to service to date but also for those expected to be earned in the future. We expect to contribute between $10 million and $15 million to our Retiree Medical Plan during fiscal 2024.

We maintain a formal investment policy with respect to the assets in our Retiree Medical Plan to ensure the assets funding the Retiree Medical Plan are appropriately invested to maintain an acceptable level of risk. We also consider our current financial status when making recommendations and decisions regarding the Retiree Medical Plan.

We currently invest the assets funding our Retiree Medical Plan in diversified investment funds which consist of common stocks, preferred stocks and fixed income securities. The diversified investment funds may invest up to 75 percent of assets in common stocks and convertible securities. The following table presents asset allocation information for the Retiree Medical Plan assets as of September 30, 2023 and 2022.

	Actual Allocation September 30	
Security Class	2023	2022
Diversified investment funds	98.2%	97.7%
Cash and cash equivalents	1.8%	2.3%

We review the estimates and assumptions underlying our Retiree Medical Plan annually based upon a September 30 measurement date using the same techniques as our Pension Plan and Supplemental Plans. The actuarial assumptions used to determine the pension liability for our Retiree Medical Plan were determined as of September 30, 2023 and 2022 and the actuarial assumptions used to determine the net periodic pension cost for the Retiree Medical Plan were determined as of September 30, 2022, 2021 and 2020.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The assumptions are presented in the following table:

	Postretirement Liability		Postretirement Cost		
	2023	2022	2023	2022	2021
Discount rate	6.06 %	5.61 %	5.61 %	3.01 %	2.80 %
Expected return on plan assets	4.94 %	4.94 %	4.94 %	4.94 %	4.94 %
Initial trend rate	6.50 %	6.25 %	6.25 %	6.25 %	6.25 %
Ultimate trend rate	5.00 %	4.75 %	4.75 %	5.00 %	5.00 %
Ultimate trend reached in	2030	2029	2029	2027	2026

The following table presents the Retiree Medical Plan's benefit obligation and funded status as of September 30, 2023 and 2022:

	2023	2022
	(In thousands)	
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 250,228	$ 355,156
Service cost	6,183	10,235
Interest cost	13,911	10,734
Plan participants' contributions	2,053	3,210
Actuarial (gain) loss	(21,468)	(112,748)
Benefits paid	(16,903)	(16,359)
Benefit obligation at end of year	234,004	250,228
Change in plan assets:		
Fair value of plan assets at beginning of year	229,686	268,199
Actual return on plan assets	27,833	(40,113)
Employer contributions	—	1,600
Benefits paid	(1,719)	—
Fair value of plan assets at end of year	255,800	229,686
Reconciliation:		
Funded status	21,796	(20,542)
Unrecognized transition obligation	—	—
Unrecognized prior service cost	—	—
Unrecognized net loss	—	—
Accrued postretirement cost	$ 21,796	$ (20,542)

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Net periodic postretirement cost for the Retiree Medical Plan for fiscal 2023, 2022 and 2021 is presented in the following table.

	Fiscal Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Components of net periodic postretirement cost:			
Service cost	$ 6,183	$ 10,235	$ 11,000
Interest cost [1]	13,911	10,734	15,372
Expected return on assets [1]	(11,215)	(13,249)	(10,455)
Amortization of prior service (credit) cost [1]	(13,142)	(13,234)	30,533
Recognized actuarial (gain) loss [1]	(7,452)	—	1,172
Net periodic postretirement cost	$ (11,715)	$ (5,514)	$ 47,622

(1) The components of net periodic cost other than the service cost component are included in the line item other non-operating income (expense) in the consolidated statements of comprehensive income or are capitalized on the consolidated balance sheets as a regulatory asset or liability, as described in Note 2 to the consolidated financial statements.

We are currently recovering other postretirement benefits costs through our regulated rates in substantially all of our service areas under accrual accounting as prescribed by accounting principles generally accepted in the United States. Other postretirement benefits costs have been specifically addressed in rate orders in each jurisdiction served by our Kentucky/Mid-States, West Texas, Mid-Tex and Mississippi Divisions as well as our Kansas jurisdiction and APT or have been included in a rate case and not disallowed. Management believes that this accounting method is appropriate and will continue to seek rate recovery of accrual-based expenses in its ratemaking jurisdictions that have not yet approved the recovery of these expenses.

The following tables set forth by level, within the fair value hierarchy, the Retiree Medical Plan's assets at fair value as of September 30, 2023 and 2022. The methods used to determine fair value for the assets held by the Retiree Medical Plan are fully described in Note 2 to the consolidated financial statements.

	Assets at Fair Value as of September 30, 2023			
	Level 1	Level 2	Level 3	Total
	(In thousands)			
Investments:				
Money market funds	$ —	$ 4,759	$ —	$ 4,759
Registered investment companies	251,041	—	—	251,041
Total investments measured at fair value	$ 251,041	$ 4,759	$ —	$ 255,800

	Assets at Fair Value as of September 30, 2022			
	Level 1	Level 2	Level 3	Total
	(In thousands)			
Investments:				
Money market funds	$ —	$ 5,214	$ —	$ 5,214
Registered investment companies	224,472	—	—	224,472
Total investments measured at fair value	$ 224,472	$ 5,214	$ —	$ 229,686

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Estimated Future Benefit Payments

The following benefit payments paid by the Company, retirees and prescription drug subsidies for our Retiree Medical Plan, which reflect expected future service, as appropriate, are expected to be paid in the following fiscal years.

	Company Payments	Retiree Payments	Subsidy Payments	Total Postretireme Benefits
		(In thousands)		
2024	$ 17,124	$ 2,257	$ —	$ 19,3
2025	17,179	2,233	—	19,4
2026	17,228	2,189	—	19,4
2027	17,464	2,095	—	19,5
2028	17,576	1,967	—	19,5
2029-2033	92,555	9,068	—	101,6

Defined Contribution Plan

The Atmos Energy Corporation Retirement Savings Plan and Trust (the Retirement Savings Plan) covers substantially all employees and is subject to the provisions of Section 401(k) of the Internal Revenue Code. Newly hired employees automatically become participants of the Retirement Savings Plan on the date of employment at a contribution rate of four percent. They are eligible to receive matching contributions immediately upon enrollment, which vest after completing one year of service. Participants may elect a salary reduction up to a maximum of 65 percent of eligible compensation, as defined by the Retirement Savings Plan, not to exceed the maximum allowed by the Internal Revenue Service. Effective October 1, 2022, participants who contribute less than 10 percent will have their contribution percent increased by one percent annually until a 10 percent salary deferral rate is achieved, unless the participant opts out of this election. We match 100 percent of a participant's contributions, limited to four percent of the participant's salary. Additionally, employees hired on or after October 1, 2010 receive a fixed annual contribution of four percent of eligible earnings. And, effective October 1, 2022, the Retirement Savings Plan was amended to add an elective Roth deferral feature. Finally, participants are permitted to take out a loan against their accounts subject to certain restrictions.

Matching and fixed annual contributions to the Retirement Savings Plan are expensed as incurred and amounted to $23.9 million, $21.9 million and $20.6 million for fiscal years 2023, 2022 and 2021. At September 30, 2023 and 2022, the Retirement Savings Plan held 1.4 percent and 1.6 percent of our outstanding common stock.

12. Stock and Other Compensation Plans

Stock-Based Compensation Plans

Total stock-based compensation cost was $23.7 million, $22.2 million and $24.1 million for the fiscal years ended September 30, 2023, 2022 and 2021. Of this amount, $13.5 million, $11.5 million and $12.9 million was capitalized.

1998 Long-Term Incentive Plan

We have the 1998 Long-Term Incentive Plan (LTIP), which provides a comprehensive, long-term incentive compensation plan providing for discretionary awards of incentive stock options, non-qualified stock options, stock appreciation rights, bonus stock, time-lapse restricted stock, time-lapse restricted stock units, performance-based restricted stock units and stock units to certain employees and non-employee directors of the Company and our subsidiaries. The objectives of this plan include attracting and retaining the best available personnel and providing for additional performance incentives by providing employees with the opportunity to acquire common stock.

We are authorized to grant awards up to a maximum cumulative amount of 11.2 million shares of common stock under this plan subject to certain adjustment provisions. As of September 30, 2023, non-qualified stock options, bonus stock, time-lapse restricted stock, time-lapse restricted stock units, performance-based restricted stock units and stock units had been issued under this plan, and 0.6 million shares are available for future issuance.

Restricted Stock Units Award Grants

As noted above, the LTIP provides for discretionary awards of restricted stock units to help attract, retain and reward certain employees of Atmos Energy and its subsidiaries. Certain of these awards vest based upon the passage of time and other awards vest based upon the passage of time and the achievement of specified performance targets. The fair value of the awards

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

granted is based on the market price of our stock at the date of grant. We estimate forfeitures using our historical forfeiture rate. The associated expense is recognized ratably over the vesting period. We use authorized and unissued shares to meet share requirements for the vesting of restricted stock units.

Employees who are granted time-lapse restricted stock units under our LTIP have a nonforfeitable right to dividend equivalents that are paid at the same rate and at the same time at which they are paid on shares of stock without restrictions. Time-lapse restricted stock units contain only a service condition that the employee recipients render continuous services to the Company for a period of three years from the date of grant, except for accelerated vesting in the event of death, disability, change of control of the Company or termination without cause (with certain exceptions). There are no performance conditions required to be met for employees to be vested in time-lapse restricted stock units.

Employees who are granted performance-based restricted stock units under our LTIP have a forfeitable right to dividend equivalents that accrue at the same rate at which they are paid on shares of stock without restrictions. Dividend equivalents on the performance-based restricted stock units are paid either in cash or in the form of shares upon the vesting of the award. Performance-based restricted stock units contain a service condition that the employee recipients render continuous services to the Company for a period of three years from the beginning of the applicable three-year performance period, except for accelerated vesting in the event of death, disability, change of control of the Company or termination without cause (with certain exceptions) and a performance condition based on a cumulative earnings per share target amount.

The following summarizes information regarding the restricted stock units granted under the plan during the fiscal years ended September 30, 2023, 2022 and 2021:

	2023		2022		2021	
	Number of Restricted Units	Weighted Average Grant-Date Fair Value	Number of Restricted Units	Weighted Average Grant-Date Fair Value	Number of Restricted Units	Weighted Average Grant-Date Fair Value
Nonvested at beginning of year	381,295	$ 105.69	378,127	$ 102.45	443,279	$ 99.28
Granted	241,436	109.78	179,738	108.07	223,954	102.68
Vested	(220,929)	104.05	(159,019)	100.99	(271,435)	97.44
Forfeited	(11,845)	107.47	(17,551)	103.37	(17,671)	101.48
Nonvested at end of year	389,957	$ 109.10	381,295	$ 105.69	378,127	$ 102.45

As of September 30, 2023, there was $13.9 million of total unrecognized compensation cost related to nonvested restricted stock units granted under the LTIP. That cost is expected to be recognized over a weighted average period of 1.4 years. The fair value of restricted stock vested during the fiscal years ended September 30, 2023, 2022 and 2021 was $22.8 million, $16.0 million and $26.3 million.

Other Plans

Direct Stock Purchase Plan

We maintain a Direct Stock Purchase Plan, open to all investors, which allows participants to have all or part of their cash dividends paid quarterly in additional shares of our common stock. The minimum initial investment required to join the plan is $1,250. Direct Stock Purchase Plan participants may purchase additional shares of our common stock as often as weekly with voluntary cash payments of at least $25, up to an annual maximum of $100,000.

Equity Incentive and Deferred Compensation Plan for Non-Employee Directors

We have an Equity Incentive and Deferred Compensation Plan for Non–Employee Directors, which provides non-employee directors of Atmos Energy with the opportunity to defer receipt, until retirement, of compensation for services rendered to the Company and invest deferred compensation into either a cash account or a stock account.

Other Discretionary Compensation Plans

We have an annual incentive program covering substantially all employees to give each employee an opportunity to share in our financial success based on the achievement of key performance measures considered critical to achieving business objectives for a given year with minimum and maximum thresholds. The Company must meet the minimum threshold for the plan to be funded and distributed to employees. These performance measures may include earnings growth objectives, improved cash flow objectives or crucial customer satisfaction and safety results. We monitor progress towards the achievement of the performance measures throughout the year and record accruals based upon the expected payout using the best estimates

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

available at the time the accrual is recorded. During the last several fiscal years, we have used earnings per share as our sole performance measure.

13. Details of Selected Financial Statement Captions

The following tables provide additional information regarding the composition of certain financial statement captions.

Balance Sheet

Accounts receivable

Accounts receivable was comprised of the following at September 30, 2023 and 2022:

	September 30	
	2023	2022
	(In thousands)	
Billed accounts receivable	$ 198,976	$ 258,333
Unbilled revenue	105,743	121,518
Contributions in aid of construction receivable	17,184	5,390
Insurance receivable	33,697	13,160
Other accounts receivable	13,894	15,300
Total accounts receivable	369,494	413,701
Less: allowance for uncollectible accounts	(40,840)	(49,993)
Net accounts receivable	$ 328,654	$ 363,708

Other current assets

Other current assets as of September 30, 2023 and 2022 were comprised of the following accounts.

	September 30	
	2023	2022
	(In thousands)	
Deferred gas costs	$ 148,297	$ 119,742
Winter Storm Uri incremental costs	21,213	2,020,954
Prepaid expenses	58,029	58,551
Taxes receivable	13,918	11,911
Materials and supplies	34,297	25,880
Assets from risk management activities	4,071	26,207
Other	12,211	11,245
Total	$ 292,036	$ 2,274,490

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Property, plant and equipment

Property, plant and equipment was comprised of the following as of September 30, 2023 and 2022:

	September 30	
	2023	2022
	(In thousands)	
Storage plant	$ 668,237	$ 589,210
Transmission plant	4,995,579	4,325,540
Distribution plant	15,283,965	13,511,409
General plant	972,054	937,500
Intangible plant	38,612	38,612
	21,958,447	19,402,271
Construction in progress	939,927	835,868
	22,898,374	20,238,139
Less: accumulated depreciation and amortization	(3,291,791)	(2,997,900)
Net property, plant and equipment [1]	$ 19,606,583	$ 17,240,239

(1) Net property, plant and equipment includes plant acquisition adjustments of $(24.8) million and $(26.6) million at September 30, 2023 and 2022.

Deferred charges and other assets

Deferred charges and other assets as of September 30, 2023 and 2022 were comprised of the following accounts.

	September 30	
	2023	2022
	(In thousands)	
Marketable securities	$ 104,602	$ 96,012
Regulatory assets (See Note 3)	364,741	368,375
Operating lease right of use assets (See Note 7)	223,366	214,663
Winter Storm Uri incremental costs	10,902	88,500
Assets from risk management activities	381,593	355,784
Pension assets	92,648	29,498
Other	23,306	20,968
Total	$ 1,201,158	$ 1,173,800

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Accounts payable and accrued liabilities

Accounts payable and accrued liabilities as of September 30, 2023 and 2022 were comprised of the following accounts.

	September 30	
	2023	2022
	(In thousands)	
Trade accounts payable	$ 218,181	$ 258,506
Accrued gas payable	43,688	157,942
Accrued liabilities	74,214	79,571
Total	$ 336,083	$ 496,019

Other current liabilities

Other current liabilities as of September 30, 2023 and 2022 were comprised of the following accounts.

	September 30	
	2023	2022
	(In thousands)	
Customer credit balances and deposits	$ 65,266	$ 56,016
Accrued employee costs	50,042	47,661
Deferred gas costs	23,093	28,834
Operating lease liabilities (See Note 7)	35,820	38,644
Accrued interest	78,939	59,542
Liabilities from risk management activities	14,584	3,000
Taxes payable	195,468	189,239
Pension and postretirement liabilities	9,375	9,721
Regulatory cost of removal obligation	85,850	80,676
APT annual adjustment mechanism	34,550	18,034
Regulatory excess deferred taxes (See Note 15)	131,301	159,808
Other	38,798	28,982
Total	$ 763,086	$ 720,157

Deferred credits and other liabilities

Deferred credits and other liabilities as of September 30, 2023 and 2022 were comprised of the following accounts.

	September 30	
	2023	2022
	(In thousands)	
Pension and postretirement liabilities	$ 66,523	$ 91,596
Operating lease liabilities (See Note 7)	194,452	184,301
Customer advances for construction	9,158	8,628
Other regulatory liabilities (See Note 3)	242,049	178,990
Asset retirement obligation	5,174	5,737
Liabilities from risk management activities	824	1,129
APT annual adjustment mechanism	15,344	13,104
Unrecognized tax benefits (See Note 15)	46,620	39,908
Other	19,754	14,909
Total	$ 599,898	$ 538,302

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Statement of Comprehensive Income

Other non-operating income (expense)

Other non-operating income (expense) for the fiscal years ended September 30, 2023, 2022 and 2021 were comprised of the following accounts.

	Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Equity component of AFUDC	$ 64,019	$ 45,505	$ 32,749
Performance-based rate program	7,093	8,327	6,362
Pension and other postretirement non-service credit (cost)	8,955	8,337	(19,238)
Interest income	7,207	2,781	2,144
Community support spending	(12,027)	(16,357)	(14,460)
Unrealized gains (losses) on equity securities	1,406	(7,737)	(860)
Miscellaneous	(6,878)	(7,119)	(8,842)
Total	$ 69,775	$ 33,737	$ (2,145)

Statement of Cash Flows

Supplemental disclosures of cash flow information for the fiscal years ended September 30, 2023, 2022 and 2021 were as follows:

	Year Ended September 30		
	2023	2022	2021
	(In thousands)		
Cash Paid (Received) During The Period For:			
Interest [1]	$ 249,066	$ 234,297	$ 207,555
Income taxes	$ 14,968	$ 15,760	$ 8,199
Non-Cash Transactions:			
Capital expenditures included in current liabilities	$ 186,912	$ 217,868	$ 184,786

(1) Cash paid during the period for interest, net of amounts capitalized was $117.9 million, $98.4 million and $81.9 million for the fiscal years ended September 30, 2023, 2022 and 2021.

14. Commitments and Contingencies

Litigation and Environmental Matters

In the normal course of business, we are subject to various legal and regulatory proceedings. For such matters, we record liabilities when they are considered probable and estimable, based on currently available facts, our historical experience and our estimates of the ultimate outcome or resolution of the liability in the future. While the outcome of these proceedings is uncertain and a loss in excess of the amount we have accrued is possible though not reasonably estimable, it is the opinion of management that any amounts exceeding the accruals will not have a material adverse impact on our financial position, results of operations or cash flows.

We are a party to various other litigation and environmental-related matters or claims that have arisen in the ordinary course of our business. While the results of such litigation and response actions to such environmental-related matters or claims cannot be predicted with certainty, we continue to believe the final outcome of such litigation and matters or claims will not have a material adverse effect on our financial condition, results of operations or cash flows.

Purchase Commitments

Our distribution divisions maintain supply contracts with several vendors that generally cover a period of up to one year. Commitments for estimated base gas volumes are established under these contracts on a monthly basis at contractually

negotiated prices. Commitments for incremental daily purchases are made as necessary during the month in accordance with the terms of the individual contract.

Our Mid-Tex Division also maintains long-term supply contracts to ensure a reliable source of gas for our customers in its service area, which obligate it to purchase specified volumes at prices under contracts indexed to natural gas trading hubs or fixed price contracts. At September 30, 2023, we were committed to purchase 65.5 Bcf within one year and 72.3 Bcf within two to three years under indexed contracts. At September 30, 2023, we were committed to purchase 20.6 Bcf within one year under fixed price contracts with a weighted average price of $2.80 per Mcf. Purchases under these contracts totaled $182.0 million, $352.6 million and $149.4 million for 2023, 2022 and 2021.

Rate Regulatory Proceedings

As of September 30, 2023, routine rate regulatory proceedings were in progress in some of our service areas, which are discussed in further detail above in the *Business — Ratemaking Activity* section.

15. Income Taxes

Income Tax Expense

The components of income tax expense from continuing operations for 2023, 2022 and 2021 were as follows:

	2023	2022	2021
	(In thousands)		
Current			
Federal	$ (1,274)	$ 2,849	$ —
State	13,550	28,125	252
Deferred			
Federal	83,244	43,435	128,867
State	18,259	3,101	24,617
Income tax expense	$ 113,779	$ 77,510	$ 153,736

Reconciliations of the provision for income taxes computed at the statutory rate of 21 percent to the reported provisions for income taxes from continuing operations for 2023, 2022 and 2021 are set forth below:

	2023	2022	2021
	(In thousands)		
Tax at statutory rate	$ 209,925	$ 178,901	$ 172,053
Common stock dividends deductible for tax reporting	(1,355)	(1,355)	(1,372)
State taxes (net of federal benefit)	25,129	24,669	19,647
Amortization of excess deferred taxes	(123,953)	(127,193)	(45,382)
Other, net	4,033	2,488	8,790
Income tax expense	$ 113,779	$ 77,510	$ 153,736

Deferred income taxes reflect the tax effect of differences between the basis of assets and liabilities for book and tax purposes. The tax effect of temporary differences that gave rise to significant components of the deferred tax liabilities and deferred tax assets at September 30, 2023 and 2022 are presented below:

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	2023	2022
	(In thousands)	
Deferred tax assets:		
Employee benefit plans	$ 50,576	$ 57,094
Net operating loss carryforwards	504,121	485,061
Charitable and other credit carryforwards	10,084	1,903
Regulatory excess deferred tax	76,943	110,548
Lease asset	58,633	50,007
Other	42,257	44,035
Total deferred tax assets	742,614	748,648
Valuation allowance	(351)	(523)
Net deferred tax assets	742,263	748,125
Deferred tax liabilities:		
Difference in net book value and net tax value of assets	(2,674,341)	(2,431,757)
Gas cost adjustments	(47,822)	(43,964)
Winter Storm Uri regulatory asset	(28,116)	(20,710)
Lease liability	(51,666)	(50,007)
Rate deferral adjustment	(47,218)	(49,309)
Interest rate agreements	(149,969)	(106,820)
Other	(48,105)	(45,063)
Total deferred tax liabilities	(3,047,237)	(2,747,630)
Net deferred tax liabilities	$ (2,304,974)	$ (1,999,505)

At September 30, 2023, we had $458.7 million (tax effected) of federal net operating loss carryforwards. The federal net operating loss carryforwards are available to offset future taxable income and have no expiration date. The Company has $8.2 million (tax effected) charitable contribution carryforwards to offset future taxable income as of September 30, 2023.

The Company also has $45.4 million (tax effected) of state net operating loss carryforwards (net of $11.9 million of federal effects) and $1.9 million of state tax credits carryforwards (net of $0.5 million of federal effects). Depending on the jurisdiction in which the state net operating loss was generated, the carryforwards expiration period begins in fiscal 2026.

At September 30, 2023 and 2022, we had recorded liabilities associated with unrecognized tax benefits totaling $58.6 million and $52.7 million, which includes $12.0 million and $12.8 million in deferred tax liabilities. The following table reconciles the beginning and ending balance of our unrecognized tax benefits:

	2023	2022	2021
		(In thousands)	
Unrecognized tax benefits - beginning balance	$ 52,683	$ 32,792	$ 30,921
Increase (decrease) resulting from prior period tax positions	(631)	(721)	671
Increase resulting from current period tax positions	6,586	20,612	1,200
Unrecognized tax benefits - ending balance	58,638	52,683	32,792
Less: deferred federal and state income tax benefits	(12,314)	(11,063)	(6,886)
Total unrecognized tax benefits that, if recognized, would impact the effective income tax rate as of the end of the year	$ 46,324	$ 41,620	$ 25,906

The Company recognizes interest accrued related to unrecognized tax benefits in interest expense and penalties included within interest charges in our consolidated statements of comprehensive income. During the years ended September 30, 2023, 2022 and 2021, the Company recognized approximately $3.4 million, $1.3 million and $1.4 million in interest and penalties. The Company had approximately $15.1 million, $11.7 million and $10.4 million for the payment of interest and penalties accrued at September 30, 2023, 2022 and 2021.

We file income tax returns in the U.S. federal jurisdiction as well as in various states where we have operations. We have concluded substantially all U.S. federal income tax matters through fiscal year 2009 and concluded substantially all Texas income tax matters through fiscal year 2010.

Regulatory Excess Deferred Taxes

Regulatory excess net deferred taxes represent changes in our net deferred tax liability related to our cost of service ratemaking due to the enactment of the Tax Cuts and Jobs Act of 2017 (the TCJA) and a Kansas legislative change enacted in fiscal 2020. As of September 30, 2023 and 2022, $131.3 million and $159.8 million is recorded in other current liabilities.

Currently, the regulatory excess net deferred tax liability is being returned over various periods. Of this amount, $279.4 million, is being returned to customers over 35 - 60 months. An additional $53.5 million is being returned to customers on a provisional basis over 15 - 69 years until our regulators establish the final refund periods. The refund of the remaining $4.0 million will be addressed in future rate proceedings.

16. Financial Instruments

We currently use financial instruments to mitigate commodity price risk and interest rate risk. Our financial instruments do not contain any credit-risk-related or other contingent features that could cause accelerated payments when our financial instruments are in net liability positions.

Commodity Risk Management Activities

Our purchased gas cost adjustment mechanisms essentially insulate our distribution segment from commodity price risk; however, our customers are exposed to the effects of volatile natural gas prices. We manage this exposure through a combination of physical storage, fixed-price forward contracts and financial instruments, primarily over-the-counter swap and option contracts, in an effort to minimize the impact of natural gas price volatility on our customers during the winter heating season.

In jurisdictions where we are permitted to mitigate commodity price risk through financial instruments, the relevant regulatory authorities may establish the level of heating season gas purchases that can be hedged. Our distribution gas supply department is responsible for executing this segment's commodity risk management activities in conformity with regulatory requirements. Historically, if the regulatory authority does not establish this level, we seek to hedge between 25 and 50 percent of anticipated heating season gas purchases using financial instruments. For the 2022-2023 heating season (generally October through March), in the jurisdictions where we are permitted to utilize financial instruments, we hedged approximately 17.3 Bcf of the winter flowing gas requirements at a weighted average cost of approximately $5.28 per Mcf. We have not designated these financial instruments as hedges for accounting purposes.

Interest Rate Risk Management Activities

We manage interest rate risk by periodically entering into financial instruments to effectively fix the Treasury yield component of the interest cost associated with anticipated financings.

The following table summarizes our existing forward starting interest rate swaps as of September 30, 2023. These swaps were designated as cash flow hedges at the time the agreements were executed.

Planned Debt Issuance Date	Amount Hedged (In thousands)
Fiscal 2025	$ 600,000
Fiscal 2026	300,000
	$ 900,000

Quantitative Disclosures Related to Financial Instruments

The following tables present detailed information concerning the impact of financial instruments on our consolidated balance sheet and statements of comprehensive income.

As of September 30, 2023, our financial instruments were comprised of both long and short commodity positions. A long position is a contract to purchase the commodity, while a short position is a contract to sell the commodity. As of September 30, 2023, we had 31,289 MMcf of net long commodity contracts outstanding. These contracts have not been designated as hedges.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Financial Instruments on the Balance Sheet

The following tables present the fair value and balance sheet classification of our financial instruments as of September 30, 2023 and 2022. As discussed in Note 2 to the consolidated financial statements, we report our financial instruments as risk management assets and liabilities, each of which is classified as current or noncurrent based upon the anticipated settlement date of the underlying financial instrument. The gross amounts of recognized assets and liabilities are netted within our consolidated balance sheets to the extent that we have netting arrangements with the counterparties. However, as of September 30, 2023 and 2022, no gross amounts and no cash collateral were netted within our consolidated balance sheet.

	Balance Sheet Location	Assets	Liabilities
		(In thousands)	
September 30, 2023			
Designated As Hedges:			
Interest rate contracts	Deferred charges and other assets / Deferred credits and other liabilities	$ 379,101	$ —
Total		379,101	—
Not Designated As Hedges:			
Commodity contracts	Other current assets / Other current liabilities	4,071	(14,584)
Commodity contracts	Deferred charges and other assets / Deferred credits and other liabilities	2,492	(824)
Total		6,563	(15,408)
Gross / Net Financial Instruments		$ 385,664	$ (15,408)

	Balance Sheet Location	Assets	Liabilities
		(In thousands)	
September 30, 2022			
Designated As Hedges:			
Interest rate contracts	Deferred charges and other assets / Deferred credits and other liabilities	$ 355,075	$ —
Total		355,075	—
Not Designated As Hedges:			
Commodity contracts	Other current assets / Other current liabilities	26,207	(3,000)
Commodity contracts	Deferred charges and other assets / Deferred credits and other liabilities	709	(1,129)
Total		26,916	(4,129)
Gross / Net Financial Instruments		$ 381,991	$ (4,129)

Impact of Financial Instruments on the Statement of Comprehensive Income

Cash Flow Hedges

As discussed above, our distribution segment has interest rate agreements, which we designate as cash flow hedges at the time the agreements were executed. The net (gain) loss on settled interest rate agreements reclassified from AOCI into interest charges on our consolidated statements of comprehensive income for the years ended September 30, 2023, 2022 and 2021 was $(2.7) million, $3.8 million and $5.9 million.

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes the gains and losses arising from hedging transactions that were recognized as a component of other comprehensive income, net of taxes, for the years ended September 30, 2023 and 2022.

	Fiscal Year Ended September 30	
	2023	2022
	(In thousands)	
Increase in fair value:		
Interest rate agreements	$ 151,410	$ 296,875
Recognition of (gains) losses in earnings due to settlements:		
Interest rate agreements	(2,120)	2,976
Total other comprehensive income from hedging, net of tax	$ 149,290	$ 299,851

Deferred gains (losses) recorded in AOCI associated with our interest rate agreements are recognized in earnings as they are amortized over the terms of the underlying debt instruments. As of September 30, 2023, we had $224.8 million of net realized gains in AOCI associated with our interest rate agreements. The following amounts, net of deferred taxes, represent the expected recognition in earnings of the deferred net gains recorded in AOCI associated with our interest rate agreements, based upon the fair values of these agreements at the date of settlement. The remaining amortization periods for these settled amounts extend through fiscal 2053. However, the table below does not include the expected recognition in earnings of our outstanding interest rate agreements as those financial instruments have not yet settled.

	Interest Rate Agreements
	(In thousands)
2024	$ 9,965
2025	9,965
2026	9,965
2027	9,965
2028	9,965
Thereafter	174,973
Total	$ 224,798

Financial Instruments Not Designated as Hedges

As discussed above, commodity contracts which are used in our distribution segment are not designated as hedges. However, there is no earnings impact on our distribution segment as a result of the use of these financial instruments because the gains and losses arising from the use of these financial instruments are recognized in the consolidated statements of comprehensive income as a component of purchased gas cost when the related costs are recovered through our rates and recognized in revenue. Accordingly, the impact of these financial instruments is excluded from this presentation.

17. Fair Value Measurements

We report certain assets and liabilities at fair value, which is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). We record cash and cash equivalents and restricted cash and cash equivalents, accounts receivable and accounts payable at carrying value, which substantially approximates fair value due to the short-term nature of these assets and liabilities. For other financial assets and liabilities, we primarily use quoted market prices and other observable market pricing information to minimize the use of unobservable pricing inputs in our measurements when determining fair value. The methods used to determine fair value for our assets and liabilities are fully described in Note 2 to the consolidated financial statements.

Fair value measurements also apply to the valuation of our pension and postretirement plan assets. The fair value of these assets is presented in Note 11 to the consolidated financial statements.

Quantitative Disclosures

Financial Instruments

The classification of our fair value measurements requires judgment regarding the degree to which market data are observable or corroborated by observable market data. The following tables summarize, by level within the fair value hierarchy,

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

our assets and liabilities that were accounted for at fair value on a recurring basis as of September 30, 2023 and 2022. As required under authoritative accounting literature, assets and liabilities are categorized in their entirety based on the lowest level of input that is significant to the fair value measurement.

	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)[1]	Significant Other Unobservable Inputs (Level 3)	Netting and Cash Collateral	September 30, 2023
			(In thousands)		
Assets:					
Financial instruments	$ —	$ 385,664	$ —	$ —	$ 385,664
Debt and equity securities					
Registered investment companies	26,685	—	—	—	26,685
Bond mutual funds	37,573	—	—	—	37,573
Bonds [2]	—	35,507	—	—	35,507
Money market funds	—	4,837	—	—	4,837
Total debt and equity securities	64,258	40,344	—	—	104,602
Total assets	$ 64,258	$ 426,008	$ —	$ —	$ 490,266
Liabilities:					
Financial instruments	$ —	$ 15,408	$ —	$ —	$ 15,408

	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)[1]	Significant Other Unobservable Inputs (Level 3)	Netting and Cash Collateral	September 30, 2022
			(In thousands)		
Assets:					
Financial instruments	$ —	$ 381,991	$ —	$ —	$ 381,991
Debt and equity securities					
Registered investment companies	26,367	—	—	—	26,367
Bond mutual funds	32,367	—	—	—	32,367
Bonds [2]	—	33,433	—	—	33,433
Money market funds	—	3,845	—	—	3,845
Total debt and equity securities	58,734	37,278	—	—	96,012
Total assets	$ 58,734	$ 419,269	$ —	$ —	$ 478,003
Liabilities:					
Financial instruments	$ —	$ 4,129	$ —	$ —	$ 4,129

(1) Our Level 2 measurements consist of over-the-counter options and swaps, which are valued using a market-based approach in which observable market prices are adjusted for criteria specific to each instrument, such as the strike price, notional amount or basis differences, municipal and corporate bonds, which are valued based on the most recent available quoted market prices and money market funds which are valued at cost.

(2) Our investments in bonds are considered available-for-sale debt securities in accordance with current accounting guidance.

Debt and equity securities are comprised of our available-for-sale debt securities and our equity securities. We evaluate the performance of our available-for-sale debt securities on an investment by investment basis for impairment, taking into consideration the investment's purpose, volatility, current returns and any intent to sell the security. As of September 30, 2023, no allowance for credit losses was recorded for our available-for-sale debt securities. At September 30, 2023 and 2022, the amortized cost of our available-for-sale debt securities was $36.0 million and $34.1 million. At September 30, 2023 we maintained investments in bonds that have contractual maturity dates ranging from October 2023 through September 2026.

Other Fair Value Measures

In addition to the financial instruments above, we have several financial and nonfinancial assets and liabilities subject to fair value measures. These financial assets and liabilities include cash and cash equivalents and restricted cash and cash

ATMOS ENERGY CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

equivalents, accounts receivable, accounts payable, finance leases and debt, which are recorded at carrying value. The nonfinancial assets and liabilities include asset retirement obligations and pension and postretirement plan assets. For cash and cash equivalents and restricted cash and cash equivalents, accounts receivable, accounts payable and finance leases we consider carrying value to materially approximate fair value due to the short-term nature of these assets and liabilities.

Our long-term debt is recorded at carrying value. The fair value of our long-term debt, excluding finance leases, is determined using third party market value quotations, which are considered Level 1 fair value measurements for debt instruments with a recent, observable trade or Level 2 fair value measurements for debt instruments where fair value is determined using the most recent available quoted market price. The following table presents the carrying value and fair value of our long-term debt, excluding finances leases, debt issuance costs and original issue premium or discount, as of September 30, 2023:

	September 30, 2023
	(In thousands)
Carrying Amount	$ 6,560,000
Fair Value	$ 5,402,591

18. Concentration of Credit Risk

Credit risk is the risk of financial loss to us if a customer fails to perform its contractual obligations. We engage in transactions for the purchase and sale of products and services with major companies in the energy industry and with industrial, commercial, residential and municipal energy consumers. These transactions principally occur in the southern and midwestern regions of the United States. We believe that this geographic concentration does not contribute significantly to our overall exposure to credit risk. Credit risk associated with trade accounts receivable for the distribution segment is mitigated by the large number of individual customers and the diversity in our customer base. The credit risk for our pipeline and storage segment is not significant.

ITEM 9. ***Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.***

None.

ITEM 9A. ***Controls and Procedures.***

Management's Evaluation of Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the Company's disclosure controls and procedures, as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based on this evaluation, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures were effective as of September 30, 2023 to provide reasonable assurance that information required to be disclosed by us, including our consolidated entities, in the reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified by the SEC's rules and forms, including a reasonable level of assurance that such information is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f), in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we evaluated the effectiveness of our internal control over financial reporting based on the framework in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (COSO). Based on our evaluation under the framework in *Internal Control-Integrated Framework* issued by COSO and applicable Securities and Exchange Commission rules, our management concluded that our internal control over financial reporting was effective as of September 30, 2023, in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Ernst & Young LLP has issued its report on the effectiveness of the Company's internal control over financial reporting. That report appears below.

/s/ JOHN K. AKERS	/s/ CHRISTOPHER T. FORSYTHE
John K. Akers	Christopher T. Forsythe
President, Chief Executive Officer and Director	Senior Vice President and Chief Financial Officer

November 14, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Atmos Energy Corporation

Opinion on Internal Control Over Financial Reporting

We have audited Atmos Energy Corporation's internal control over financial reporting as of September 30, 2023, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Atmos Energy Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of September 30, 2023, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2023 consolidated financial statements of the Company and our report dated November 14, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Dallas, Texas
November 14, 2023

Changes in Internal Control over Financial Reporting

We did not make any changes in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Act) during the fourth quarter of the fiscal year ended September 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. ***Other Information.***

During the three months ended September 30, 2023, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

ITEM 9C. ***Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.***

Not applicable.

PART III

ITEM 10. ***Directors, Executive Officers and Corporate Governance.***

Information regarding directors is incorporated herein by reference to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders on February 7, 2024. Information regarding executive officers is reported below:

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following table sets forth certain information as of September 30, 2023, regarding the executive officers of the Company. It is followed by a brief description of the business experience of each executive officer.

Name	Age	Years of Service	Office Currently Held
John K. Akers	60	32	President, Chief Executive Officer and Director
Christopher T. Forsythe	52	20	Senior Vice President and Chief Financial Officer
John S. McDill	59	36	Senior Vice President, Utility Operations
Karen E. Hartsfield	53	8	Senior Vice President, General Counsel and Corporate Secretary
John M. Robbins	53	10	Senior Vice President, Human Resources

John K. (Kevin) Akers was named President and Chief Executive Officer and was appointed to the Board of Directors effective October 1, 2019. Mr. Akers joined the company in 1991. Mr. Akers assumed increased responsibilities over time and was named President of the Mississippi Division in 2002. He was later named President of the Kentucky/Mid-States Division in May 2007, a position he held until December 2016. Effective January 1, 2017, Mr. Akers was named Senior Vice President, Safety and Enterprise Services and was responsible for customer service, facilities management, safety and supply chain management. In November 2018, Mr. Akers was named Executive Vice President and assumed oversight responsibility for APT.

Christopher T. Forsythe was named Senior Vice President and Chief Financial Officer effective February 1, 2017. Mr. Forsythe joined the Company in June 2003 and prior to this promotion, served as the Company's Vice President and Controller from May 2009 through January 2017. Prior to joining Atmos Energy, Mr. Forsythe worked in public accounting for 10 years.

John S. McDill was named Senior Vice President, Utility Operations, effective October 1, 2021. In this role, Mr. McDill is responsible for the operations of Atmos Energy's six utility divisions as well as gas supply. Prior to this promotion, Mr. McDill served as Vice President, Pipeline Safety from May 2012 to September 2021. Mr. McDill also served as Vice President of Operations in our Mississippi Division. Mr. McDill's years of service include that with Mississippi Valley Gas, a company acquired by Atmos Energy in 2002.

Karen E. Hartsfield was named Senior Vice President, General Counsel and Corporate Secretary of Atmos Energy, effective August 7, 2017. Ms. Hartsfield joined the Company in June 2015, after having served in private practice for 19 years,

most recently as Managing Partner of Jackson Lewis LLP in its Dallas office from July 2013 to June 2015. Prior to joining Jackson Lewis as a partner in January 2009, Ms. Hartsfield was a partner with Baker Botts LLP in Dallas.

John M. (Matt) Robbins was named Senior Vice President, Human Resources, effective January 1, 2017. Mr. Robbins joined the Company in May 2013 and prior to this promotion served as Vice President, Human Resources from February 2015 to December 2016. Before joining Atmos Energy, Mr. Robbins had over 20 years of experience in human resources.

Identification of the members of the Audit Committee of the Board of Directors as well as the Board of Directors' determination as to whether one or more audit committee financial experts are serving on the Audit Committee of the Board of Directors is incorporated herein by reference to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders on February 7, 2024.

The Company has adopted a code of ethics for its principal executive officer, principal financial officer and principal accounting officer. Such code of ethics is represented by the Company's Code of Conduct, which is applicable to all directors, officers and employees of the Company, including the Company's principal executive officer, principal financial officer and principal accounting officer. A copy of the Company's Code of Conduct, as well as any amendment to or waiver granted from a provision of the Company's Code of Conduct is posted on the Company's website at *www.atmosenergy.com/company/corporate-responsibility-reports*.

ITEM 11. ***Executive Compensation.***

Information on executive compensation is incorporated herein by reference to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders on February 7, 2024, under the captions "Director Compensation," "Compensation Discussion and Analysis," "Other Executive Compensation Matters" and "Named Executive Officer Compensation."

ITEM 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

Security ownership of certain beneficial owners and of management is incorporated herein by reference to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders on February 7, 2024, under the heading "Beneficial Ownership of Common Stock." Information concerning our equity compensation plans is provided in Part II, Item 5, "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities", of this Annual Report on Form 10-K.

ITEM 13. ***Certain Relationships and Related Transactions, and Director Independence.***

Information on certain relationships and related transactions as well as director independence is incorporated herein by reference to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders on February 7, 2024, under the heading "Corporate Governance and Other Board Matters," and "Proposal One – Election of Directors."

ITEM 14. ***Principal Accountant Fees and Services.***

Information on our principal accountant's fees and services is incorporated herein by reference to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders on February 7, 2024, under the heading "Proposal Two – Ratification of Appointment of Independent Registered Public Accounting Firm."

PART IV

ITEM 15. ***Exhibits and Financial Statement Schedules.***

(a) 1. and 2. *Financial statements and financial statement schedules.*

The financial statements listed in the Index to Financial Statements in Part II, Item 8 are filed as part of this Form 10-K. All financial statement schedules are omitted because the required information is not present, or not present in amounts sufficient to require submission of the schedule or because the information required is included in the financial statements and accompanying notes thereto.

3. *Exhibits*

Exhibit Number	Description	Page Number or Incorporation by Reference to
	Articles of Incorporation and Bylaws	
3.1	Restated Articles of Incorporation of Atmos Energy Corporation - Texas (As Amended Effective February 3, 2010)	Exhibit 3.1 to Form 10-Q dated March 31, 2010 (File No. 1-10042)
3.2	Restated Articles of Incorporation of Atmos Energy Corporation - Virginia (As Amended Effective February 3, 2010)	Exhibit 3.2 to Form 10-Q dated March 31, 2010 (File No. 1-10042)
3.3	Amended and Restated Bylaws of Atmos Energy Corporation (as of August 4, 2023)	Exhibit 3.1 to Form 8-K dated August 1, 2023 (File No. 1-10042)
	Instruments Defining Rights of Security Holders, Including Indentures	
4.1(a)	Specimen Common Stock Certificate (Atmos Energy Corporation)	Exhibit 4.1 to Form 10-K for fiscal year ended September 30, 2012 (File No. 1-10042)
4.1(b)	Description of Registrant's Securities	Exhibit 4.1(b) to Form 10-K for fiscal year ended September 30, 2021 (File No. 1-10042)
4.2	Indenture dated as of November 15, 1995 between United Cities Gas Company and Bank of America Illinois, Trustee	Exhibit 4.11(a) to Form S-3 dated August 31, 2004 (File No. 333-118706)
4.3	Indenture dated as of July 15, 1998 between Atmos Energy Corporation and U.S. Bank Trust National Association, Trustee	Exhibit 4.8 to Form S-3 dated August 31, 2004 (File No. 333-118706)
4.4	Indenture dated as of May 22, 2001 between Atmos Energy Corporation and SunTrust Bank, Trustee	Exhibit 99.3 to Form 8-K dated May 22, 2001 (File No. 1-10042)
4.5	Indenture dated as of March 26, 2009 between Atmos Energy Corporation and U.S. Bank National Corporation, Trustee	Exhibit 4.1 to Form 8-K dated March 26, 2009 (File No. 1-10042)
4.6	Underwriting Agreement among Atmos Energy Kansas Securitization I, LLC, Atmos Energy Corporation and J.P. Morgan Securities LLC, dated June 9, 2023	Exhibit 1.1 of Form 8-K dated June 9, 2023 (File No. 1-10042)
4.7	Indenture by and among Atmos Energy Kansas Securitization I, LLC, U.S. Bank Trust Company, National Association, as Indenture Trustee, and U.S. Bank National Association, as Securities Intermediary (including the form of the Bonds and the Series Supplement), dated as of June 20, 2023	Exhibit 4.1 to Form 8-K dated June 20, 2023 (File No. 1-10042)
4.8	Series Supplement by and among Atmos Energy Kansas Securitization I, LLC and U. S. Bank Trust Company, National Association, as Indenture Trustee, and U.S. Bank National Association, as Securities Intermediary, dated as of June 20, 2023	Exhibit 4.2 to Form 8-K dated June 20, 2023 (File No. 1-10042)
4.9(a)	Debenture Certificate for the 6 3/4% Debentures due 2028	Exhibit 99.2 to Form 8-K dated July 29, 1998 (File No. 1-10042)
4.9(b)	Global Security for the 5.95% Senior Notes due 2034	Exhibit 10(2)(g) to Form 10-K for fiscal year ended September 30, 2004 (File No. 1-10042)
4.9(c)	Officers' Certificate dated June 10, 2011	Exhibit 4.1 to Form 8-K dated June 13, 2011 (File No. 1-10042)
4.9(d)	Global Security for the 5.5% Senior Notes due 2041	Exhibit 4.2 to Form 8-K dated June 13, 2011 (File No. 1-10042)

4.9(e)	Officers' Certificate dated January 11, 2013	Exhibit 4.1 to Form 8-K dated January 15, 2013 (File No. 1-10042)
4.9(f)	Global Security for the 4.15% Senior Notes due 2043	Exhibit 4.2 to Form 8-K dated January 15, 2013 (File No. 1-10042)
4.9(g)	Officers' Certificate dated October 15, 2014	Exhibit 4.1 to Form 8-K dated October 17, 2014 (File No. 1-10042)
4.9(h)	Global Security for the 4.125% Senior Notes due 2044	Exhibit 4.2 to Form 8-K dated October 17, 2014 (File No. 1-10042)
4.9(i)	Officers' Certificate dated June 8, 2017	Exhibit 4.1 to Form 8-K dated June 8, 2017 (File No. 1-10042)
4.9(j)	Global Security for the 3.000% Senior Notes due 2027	Exhibit 4.2 to Form 8-K dated June 8, 2017 (File No. 1-10042)
4.9(k)	Global Security for the 4.125% Senior Notes due 2044	Exhibit 4.3 to Form 8-K dated June 8, 2017 (File No. 1-10042)
4.9(l)	Officers' Certificate dated October 4, 2018	Exhibit 4.1 to Form 8-K dated October 4, 2018 (File No. 1-10042)
4.9(m)	Global Security for the 4.300% Senior Notes due 2048	Exhibit 4.2 to Form 8-K dated October 4, 2018 (File No. 1-10042)
4.9(n)	Global Security for the 4.300% Senior Notes due 2048	Exhibit 4.3 to Form 8-K dated October 4, 2018 (File No. 1-10042)
4.9(o)	Officers' Certificate dated March 4, 2019	Exhibit 4.1 to Form 8-K dated March 4, 2019 (File No. 1-10042)
4.9(p)	Global Security for the 4.125% Senior Notes due 2049	Exhibit 4.2 to Form 8-K dated March 4, 2019 (File No. 1-10042)
4.9(q)	Officers' Certificate dated October 2, 2019	Exhibit 4.1 to Form 8-K dated October 2, 2019 (File No. 1-10042)
4.9(r)	Global Security for the 2.625% Senior Notes due 2029	Exhibit 4.2 to Form 8-K dated October 2, 2019 (File No. 1-10042)
4.9(s)	Global Security for the 3.375% Senior Notes due 2049	Exhibit 4.3 to Form 8-K dated October 2, 2019 (File No. 1-10042)
4.9(t)	Officers' Certificate dated October 1, 2020	Exhibit 4.1 to Form 8-K dated October 1, 2020 (File No. 1-10042)
4.9(u)	Global Security for the 1.500% Senior Notes due 2031	Exhibit 4.2 to Form 8-K dated October 1, 2020 (File No. 1-10042)
4.9(v)	Global Security for the 1.500% Senior Notes due 2031	Exhibit 4.3 to Form 8-K dated October 1, 2020 (File No. 1-10042)
4.9(w)	Officers' Certificate dated October 1, 2021	Exhibit 4.1 to Form 8-K dated October 1, 2021 (File No. 1-10042)
4.9(x)	Global Security for the 2.850% Senior Notes due 2052	Exhibit 4.2 to Form 8-K dated October 1, 2021 (File No. 1-10042)
4.9(y)	Global Security for the 2.850% Senior Notes due 2052	Exhibit 4.3 to Form 8-K dated October 1, 2021 (File No. 1-10042)
4.9(z)	Officers' Certificate dated January 14, 2022	Exhibit 4.1 to Form 8-K dated January 14, 2022 (File No. 1-10042)
4.9(aa)	Global Security for the 2.625% Senior Notes due 2029	Exhibit 4.2 to Form 8-K dated January 14, 2022 (File No. 1-10042)
4.9(bb)	Officers' Certificate dated October 3, 2022	Exhibit 4.1 to Form 8-K dated October 3, 2022 (File No. 1-10042)
4.9(cc)	Global Security for the 5.450% Senior Notes due 2032	Exhibit 4.2 to Form 8-K dated October 3, 2022 (File No. 1-10042)
4.9(dd)	Global Security for the 5.750% Senior Notes due 2052	Exhibit 4.3 to Form 8-K dated October 3, 2022 (File No. 1-10042)

4.9(ee)	Officers' Certificate dated October 10, 2023	Exhibit 4.2 to Form 8-K dated October 10, 2023 (File No. 1-10042)
4.9(ff)	Global Security for the 5.900% Senior Notes due 2033	Exhibit 4.3 to Form 8-K dated October 10, 2023 (File No. 1-10042)
4.9(gg)	Global Security for the 6.200% Senior Notes due 2053	Exhibit 4.4 to Form 8-K dated October 10, 2023 (File No. 1-10042)
	Material Contracts	
10.1(a)	Revolving Credit Agreement, dated as of March 31, 2021, among Atmos Energy Corporation, Crédit Agricole Corporate and Investment Bank, as the Administrative Agent, the agents, arrangers and bookrunners named therein, and the lenders named therein	Exhibit 10.1 to Form 8-K dated March 31, 2021 (File No. 1-10042)
10.1(b)	First Amendment to Revolving Credit Agreement, dated as of March 31, 2022, among Atmos Energy Corporation, Credit Agricole Corporate and Investment Bank, as the Administrative Agent, the agents, arrangers and bookrunners named therein, and the lenders named therein	Exhibit 10.2 to Form 8-K dated April 1, 2022 (File No. 1-10042)
10.2(a)	Revolving Credit Agreement, dated as of March 31, 2021, among Atmos Energy Corporation, Crédit Agricole Corporate and Investment Bank, as the Administrative Agent, the agents, arrangers and bookrunners named therein, and the lenders named therein	Exhibit 10.2 to Form 8-K dated March 31, 2021 (File No. 1-10042)
10.2(b)	First Amendment to Revolving Credit Agreement, dated as of March 31, 2022, among Atmos Energy Corporation, Credit Agricole Corporate and Investment Bank, as the Administrative Agent, the agents, arrangers and bookrunners named therein, and the lenders named therein	Exhibit 10.1 to Form 8-K dated April 1, 2022 (File No. 1-10042)
10.3	Term Loan Agreement, dated as of March 3, 2023, among Atmos Energy Corporation, U.S. Bank National Association, as the Administrative Agent, Mizuho Bank, Ltd., as Syndication Agent, CoBank, ACB, as Documentation Agent, U.S. Bank National Association, Mizuho Bank, Ltd. and CoBank ACB, as Joint Lead Arrangers and Joint-Bookrunners and the lenders named therein	Exhibit 10.1 to Form 8-K dated March 3, 2023 (File No. 1-10042)
10.4(a)	Equity Distribution Agreement, dated as of June 29, 2021, among Atmos Energy Corporation and the Managers and Forward Purchasers named in Schedule A thereto	Exhibit 1.1 to Form 8-K dated June 29, 2021 (File No. 1-10042)
10.4(b)	Form of Master Forward Sale Confirmation	Exhibit 1.2 to Form 8-K dated June 29, 2021 (File No. 1-10042)
10.5(a)	Equity Distribution Agreement, dated as of March 23, 2022, among Atmos Energy Corporation and the Managers and Forward Purchasers named in Schedule A thereto	Exhibit 1.1 to Form 8-K dated March 23, 2022 (File No. 1-10042)
10.5(b)	Form of Master Forward Sale Confirmation	Exhibit 1.2 to Form 8-K dated March 23, 2022 (File No. 1-10042)
10.6(a)	Equity Distribution Agreement, dated as of March 31, 2023, among Atmos Energy Corporation and the Managers and Forward Purchasers named in Schedule A thereto	Exhibit 1.1 to Form 8-K dated March 31, 2023 (File No. 1-10042)
10.6(b)	Form of Master Forward Sale Confirmation	Exhibit 1.2 to Form 8-K dated March 31, 2023 (File No. 1-10042)

	Executive Compensation Plans and Arrangements	
10.7(a)*	Form of Atmos Energy Corporation Change in Control Severance Agreement - Tier I	Exhibit 10.7(a) to Form 10-K for fiscal year ended September 30, 2010 (File No. 1-10042)
10.7(b)*	Form of Atmos Energy Corporation Change in Control Severance Agreement - Tier II	Exhibit 10.7(b) to Form 10-K for fiscal year ended September 30, 2010 (File No. 1-10042)
10.8(a)*	Atmos Energy Corporation Executive Retiree Life Plan	Exhibit 10.31 to Form 10-K for fiscal year ended September 30, 1997 (File No. 1-10042)
10.8(b)*	Amendment No. 1 to the Atmos Energy Corporation Executive Retiree Life Plan	Exhibit 10.31(a) to Form 10-K for fiscal year ended September 30, 1997 (File No. 1-10042)
10.9*	Atmos Energy Corporation Annual Incentive Plan for Management (as amended and restated August 3, 2021)	Exhibit 10.1 to Form 8-K dated August 3, 2021 (File No. 1-10042)
10.10(a)*	Atmos Energy Corporation Supplemental Executive Benefits Plan, Amended and Restated in its Entirety August 7, 2007	Exhibit 10.8(a) to Form 10-K for fiscal year ended September 30, 2008 (File No. 1-10042)
10.10(b)*	Form of Individual Trust Agreement for the Supplemental Executive Benefits Plan	Exhibit 10.3 to Form 10-Q for quarter ended December 31, 2000 (File No. 1-10042)
10.11(a)*	Atmos Energy Corporation Supplemental Executive Retirement Plan (As Amended and Restated, Effective as of January 1, 2016)	Exhibit 10.7(a) to Form 10-K for fiscal year ended September 30, 2016 (File No. 1-10042)
10.11(b)*	Atmos Energy Corporation Performance-Based Supplemental Executive Benefits Plan Trust Agreement, Effective Date December 1, 2000	Exhibit 10.1 to Form 10-Q for quarter ended December 31, 2000 (File No. 1-10042)
10.12*	Atmos Energy Corporation Account Balance Supplemental Executive Retirement Plan (As Amended and Restated, Effective as of January 1, 2022)	Exhibit 10.1 to Form 10-Q dated December 31, 2021 (File No. 1-10042)
10.13(a)*	Mini-Med/Dental Benefit Extension Agreement dated October 1, 1994	Exhibit 10.28(f) to Form 10-K for fiscal year ended September 30, 2001 (File No. 1-10042)
10.13(b)*	Amendment No. 1 to Mini-Med/Dental Benefit Extension Agreement dated August 14, 2001	Exhibit 10.28(g) to Form 10-K for fiscal year ended September 30, 2001 (File No. 1-10042)
10.13(c)*	Amendment No. 2 to Mini-Med/Dental Benefit Extension Agreement dated December 31, 2002	Exhibit 10.1 to Form 10-Q for quarter ended December 31, 2002 (File No. 1-10042)
10.14*	Atmos Energy Corporation Equity Incentive and Deferred Compensation Plan for Non-Employee Directors, Amended and Restated as of January 1, 2012	Exhibit 10.1 to Form 10-Q for quarter ended December 31, 2011 (File No. 1-10042)
10.15(a)*	Atmos Energy Corporation 1998 Long-Term Incentive Plan (as amended and restated February 3, 2021)	Exhibit 10.14(a) to Form 10-K for fiscal year ended September 30, 2022 (File No. 1-10042)
10.15(b)*	Form of Award Agreement of Time-Lapse Restricted Stock Units under the Atmos Energy Corporation 1998 Long-Term Incentive Plan	Exhibit 10.13(b) to Form 10-K for fiscal year ended September 20, 2020 (File No. 1-10042)
10.15(c)*	Form of Award Agreement of Performance-Based Restricted Stock Units under the Atmos Energy Corporation 1998 Long-Term Incentive Plan	Exhibit 10.13(c) to Form 10-K for fiscal year ended September 20, 2020 (File No. 1-10042)

10.15(d)*	Form of Non-Employee Director Award Agreement of Time-Lapse Restricted Stock Units Under the Atmos Energy Corporation 1998 Long-Term Incentive Plan	Exhibit 10.11(d) to Form 10-K for fiscal year ended September 30, 2019 (File No. 1-10042)
10.15(e)*	Form of Non-Employee Director Award Agreement of Stock Unit Awards Under The Atmos Energy Corporation 1998 Long-Term Incentive Plan	Exhibit 10.11(e) to Form 10-K for fiscal year ended September 30, 2019 (File No. 1-10042)
	Other Exhibits, as indicated	
21	Subsidiaries of the registrant	
23.1	Consent of independent registered public accounting firm, Ernst & Young LLP	
24	Power of Attorney	Signature page of Form 10-K for fiscal year ended September 30, 2023
31	Rule 13a-14(a)/15d-14(a) Certifications	
32	Section 1350 Certifications**	
	Policy Relating to Recovery of Erroneously Awarded Compensation	
97.1	Atmos Energy Corporation Executive Compensation Recoupment Policy, Effective October 2, 2023	
	Interactive Data File	
101.INS	XBRL Instance Document - the Instance Document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document	
101.SCH	Inline XBRL Taxonomy Extension Schema	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase	
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase	
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase	
104	Cover Page Interactive Data File - the cover page interactive data file does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document	

* This exhibit constitutes a "management contract or compensatory plan, contract, or arrangement."

** These certifications pursuant to 18 U.S.C. Section 1350 by the Company's Chief Executive Officer and Chief Financial Officer, furnished as Exhibit 32 to this Annual Report on Form 10-K, will not be deemed to be filed with the Securities and Exchange Commission or incorporated by reference into any filing by the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Company specifically incorporates such certifications by reference.

ITEM 16. ***Form 10-K Summary.***

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ATMOS ENERGY CORPORATION
(Registrant)

By: /s/ CHRISTOPHER T. FORSYTHE
Christopher T. Forsythe
Senior Vice President and
Chief Financial Officer

Date: November 14, 2023

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints John K. Akers and Christopher T. Forsythe, or either of them acting alone or together, as his true and lawful attorney-in-fact and agent with full power to act alone, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated:

/s/ KIM R. COCKLIN Kim R. Cocklin	Chairman of the Board	November 14, 2023
/s/ JOHN K. AKERS John K. Akers	President, Chief Executive Officer and Director	November 14, 2023
/s/ CHRISTOPHER T. FORSYTHE Christopher T. Forsythe	Senior Vice President and Chief Financial Officer	November 14, 2023
/s/ RICHARD M. THOMAS Richard M. Thomas	Vice President and Controller (Principal Accounting Officer)	November 14, 2023
/s/ JOHN C. ALE John C. Ale	Director	November 14, 2023
/s/ KELLY H. COMPTON Kelly H. Compton	Director	November 14, 2023
/s/ SEAN DONOHUE Sean Donohue	Director	November 14, 2023
/s/ RAFAEL G. GARZA Rafael G. Garza	Director	November 14, 2023
/s/ RICHARD K. GORDON Richard K. Gordon	Director	November 14, 2023
/s/ NANCY K. QUINN Nancy K. Quinn	Director	November 14, 2023
/s/ RICHARD A. SAMPSON Richard A. Sampson	Director	November 14, 2023
/s/ DIANA J. WALTERS Diana J. Walters	Director	November 14, 2023
/s/ FRANK YOHO Frank Yoho	Director	November 14, 2023

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)**

OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31 , 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**

OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission file number 001-16189

NiSource Inc.

(Exact name of registrant as specified in its charter)

DE	35-2108964
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
801 East 86th Avenue Merrillville, IN	46410
(Address of principal executive offices)	(Zip Code)

(877) 647-5990
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value $0.01 per share	NI	NYSE
Depositary Shares, each representing a 1/1,000th ownership interest in a share of 6.50% Series B Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, par value $0.01 per share, liquidation preference $25,000 per share and a 1/1,000th ownership interest in a share of Series B-1 Preferred Stock, par value $0.01 per share, liquidation preference $0.01 per share	NI PR B	NYSE

Securities registered pursuant to Section 12(g) of the Act: None

I ndicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes þ No ¨

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ¨ No þ

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes þ No ¨

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes þ No ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12-b-2 of the Exchange Act.

Large accelerated filer þ Accelerated Filer ¨ Emerging Growth Company ☐ Non-accelerated Filer ¨ Smaller Reporting Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrants included

in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240. 10D-1(b).☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No þ

The aggregate market value of the registrant's common stock, par value $0.01 per share (the "Common Stock") held by non-affiliates was approximately $ 11,285,281,624 based upon the June 30, 2023, cl osing price of $27.35 on the New York Stock Exchange.

There were 447,524,529 shares of Common Stock outstanding as of February 14, 2024.

Documents Incorporated by Reference

Part III of this report incorporates by reference specific portions of the Registrant’s Notice of Annual Meeting and Proxy Statement relating to the Annual Meeting of Stockholders to be held on May 13, 2024.

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DEFINED TERMS

The following is a list of frequently used abbreviations or acronyms that are found in this report:

NiSource Subsidiaries and Affiliates (not exhaustive)	
Columbia of Kentucky	Columbia Gas of Kentucky, Inc.
Columbia of Maryland	Columbia Gas of Maryland, Inc.
Columbia of Massachusetts	Bay State Gas Company
Columbia of Ohio	Columbia Gas of Ohio, Inc.
Columbia of Pennsylvania	Columbia Gas of Pennsylvania, Inc.
Columbia of Virginia	Columbia Gas of Virginia, Inc.
NIPSCO	Northern Indiana Public Service Company LLC
NIPSCO Holdings I	NIPSCO Holdings I LLC
NIPSCO Holdings II	NIPSCO Holdings II LLC
NiSource ("we," "us" or "our")	NiSource Inc.
Rosewater	Rosewater Wind Generation LLC and its wholly owned subsidiary, Rosewater Wind Farm LLC
Indiana Crossroads Solar	Indiana Crossroads Solar Generation LLC and its wholly owned subsidiary, Meadow Lake Solar Park LLC
Indiana Crossroads Wind	Indiana Crossroads Wind Generation LLC and its wholly owned subsidiary, Indiana Crossroads Wind Farm LLC
Dunns Bridge I	Dunns Bridge I Solar Generation LLC and its wholly owned subsidiary, Dunns Bridge Solar Center LLC
Dunns Bridge II	Dunns Bridge II Solar Generation LLC
Fairbanks	Fairbanks Solar Generation LLC
Cavalry	Cavalry Solar Generation LLC
Abbreviations and Other	
AFUDC	Allowance for funds used during construction
AOCI	Accumulated Other Comprehensive Income (Loss)
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
ATM	At-the-market
BIP	BIP Blue Buyer L.L.C
Blackstone	Blackstone Infrastructure Partners L.P.
BTA	Build-transfer agreement
CCGT	Combined Cycle Gas Turbine
CCRs	Coal Combustion Residuals
CEP	Capital Expenditure Program
CERCLA	Comprehensive Environmental Response Compensation and Liability Act (also known as Superfund)
CISA	Certified Information Systems Auditor
CISO	Chief Information Security Officer
CISSP	Certified Information Systems Security Professional
Corporate Units	Series A Corporate Units
COVID-19 ("the COVID-19 pandemic" or "the pandemic")	Novel Coronavirus 2019 and its variants, including the Delta and Omicron variants, and any other variant that may emerge
CRISC	Certified in Risk and Information Systems Control
DE&I	Diversity Equity and Inclusion
DPU	Department of Public Utilities
DSM	Demand Side Management

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DEFINED TERMS

EPA	United States Environmental Protection Agency
EPS	Earnings per share
Equity Units	Series A Equity Units
FAC	Fuel adjustment clause
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FMCA	Federally Mandated Cost Adjustment
GAAP	Generally Accepted Accounting Principles
GCA	Gas cost adjustment
GHG	Greenhouse gases
HLBV	Hypothetical Liquidation at Book Value
IIJA	Infrastructure Investment and Jobs Act
IRA	Inflation Reduction Act
IRP	Infrastructure Replacement Program
IRS	Internal Revenue Service
IURC	Indiana Utility Regulatory Commission
JV	Joint Venture
LDCs	Local distribution companies
LIFO	Last-in, first-out
LIHEAP	Low Income Heating Energy Assistance Programs
Massachusetts Business	All of the assets sold to, and liabilities assumed by, Eversource pursuant to the Asset Purchase Agreement
MGP	Manufactured Gas Plant
MISO	Midcontinent Independent System Operator
MMDth	Million dekatherms
MW	Megawatts
MWh	Megawatt hours
NERC CIP	North American Electric Reliability Corporation Critical Infrastructure Protection
NIPSCO Minority Interest Transaction	A transaction between NiSource, NIPSCO Holdings II (sole owner of NIPSCO) and an affiliate of Blackstone pursuant to a purchase and sale agreement entered into on June 17, 2023, that offered equity interests in NIPSCO Holdings II in exchange for capital contributions by the parties.
NOL	Net Operating Loss
NTSB	National Transportation Safety Board
NYMEX	The New York Mercantile Exchange
OPEB	Other Postretirement and Postemployment Benefits
OT	Operational Technology
PCB	Polychlorinated biphenyls
PHMSA	Pipeline and Hazardous Materials Safety Administration
PPA	Power Purchase Agreement
PSC	Public Service Commission
PUCO	Public Utilities Commission of Ohio
ROE	Return on Equity
RNG	Renewable Natural Gas
ROU	Right of Use
SAVE	Steps to Advance Virginia's Energy Plan

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DEFINED TERMS

Scope 1 GHG Emissions	Direct emissions from sources owned or controlled by us (e.g., emissions from our combustion of fuel, vehicles, and process emissions and fugitive emissions)
Scope 2 GHG Emissions	Indirect emissions from sources owned or controlled by us
SEC	Securities and Exchange Commission
Section 201 Tariffs	Tariffs imposed by Executive Order from the President of the U.S. on certain imported solar cells and modules at a rate of 15%, which were recently extended to 2026
SMRP	Safety Modification and Replacement Program
SMS	Safety Management System
SOFR	Secured Overnight Financing Rate
STRIDE	Strategic Infrastructure Development and Enhancement
TCJA	An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018 (commonly known as the Tax Cuts and Jobs Act of 2017)
TDSIC	Transmission, Distribution and Storage System Improvement Charge
TSA	Transportation Security Administration
U.S. Attorney's Office	U.S. Attorney's Office for the District of Massachusetts
VIE	Variable Interest Entity

Note regarding forward-looking statements

This Annual Report on Form 10-K contains "forward-looking statements," within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Investors and prospective investors should understand that many factors govern whether any forward-looking statement contained herein will be or can be realized. Any one of those factors could cause actual results to differ materially from those projected. These forward-looking statements include, but are not limited to, statements concerning our plans, strategies, objectives, expected performance, expenditures, recovery of expenditures through rates, stated on either a consolidated or segment basis, and any and all underlying assumptions and other statements that are other than statements of historical fact. Expressions of future goals and expectations and similar expressions, including "may," "will," "should," "could," "would," "aims," "seeks," "expects," "plans," "anticipates," "intends," "believes," "estimates," "predicts," "potential," "targets," "forecast," and "continue," reflecting something other than historical fact are intended to identify forward-looking statements. All forward-looking statements are based on assumptions that management believes to be reasonable; however, there can be no assurance that actual results will not differ materially.

Factors that could cause actual results to differ materially from the projections, forecasts, estimates and expectations discussed in this Annual Report on Form 10-K include, among other things:

- our ability to execute our business plan or growth strategy, including utility infrastructure investments;
- potential incidents and other operating risks associated with our business;
- our ability to work successfully with our third-party investors;
- our ability to adapt to, and manage costs related to, advances in technology, including alternative energy sources and changes in laws and regulations;
- our increased dependency on technology;
- impacts related to our aging infrastructure;
- our ability to obtain sufficient insurance coverage and whether such coverage will protect us against significant losses;
- the success of our electric generation strategy;
- construction risks and supply risks;
- fluctuations in demand from residential and commercial customers;
- fluctuations in the price of energy commodities and related transportation costs or an inability to obtain an adequate, reliable and cost-effective fuel supply to meet customer demand;
- our ability to attract, retain or re-skill a qualified, diverse workforce and maintain good labor relations;

- our ability to manage new initiatives and organizational changes;

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- the actions of activist stockholders;
- the performance and quality of third-party suppliers and service providers;
- potential cybersecurity attacks or security breaches;
- increased requirements and costs related to cybersecurity;
- any damage to our reputation;
- the impacts of natural disasters, potential terrorist attacks or other catastrophic events;
- the physical impacts of climate change and the transition to a lower carbon future;
- our ability to manage the financial and operational risks related to achieving our carbon emission reduction goals, including our Net Zero Goal (as defined below);
- our debt obligations;
- any changes to our credit rating or the credit rating of certain of our subsidiaries;
- adverse economic and capital market conditions, including increases in inflation or interest rates, recession, or changes in investor sentiment;
- economic regulation and the impact of regulatory rate reviews;
- our ability to obtain expected financial or regulatory outcomes;
- economic conditions in certain industries;
- the reliability of customers and suppliers to fulfill their payment and contractual obligations;
- the ability of our subsidiaries to generate cash;
- pension funding obligations;
- potential impairments of goodwill;
- the outcome of legal and regulatory proceedings, investigations, incidents, claims and litigation;
- compliance with changes in, or new interpretations of applicable laws, regulations and tariffs;
- the cost of compliance with environmental laws and regulations and the costs of associated liabilities;
- changes in tax laws or the interpretation thereof;
- and other matters set forth in Item 1, "Business," Item 1A, "Risk Factors" and Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this report, some of which risks are beyond our control.

In addition, the relative contributions to profitability by each business segment, and the assumptions underlying the forward-looking statements relating thereto, may change over time.

All forward-looking statements are expressly qualified in their entirety by the foregoing cautionary statements. We undertake no obligation to, and expressly disclaim any such obligation to, update or revise any forward-looking statements to reflect changed assumptions, the occurrence of anticipated or unanticipated events or changes to the future results over time or otherwise, except as required by law.

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PART I

ITEM 1. BUSINESS

NISOURCE INC.

NiSource Inc. is an energy holding company under the Public Utility Holding Company Act of 2005 whose primary subsidiaries are fully regulated natural gas and electric utility companies, serving approximately 3.8 million customers in six states. NiSource is the successor to an Indiana corporation organized in 1987 under the name of NIPSCO Industries, Inc., which changed its name to NiSource Inc. on April 14, 1999.

On November 7, 2022, we announced our intention to seek a minority interest investor in NIPSCO. We entered into an agreement with Blackstone on June 17, 2023, in furtherance of this goal. On December 31, 2023, the NIPSCO Minority Interest Transaction closed. At closing, NIPSCO Holdings I contributed all its membership interests in NIPSCO in exchange for an 80.1% controlling membership interest and Blackstone contributed $2.16 billion in cash in exchange for a 19.9% membership interest in NIPSCO Holdings II, respectively. NIPSCO Holdings II owns all the membership interests in NIPSCO.

NiSource's principal subsidiaries include NiSource Gas Distribution Group, Inc. (a holding company that owns Columbia of Kentucky, Columbia of Maryland, Columbia of Ohio, Columbia of Pennsylvania, and Columbia of Virginia), and a controlling interest in NIPSCO (a gas and electric company). NiSource derives substantially all of its revenues and earnings from the operating results of these rate-regulated businesses.

Business Strategy

Our business strategy focuses on providing safe and reliable service through our core, rate-regulated, asset-based utilities, with the goal of adding value to all of our stakeholders. Our utilities continue to advance our core safety, infrastructure and environmental investment programs supported by complementary regulatory and customer initiatives across the six states in which we operate. Our goal is to develop strategies that (i) support long-term infrastructure investment and safety programs to better serve our customers, (ii) align our tariff structures with our cost structure, and (iii) drive value and enable growth in an evolving energy ecosystem. These strategies focus on improving safety and reliability, enhancing customer experience, pursuing regulatory and legislative initiatives to increase accessibility for customers currently not on our gas and electric service, ensuring customer affordability and reducing emissions while generating sustainable returns.

We remain committed to the advancement of our SMS for the safety of our customers, communities and employees. Our SMS is the established operating model within NiSource. In 2022, we achieved conformance certification to the American Petroleum Institute Recommended Practice 1173, which serves as the guiding practice for our SMS. This certification, which requires ongoing annual review, marked an important milestone for our SMS and NiSource's journey towards operational excellence. Our focus is maintaining, sustaining and continuously improving processes, procedures, capabilities and talent to enhance safety and reduce operational risk.

NiSource has two reportable segments: Gas Distribution Operations and Electric Operations. The remainder of our operations, which are not significant enough on a stand-alone basis to warrant treatment as an operating segment, are included as Corporate and Other. The activities occurring within this non-segment consist of our centralized corporate activities and are primarily comprised of interest expense on holding company debt and unallocated corporate costs and activities. The following is a summary of the business for each reporting segment. Refer to Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Note 21, "Business Segment Information," in the Notes to Consolidated Financial Statements for additional information related to each segment.

Gas Distribution Operations

Our natural gas distribution operations serve approximately 3.3 million customers in six states. Through our wholly-owned subsidiary NiSource Gas Distribution Group, Inc., we provide natural gas to approximately 2.4 million residential, commercial and industrial customers in Ohio, Pennsylvania, Virginia, Kentucky, and Maryland. Additionally, we distribute natural gas to approximately 0.9 million customers in northern Indiana through our subsidiary NIPSCO. We operate approximately 55,000 miles of distribution main pipeline plus the associated individual customer service lines and 1,000 miles of transmission main pipeline located in our service areas described below. Throughout our service areas we also have gate stations and other operations support facilities. See below for information on our owned operating facilities. There were no significant disruptions to our system or facilities during 2023.

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Facility Name	Location	Type	Storage Capacity (MCF)
Royal Center Underground Storage	Royal Center, IN	Natural Gas	7,240,000
Rolling Prairie LNG	Rolling Prairie, IN	Liquified Natural Gas	4,000,000
Blackhawk Underground Storage	Beaver Falls, PA	Natural Gas	1,700,000
Eagle Cove Propane	Petersburgh, VA	Propane Gas	863
South Wales Propane	Jeffersonton, VA	Propane Gas	863
Portsmouth Propane-Air	Portsmouth, VA	Propane-Air Gas	17,300
Total Capacities			12,959,026

Competition. Open access to natural gas supplies over interstate pipelines and the deregulation of the natural gas supply has led to tremendous change in the energy markets and natural gas competition. Due to open access to natural gas supplies, our LDC customers can purchase gas directly from producers and marketers in an open, competitive market. Certain of our Gas Distribution Operations' subsidiaries are involved in programs that provide our residential and commercial customers the opportunity to purchase their natural gas requirements from third parties and use our Gas Distribution Operations' subsidiaries for transportation services. As of December 31, 2023, 25.9% of our residential customers and 34.7% of our commercial customers participated in such programs.

Gas Distribution Operations competes with (i) investor-owned, municipal, and cooperative electric utilities throughout its service areas, (ii) other regulated and unregulated natural gas intra and interstate pipelines and (iii) other alternate fuels, such as propane and fuel oil. Gas Distribution Operations continues to be a strong competitor in the energy markets in which it operates as a result of strong customer preference for natural gas. Competition with providers of electricity has traditionally been the strongest in the residential and commercial markets of Kentucky, southern Ohio, central Pennsylvania and western Virginia due to comparatively low electric rates.

Additionally, our gas distribution operations are subject to seasonal fluctuations in sales. Revenues from gas distribution operations are more significant during the heating season, which is primarily from November through March. Please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Results and Discussion of Operations - Gas Distribution Operations," for additional information.

Electric Operations

We generate, transmit and distribute electricity through our subsidiary NIPSCO to approximately 0.5 million customers in 20 counties in the northern part of Indiana and also engage in wholesale electric and transmission transactions. We own and operate sources of generation as well as source power through PPAs. We continue to transition our generation portfolio to primarily renewable sources. We currently have four owned projects in service: Rosewater, Indiana Crossroads Wind, Indiana Crossroads Solar, and Dunns Bridge I. Rosewater went into service in December 2020 and Indiana Crossroads Wind went into service in December 2021. The Indiana Crossroads Solar and Dunns Bridge I Solar projects went into service in June 2023. In October 2021, NIPSCO completed the retirement of two coal-burning units with installed capacity of approximately 903 MW at Schahfer Generating Station, located in Wheatfield, IN. As of December 31, 2023, we have multiple PPAs that provide 700 MW of capacity, with contracts expiring between 2024 and 2040.

NIPSCO's transmission system, with voltages from 69,000 to 765,000 volts, consists of approximately 2,920 circuit miles. NIPSCO is interconnected with eight neighboring electric utilities.We operate 66 transmission and 250 distribution substations, and own approximately 311,000 poles. Additionally, we own and operate reactive resources to supplement generation when necessary. Our facilities had no material unplanned interruptions during 2023. See below for information on our owned operating facilities:

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Facility Name	Location	Fuel Type	Generating Capacity (MW) [1]
R.M. Schahfer	Wheatfield, IN	Steam - Coal	722
Michigan City	Michigan City, IN	Steam - Coal	455
Sugar Creek [2]	West Terre Haute, IN	CCGT	563
R.M. Schahfer	Wheatfield, IN	Natural Gas	155
Oakdale	Carroll County, IN	Hydro	9
Norway	White County, IN	Hydro	7
Rosewater [3]	White County, IN	Wind	102
Indiana Crossroads Wind [3]	White County, IN	Wind	302
Dunns Bridge I [3]	Jasper County, IN	Solar	265
Indiana Crossroads Solar [3]	White County, IN	Solar	200
Total MW Capacity			2,780

[1] Represents current net generating capability of each fossil fuel and hydro generating facility. Nameplate capacity is listed for wind and solar generating facilities.
[2] Sugar Creek added additional generating capacity in January 2024.
[3] NIPSCO is the managing partner of these JVs. Refer to Note 4, "Noncontrolling Interest," in the Notes to Consolidated Financial Statements for more information.

In November 2021, NIPSCO submitted its 2021 Integrated Resource Plan ("2021 Plan") with the IURC. The 2021 Plan builds upon the 2018 Integrated Resource Plan which outlined NIPSCO's plan to retire its coal generating assets by 2028. The 2021 Plan affirmed the 2018 retirement decisions and calls for the replacement of the retiring coal generating assets with a diverse portfolio of resources, including demand side management resources, incremental solar, stand-alone energy storage, new gas peaking resources and upgrades to existing facilities at the Sugar Creek Generating Station, among other steps. Refer to Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" for further discussion of these plans.

NIPSCO participates in the MISO transmission service and wholesale energy market. MISO is a nonprofit organization created in compliance with FERC regulations to improve the flow of electricity in the regional marketplace and to enhance electric reliability. Additionally, MISO is responsible for managing energy markets, transmission constraints and the day-ahead, real-time, Financial Transmission Rights and ancillary markets. NIPSCO has transferred functional control of its electric transmission assets to MISO, and transmission service for NIPSCO occurs under the MISO Open Access Transmission Tariff. NIPSCO generating units are dispatched by MISO which takes into account economics, reliability of the MISO system and unit availability. During the year ended December 31, 2023, NIPSCO generating units, inclusive of its BTA projects, were dispatched to meet 49.5% of its overall system load, and the remainder of the overall system load was procured through PPAs and the MISO market.

Competition. Our electric utility generally has exclusive service areas under Indiana regulations, and retail electric customers in Indiana do not have the ability to choose their electric supplier. NIPSCO faces non-utility competition from other energy sources, such as self-generation by large industrial customers and other distributed energy sources.

Our electric operations are subject to seasonal fluctuations in sales. Revenues from electric operations are more significant during the cooling season, which is primarily from June through September. Please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Results and Discussion of Operations - Electric Operations," for additional information.

Political Action

The NiSource Political Action Committee ("NiPAC") provides our employees a voice in the political process. NiPAC is a voluntary, employee and director driven and funded political action committee, and NiPAC makes bipartisan political contributions to local, state and federal candidates where permitted and in accordance with established guidelines. Consistent with our commitments and our approach to engagement, the NiPAC leadership committee members evaluate candidates for support on issues important to our business.

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Regulatory

The applicable regulatory landscape at both the state and federal levels continue to evolve, including environmental. These changes have had and will continue to have an impact on our operations, structure and profitability. Management continually seeks new ways to be more competitive and profitable in this environment, while keeping service and affordability for customers at the forefront. We believe we are, in all material respects, in compliance with such laws and regulations and do not expect future compliance changes to have a material impact on our capital expenditures, earnings, or competitive position. We continue to monitor existing and pending laws and regulations, and the impact of regulatory changes cannot be predicted with certainty.

Rate Case Actions. The following table describes current rate case actions as applicable in each of our jurisdictions net of tracker impacts. See "Cost Recovery and Trackers" below for further detail on trackers.

(in millions)

Company	Approved ROE	Requested Incremental Revenue	Approved Incremental Revenue	Filing Date	Rates Effective
Approved Rates Cases					
Columbia of Pennsylvania [1]	None specified	$ 82.2	$ 44.5	March 18, 2022	December 2022
Columbia of Maryland [1]	None specified	$ 6.5	$ 3.9	May 12, 2023	December 2023
Columbia of Kentucky [2]	9.35 %	$ 26.7	$ 18.3	May 28, 2021	January 2022
Columbia of Virginia [3]	None specified	$ 40.5	$ 25.8	April 29, 2022	October 2022
Columbia of Ohio	9.60 %	$ 221.4	$ 68.3	June 30, 2021	March 2023
NIPSCO - Gas [4]	9.85 %	$ 109.7	$ 71.8	September 29, 2021	September 2022
NIPSCO - Electric [5]	9.80 %	$ 291.8	$ 261.9	September 19, 2022	August 2023
Pending Rate Cases					
NIPSCO - Gas [6]	In process	$ 161.9	In process	October 25, 2023	September 2024

[1] No approved ROE is identified for this matter since the approved revenue increase is the result of a black box settlement under which parties agree upon the amount of increase.
[2] The approved ROE for natural gas capital riders (*e.g* .,SMRP) is 9.275%.
[3] Columbia of Virginia's rate case resulted in a black box settlement, representing a settlement to a specific revenue increase but not a specified ROE. The settlement provides use of a 9.70% ROE for future SAVE filings.
[4] New rates were implemented in 2 steps, with implementation of Step 1 rates in September 2022. The Step 2 rates were filed on February 21, 2023, with rates effective March 2023.
[5] New rates will be implemented in 2 steps, with implementation of Step 1 rates in August 2023 and Step 2 Rates to be effective in March 2024, with service provided in February 2024.
[6] Pending the outcome of the current case, new rates are expected to be implemented in 2 steps, with implementation of Step 1 rates to be effective in September 2024 and Step 2 Rates in March 2025.

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FERC. NiSource's service company and operating companies are subject to varying degrees of regulation by the FERC. NiSource Corporate Services files a FERC Form 60 annual report with its financial information as a FERC jurisdictional centralized service company. NiSource also files an annual FERC Form 61 which contains a narrative description of the service company's functions during the prior calendar year.

As natural gas LDCs, Columbia of Maryland, Columbia of Ohio, Columbia of Pennsylvania, Columbia of Virginia, and NIPSCO have limited jurisdictional certificates to transport gas in the respective service territories into interstate commerce.

As an electric company, NIPSCO has Market Based Rate authority and is a Transmission Owner subject to FERC jurisdiction. NIPSCO files the following reports annually:

- FERC Form 1, which is a comprehensive financial and operating report,
- FERC Form 566, which is a list of its 20 largest purchases of electricity over the past three years,
- FERC Form 715, which is its Annual Transmission Planning and Evaluation Report and the base case power flow data from the Eastern Interconnection Reliability Assessment Group Multiregional Modeling Working Group, which was used by NIPSCO for transmission planning and,
- FERC Form 730, which is NIPSCO's Report of Transmission Investment Activity.

As a Transmission Owner subject to the MISO Transmission Owners Agreement and Tariff, NIPSCO has various FERC jurisdictional obligations such as maintaining its Attachment O formula rates and corresponding protocols. NIPSCO also has FERC approvals to make affiliate transactions between itself and various JVs. NIPSCO's officers, on the electric side, are also subject to FERC's interlocking directorate rules and reporting requirements.

Regulatory Framework. The Gas Distribution Operations utilities have pursued non-traditional revenue sources within the evolving natural gas marketplace. These efforts include (i) the sale of products and services in the companies' service territories, and (ii) gas supply cost incentive mechanisms for service to their core markets. The on-system services are offered by us to customers and include products such as the transportation and balancing of gas on the Gas Distribution Operations utility's system. The incentive mechanisms give the Gas Distribution Operations utilities an opportunity to share in the savings created from such situations as gas purchases made below an agreed upon benchmark price and the remarketing of unused pipeline capacity to reduce overall pipeline costs.

We recognize that energy efficiency reduces emissions, conserves natural resources and saves our customers money. Our gas distribution companies offer programs such as energy efficiency upgrades, home checkups and weatherization services. The increased efficiency of natural gas appliances and improvements in home building codes and standards contribute to a long-term trend of declining average use per customer. While we are looking to expand offerings so the energy efficiency programs can benefit as many customers as possible, our Gas Distribution Operations have pursued changes in rate design to more effectively match recoveries with costs incurred. Columbia of Ohio has adopted a straight fixed variable rate design that closely links the recovery of fixed costs with fixed charges. Columbia of Maryland and Columbia of Virginia have regulatory approval for weather and revenue normalization adjustments for certain customer classes, which adjust monthly revenues that exceed or fall short of approved levels. Columbia of Pennsylvania continues to operate its pilot residential weather normalization adjustment and also has a fixed customer charge. This weather normalization adjustment only adjusts revenues when actual weather compared to normal varies by more than 3%. Columbia of Kentucky incorporates a weather normalization adjustment for certain customer classes and also has a fixed customer charge. NIPSCO Gas and Electric include a fixed customer charge for residential and small commercial and industrial customer classes, but has no weather or usage protection mechanism. In its pending gas rate case, NIPSCO has requested approval of a revenue decoupling mechanism.

While increased efficiency of electric appliances and improvements in home building codes and standards have similarly impacted the average use per electric customer in recent years, NIPSCO expects future growth in per customer usage as a result of increasing electric applications. Further growth is anticipated as electric vehicles become more prevalent. These ongoing changes in use of electricity will likely lead to development of innovative rate designs, and NIPSCO will continue efforts to design rates that increase the certainty of recovery of fixed costs.

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Cost Recovery and Trackers. Comparability of our line item operating results is impacted by regulatory trackers that allow for the recovery in rates of certain costs such as those described below. Increases in the expenses that are subject to approved regulatory tracker mechanisms generally lead to increased regulatory assets, which ultimately result in a corresponding increase in operating revenues and, therefore, have essentially no impact on total operating income results. Certain approved regulatory tracker mechanisms allow for abbreviated regulatory proceedings in order for the operating companies to quickly implement revised rates and recover associated costs.

A portion of the Gas Distribution Operations revenue is related to the recovery of gas costs, the review and recovery of which occurs through standard regulatory proceedings. All states in our operating area require periodic review of actual gas procurement activity to determine prudence and confirm the recovery of prudently incurred energy commodity costs supplied to customers.

A portion of the Electric Operations revenue is related to the recovery of fuel costs to generate power and the fuel costs related to purchased power. These costs are recovered through a FAC, which is updated quarterly to reflect actual costs incurred to supply electricity to customers.

Environmental and Safety Matters

We are committed to reducing the environmental impact of our business and promoting sustained environmental stewardship. We seek proactive opportunities for improved environmental performance and are committed to complying with environmental laws and regulations. To fulfill our vision of being a trusted energy provider, we follow safety practices recommended by leading industry organizations. These practices help us identify and address potential risks, resulting in improvements to our operational and environmental safety.

PHMSA Legislation and Regulations

Under the Protecting Our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2020, PHMSA has revised, and continues to revise, the pipeline safety regulations to require operators to update, as needed, their existing distribution integrity management plans, emergency response plans, and operation and maintenance plans. PHMSA has also adopted new requirements for managing records and updating, as necessary, existing district regulator stations to eliminate common modes of failure that can lead to over-pressurization.

In May 2023, PHMSA proposed numerous regulatory revisions under the PIPES Act of 2020 to minimize methane emissions and improve public safety. Under these proposed revisions, our subsidiaries would be required to detect and repair an increased number of gas leaks, reduce the time to repair leaks, increase leak survey frequency, and expand our existing advanced leak detection program. We continue to evaluate the proposed rule for additional impacts on our business.

In September 2023, PHMSA proposed additional regulatory revisions under the PIPES Act of 2020 to enhance distribution system safety through equipment and procedural expectations. Operators will be required to incorporate additional protections for low pressure distribution systems that prevent over-pressurization, amend construction procedures designed to minimize the risk of incidents caused by system over-pressurization, and update distribution integrity management programs to cover and prepare for over-pressurization incidents.

On November 30, 2023, the House Transportation & Infrastructure Committee introduced new pipeline safety reauthorization legislation known as the PIPES Act of 2023 to reauthorize PHMSA's safety programs for the next four years. The proposed legislation includes several priorities for our company, including excavation damage prevention grants to improve states' damage prevention programs, a PHMSA study on blending hydrogen in distribution pipelines, new criminal penalties for intentionally damaging pipeline facilities, and creation of a Voluntary Information Sharing System to allow for industry participants to share learnings and best practices in a protected manner across the pipeline industry.

CCR Regulation

In May 2023, the EPA proposed changes to the CCR regulations for inactive surface impoundments at inactive facilities, referred to as legacy CCR surface impoundments. The EPA is also proposing to extend a subset of requirements in the CCR regulations to areas not previously subject to the CCR regulations, referred to as CCR management units ("CCRMUs"). In November 2023, the EPA issued a Notice of Data Availability seeking comment on updated lists of legacy impoundments and CCRMUs, as well as a risk assessment for legacy impoundments and CCRMUs. We continue to evaluate the proposed rule for impacts on our business.

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Climate Change Issues

Physical Climate Risks. Increased frequency of severe and extreme weather events associated with climate change could materially impact our facilities, energy sales, and results of operations. We are unable to predict these events. However, we perform ongoing assessments of physical risk, including physical climate risk, to our business. More extreme and volatile temperatures, increased storm intensity and flooding, and more volatile precipitation leading to changes in lake and river levels are among the weather events that are most likely to impact our business. Efforts to mitigate these physical risks continue to be implemented on an ongoing basis.

Transition Climate Risks . We actively engage with and monitor the impact that proposed legislative and regulatory programs related to GHG emissions, at both the federal and state levels, would have on our business. Refer to Item 1A. Risk Factors, "Operational Risks," of this Annual Report on Form 10-K for further detail.

Regarding federal policies, we continue to monitor the implementation of any final and proposed climate change-related legislation and regulation, including the IIJA, IRA, EPA's final methane regulations for the oil and natural gas industry, and EPA's proposed Waste Emissions Charge for Petroleum and Natural Gas systems. We have identified potential opportunities associated with the IIJA and the IRA and are evaluating how they may align with our strategy going forward. The energy-related provisions of the IIJA include new federal funding for power grid infrastructure and resiliency investments, new and existing energy efficiency and weatherization programs, electric vehicle infrastructure for public chargers and additional LIHEAP funding. The IRA contains climate and energy provisions, including funding to decarbonize the electric sector.

The United States is a party to the Paris Agreement, an international treaty through which parties set nationally determined contributions to reduce GHG emissions, build resilience, and adapt to the impacts of climate change. The Biden Administration has set a target for the United States to achieve a 50%-52% GHG reduction from 2005 levels by 2030, which supports the President's goals to create a carbon-free power sector by 2035 and net zero emissions economy no later than 2050. There are many potential pathways to reach these goals.

In December 2023, the U.S. Department of Energy ("DOE") amended the congressionally-mandated efficiency standards for residential home furnaces manufactured after December 2028. We are assessing the potential impacts associated with these new standards.

The DOE has selected two hydrogen hubs in our territories as recipients of funding designated in the IIJA to support the development of regional clean hydrogen hubs. The two hubs are the Midwest Alliance for Clean Hydrogen Hub (MachH2), with potential projects across Illinois, Indiana, Kentucky, Michigan, Missouri, and Wisconsin; and the Appalachian Regional Clean Hydrogen Hub (ARCH2), with potential investments across West Virginia, Ohio, Kentucky, and Pennsylvania. Work is underway to determine what roles our companies may have with these hydrogen hubs.

In May 2023, the EPA released a package of proposed regulatory actions to reduce carbon dioxide emissions from new natural gas-fired electric generating units ("EGUs"), existing natural gas-fired EGUs, and existing coal-fired EGUs. We are reviewing the potential impacts of the proposed rules.

We also continue to monitor the implementation of any final and proposed state policy. The Virginia Energy Innovation Act, enacted into law in April 2022, and effective July 1, 2022, allows natural gas utilities to supply alternative forms of gas that meet certain standards and reduce emissions intensity. The Act also provides that the costs of enhanced leak detection and repair may be added to a utility’s plan to identify proposed eligible infrastructure replacement projects and related cost recovery mechanisms, known as the SAVE Plan. Furthermore, under the Act, utilities can recover eligible biogas supply infrastructure costs on an ongoing basis. The provisions of these laws may provide opportunities for Columbia of Virginia as it participates in the transition to a lower carbon future.

The Climate Solutions Now Act of 2022 requires Maryland to reduce GHG emissions by 60% by 2031 (from 2006 levels), and it requires the state to reach net zero emissions by 2045. The Maryland Department of the Environment adopted a plan to achieve its 2031 goal and is required to adopt a plan for their 2045 net zero goal by 2030. The Act also enacts a state policy to move to broader electrification of both existing buildings and new construction, and requires the PSC to complete a study assessing the capacity of gas and electric distribution systems to successfully serve customers under a transition to a highly electrified building sector. The PSC released their report on December 29, 2023, and concluded that high levels of electrification can be handled by Maryland's electric systems through 2031. On December 15, 2023, the Maryland Department of the Environment issued proposed Building Energy Performance Standards (BEPS), which would require net zero direct

greenhouse gas emissions from large buildings by 2040 with interim targets. Comments on the proposed action were due to the agency on January 18, 2024. Columbia of Maryland is advocating for compliance pathways that use RNG, hydrogen, and emissions offsets. Separately, the PSC has also initiated a proceeding related to Near-Term, Priority Actions and

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Comprehensive, Long-Term Planning for Maryland's Gas Companies. Columbia of Maryland will continue to monitor these matters, but we cannot predict their final impact on our business at this time.

NIPSCO Gas, Columbia of Maryland, Columbia of Pennsylvania, Columbia of Virginia and Columbia of Kentucky each filed petitions to implement the Green Path Rider, which is a voluntary rider allowing customers to opt in and offset either 50% or 100% of their natural gas related emissions. To reduce the emissions, the utilities will purchase RNG attributes and carbon offsets to match the usage for customers opting into the program. The program was approved by the IURC at NIPSCO in November 2022 with a January 2023 start date. After reaching settlement with other parties in September 2022, NIPSCO agreed to add a third tier to offset 25% of customer usage. Columbia of Virginia received a final order in May 2023, approving the Green Path Rider and began enrolling customers in September 2023. The petitions filed by Columbia of Maryland, Columbia of Pennsylvania, and Columbia of Kentucky were rejected and have not been implemented as of December 31, 2023. Additionally, NIPSCO Electric has a voluntary Green Power Rider program in place that allows customers to designate a portion or all their monthly electric usage to come from power generated by renewable energy sources.

Net Zero Goal. In November 2022, we announced a goal of net zero greenhouse gas emissions by 2040 covering both Scope 1 and Scope 2 GHG emissions ("Net Zero Goal"). Our Net Zero Goal builds on greenhouse gas emission reductions achieved to-date and demonstrates that continued execution of our long-term business plan will drive further greenhouse gas emission reductions. We remain on track to achieve previously announced interim greenhouse gas emission reduction targets by reducing fugitive methane emissions from main and service lines by 50 percent from 2005 levels by 2025 and reducing Scope 1 GHG emissions from company-wide operations by 90 percent from 2005 levels by 2030. We plan to achieve our Net Zero Goal primarily through continuation and enhancement of existing programs, such as retiring and replacing coal-fired electric generation with low- or zero-emission electric generation, ongoing pipe replacement and modernization programs, and deployment of advanced leak-detection technologies. In addition, we plan to advance other low- or zero-emission energy resources and technologies, which may include hydrogen, renewable natural gas, long-duration storage, and/or deployment of carbon capture and utilization technologies, if and when these become technologically and economically feasible. Carbon offsets and renewable energy credits may also be used to support achievement of our Net Zero Goal. As of the end of 2022, we had reduced Scope 1 GHG emissions by approximately 67% from 2005 levels.

Our greenhouse gas emissions projections, including achieving a Net Zero Goal, are subject to various assumptions that involve risks and uncertainties. Achievement of our Net Zero Goal by 2040 will require supportive regulatory and legislative policies, favorable stakeholder environments and advancement of technologies that are not currently economical to deploy. Should such regulatory and legislative policies, stakeholder environments or technologies fail to materialize, our actual results or ability to achieve our Net Zero Goal, including by 2040, may differ materially.

As discussed in Management's Discussion within "Results and Discussion of Operations - Electric Operations," NIPSCO continues to execute on an electric generation transition consistent with the preferred pathways identified in its 2018 and 2021 Integrated Resource Plans. Additionally, as discussed in Management's Discussion within "Liquidity and Capital Resources - Regulatory Capital Programs," our natural gas distribution companies are lowering methane emissions by replacing aging infrastructure, which also increases safety and reliability for customers and communities.

Human Capital

Human Capital Management Governance and Organizational Practices . The Compensation and Human Capital Committee ("C&HC Committee") of our Board of Directors (the "Board") is primarily responsible for assisting the Board in overseeing our human capital management practices. The C&HC Committee reviews our human capital management function and programs. The review of related procedures, programs, policies and practices allows the committee to make recommendations to management with respect to equal employment opportunity and DE&I initiatives, employee engagement, corporate culture, and talent management.

In addition to overseeing our human capital management practices, our Board is committed to equal opportunity and valuing diversity. We have a goal that the Board is comprised of directors with diverse skills, expertise, experience, and demographics, including racial and gender diversity.

Human Capital Goals and Objectives . We have aligned our human capital goals to achieve overall company strategic and operational objectives by driving an enhanced talent strategy, elevating support for front-line leaders, fostering a culture of rigor

and accountability, and strengthening our human resource function. We aspire to be an employer of choice in the utility industry, in part, through embedding DE&I throughout the enterprise and creating an enviable employee experience.

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Workforce Composition . As of December 31, 2023, we had 7,364 full-time and 47 part-time active employees (i.e., not interns, not on leave or disability). Of our total workforce, 34% were subject to collective bargaining agreements with various labor unions. These collective bargaining agreements were renegotiated in 2021 and 2023 and expire in 2026 and 2027, respectively.

Diversity, Equity and Inclusion . We foster an enviable work environment that embraces DE&I and where all employees are energized. In efforts to become an employer of choice, we have developed sourcing strategies to attract and retain the most qualified talent. Our executive leadership team is characterized by a diverse composition, with 75% representation from both POC and females. In additional we have made progress the last several years with growth in our overall female and POC population.

In 2023, our Diversity of Slate initiative contributed to our talent acquisition team filling 1,508 roles with 579 filled by external candidates. Our efforts in 2023 resulted in 32% of external hires being racially or ethnically diverse and 49% being female. Our sourcing efforts led our organization across all businesses to create a workforce composition that embraces all different perspectives. We believe that every move we make as a company must value and advance the interests of the individual, energize our communities, and serve as another step toward establishing a society where no one is left behind.

A company that works to become truly fair and inclusive opens the door to more voices being heard. Our employee resource groups (ERGs) serve to create a culture of inclusion through their engagement of all employees throughout the year. We continue to develop ERG leaders to equip employees with the necessary tools to further support our efforts for advancement and strengthen our inclusive workplace. A key area for us has been our implementation and development of programs to drive higher retention and engagement of our employees. Our commitment is grounded on the core belief that our purpose extends far beyond our primary role as a utility company; thus, we focused on inclusive leadership training for over 700 Directors and Managers in the organization.

We are committed to providing equal employment opportunities in each of our companies to all employees and applicants without regard to race, color, religion, national origin or ancestry, veteran status, disability, gender, age, marital status, sexual orientation, gender identity, genetic information, or any protected group status as defined by law. The input provided by our increasingly diverse workforce will continue to strengthen our corporate culture as well as drive constructive changes within our company to improve our operational strategies, enhance the quality of the services we provide, and increase revenue.

Talent Attraction . To recruit and hire individuals with a variety of skills, talents, backgrounds and experiences, we value and cultivate relationships with community and diversity outreach partners. We also target job fairs, including those focused on people of color and veteran and female candidates and partner with local colleges and universities to identify and recruit qualified applicants in the communities we serve.

Similar to other companies we focused on our future of work and creating a flexible, agile model for roles that can be performed in a more remote setting. Our hybrid model recognizes differing ways of working; onsite, hybrid and remote. Most of our workforce is onsite (56%) and our hybrid (36%) and remote (7%) roles provide different avenues of working and seeking talent across our footprint. Hybrid employees work in a NiSource facility twice a week. This in-office presence supports colleague connection, development, in-person mentoring, and broader team building.

As an investment in our talent attraction in 2023, our NiSource Candidate Relationship Management (CRM) was brought online enabling interface with potential candidates and pools of candidates through a talent network even when active recruiting may not be in progress. We are proud to be one of TIME magazine’s World’s Best Companies of 2023 and recognized to the Forbes 2023 list of Best Employers for Diversity.

Talent Development and Retention . We offer leadership development programs to enhance the behaviors and skills of our existing and future leaders. In 2023, we had participation from employees of all levels. We also offer extensive technical and non-technical employee development training programs.

We strive to provide promotion and advancement opportunities for employees. In 2023, for all leadership positions at the supervisor and above level posted externally, we filled 72% with internal employees. We also develop and implement targeted

development action plans to increase succession candidate readiness for leadership roles. Additionally, we monitor the risk and potential impact of talent loss and take action to increase retention of top talent. Retention in 2023 was over 93%. We calculate retention as 100 minus the total number of separations divided by the average headcount for the annual period. These

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separations break down into involuntary separations (2%), resignations (4%), and retirements (2%). Retention has improved 2% year over year since 2021.

Succession Planning . We perform succession planning annually for officer level positions to ensure that we develop and sustain a strong bench of talent capable of performing at the highest levels. Talent is identified, and potential paths of development are discussed to ensure that employees have an opportunity to build their skills to be well-prepared for future roles. We maintain formal succession plans for our Chief Executive Officer ("CEO") and key officers. The succession plan for our CEO is reviewed by the Nominating and Governance Committee and the succession plans for key officers (other than the CEO) and critical roles are reviewed by the Compensation and Human Capital Committee annually or more frequently as needed.

Employee and Workplace Health and Safety . We have several programs to support employees, and their families' physical, mental, and financial well-being. These programs include competitive medical, dental, vision, life and long-term disability programs, including employee HSA company contributions, telemedicine services, Employee Assistance Program, Integrated Health Management navigation services, and paid time off including a wellness day, sick/disability, parental leave, and illness in family day.

We also have a robust program to support employees, contractors and public safety, which is led by our Chief Safety Officer and is under the oversight of the Safety, Operations, Regulatory and Policy Committee of our Board.

Culture and Engagement. Our culture is another important aspect of our ability to advance our strategic and operational objectives. In addition to our DE&I, recruiting, development and retention programs described above, we also invest in internal communications programs, including in-person and virtual learning and networking opportunities, as well as regular town hall communications to employees. We measure and monitor culture and employee engagement through various channels including employee lifecycle, pulse, and census surveys. These surveys continue to show above benchmark performance in safety, employee/manager relationships, and employee empowerment.

To instill and reinforce our values and culture, we require our employees to participate in regular training on ethics and compliance topics each year, including raising concerns, treating others with respect, preventing discrimination in the workplace, anti-bribery and corruption, data protection, unconscious biases, harassment, conflicts of interest, and how to use the anonymous ethics and compliance hotline. All employees receive training on our Code of Business Conduct annually or more frequently if there is a material change in content. Because of this training and other programs, we have learned from our most recent employee survey that 92% of our employees know what ethical violations look like and how to report them. Our business ethics program, including the employee training program, is reviewed annually by our executive leadership team and the Audit Committee of our Board of Directors.

Our Compensation and Human Capital Committee reviews reports from our Chief Human Resources Officer and Chief Diversity, Equity and Inclusion Officer on employee engagement and corporate culture. Our Board reviews results and action plans related to our enterprise-wide comprehensive employee engagement survey. Our executive leadership team, including our Chief Executive Officer, communicates directly and regularly with all employees on timely ethics topics through electronic messages, coffee chats, and all-employee town hall meetings. These communications emphasize the importance of our values and culture in the workplace.

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INFORMATION ABOUT OUR EXECUTIVE OFFICERS

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The following is a list of our Executive Officers, including their names, ages, offices held and other recent business experience.

Name	Age	Office(s) Held in Past 5 Years
Lloyd M. Yates	63	President and Chief Executive Officer of NiSource since February 2022 and Director since March 2020
		Executive Vice President, Customer and Delivery Operations, and President, Carolinas Region, of Duke Energy Corporation from 2014 to 2019.
Shawn Anderson	42	Executive Vice President and Chief Financial Officer of NiSource since March 2023
		Senior Vice President and Chief Strategy and Risk Officer from June 2020 to March 2023.
		Vice President, Strategy and Chief Risk Officer from January 2019 to May 2020.
Melody Birmingham	52	Executive Vice President, and President, NiSource Utilities of NiSource since March 2023
		Executive Vice President, Chief Innovation Officer of NiSource from July 2022 to March 2023.
		Senior Vice President and Chief Administrator Officer of Duke Energy Corporation from May 2021 to June 2022.
		Senior Vice President, Supply Chain and Chief Procurement Officer of Duke Energy Indiana from 2018 to April 2021.
Donald E. Brown	52	Executive Vice President and Chief Innovation Officer of NiSource since March 2023
		Executive Vice President and Chief Financial Officer of NiSource from July 2015 to March 2023.
		President, NiSource Corporate Services from 2020 to 2022.
William Jefferson, Jr	62	Executive Vice President, Operations and Chief Safety Officer of NiSource since July 2022
		Station Director and Plant General Manager at STPNOC, Wadsworth, Texas, from 2016 to May 2022.
Michael S. Luhrs	51	Executive Vice President, Strategy and Risk Chief Commercial Officer of NiSource since March 2023
		Senior Vice President at Alliant Energy from 2022 to March 2023.
		Vice President at Duke Energy Corporation from 2013 to 2022.
Kimberly S. Cuccia	40	Senior Vice President, General Counsel and Corporate Secretary of NiSource since April 2022
		Vice President, Interim General Counsel and Corporate Secretary of NiSource from December 2021 to April 2022.
		Vice President and Deputy General Counsel, Regulatory, of NiSource Corporate Services Company, from January 2021 to December 2021.
		Vice President and General Counsel of Columbia Gas of Massachusetts and of NiSource Corporate Services Company, from 2019 to 2020.
Melanie B. Berman	53	Senior Vice President and Chief Human Resources Officer since June 2021
		Executive Vice President and Chief Human Resources Officer of The Michaels Companies, Inc. from 2020 to 2021.
		Vice President, Human Resources of Anthem, Inc. from January 2018 to 2019.
Michael W. Hooper	50	Senior Vice President and President, NIPSCO of NiSource since May 2020
		Senior Vice President, Regulatory, Legislative Affairs and Strategy, of NIPSCO from 2018 to 2020.
Gunnar J. Gode	49	Vice President, Chief Accounting Officer and Controller of NiSource since July 2020
		Vice President and Controller of Washington Gas from March 2019 to 2020.
		Assistant Controller of Washington Gas from 2016 to March 2019.

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NI SOURCE INC.

Our operations and financial results are subject to various risks and uncertainties, including those described below, that could adversely affect our business, financial condition, results of operations, cash flows, and the market price of our common stock.

OPERATIONAL RISKS

We may not be able to execute our business plan or growth strategy, including utility infrastructure investments.
Operational, financial or regulatory conditions may result in our inability to execute our business plan or growth strategy, including investments related to natural gas pipeline modernization and our renewable energy projects, and the build-transfer execution goals within our business plan.

Our enterprise-wide transformation roadmap initiatives are designed to identify long-term sustainable capability enhancements, cost optimization improvements, technology investments and work process optimization, has increased the volume and pace of change and may not be effective as it continues. Our customer and regulatory initiatives may not achieve planned results. Utility infrastructure investments may not materialize, may cease to be achievable or economically viable and may not be successfully completed. Natural gas may cease to be viewed as an economically and environmentally attractive fuel. Certain environmental activist groups, investors and governmental entities continue to oppose natural gas delivery and infrastructure investments because of perceived environmental impacts associated with the natural gas supply chain and end use. Energy conservation, energy efficiency, distributed generation, energy storage, policies favoring electric heat over gas heat and other factors may reduce demand for natural gas and electricity. In addition, we consider acquisitions or dispositions of assets or businesses, JVs, and mergers from time to time as we execute on our business plan and growth strategy. Any of these circumstances could adversely affect our business, results of operations and growth prospects. Even if our business plan and/or growth strategy are executed, there is still risk of, among other things, human error in maintenance, installation or operations, shortages or delays in obtaining equipment, including as a result of transportation delays and availability, labor availability and performance below expected levels (in addition to the other risks discussed in this section). We are currently experiencing, and expect to continue to experience, supply chain challenges, including labor availability issues, impacting our ability to obtain materials for our gas and electric projects, as well as our ability to ensure timely completion.

Our distribution, transmission and generation activities involve a variety of inherent hazards and operating risks, including potential public safety risks.
Our gas distribution and transmission, electric generation, transmission and distribution activities, involve a variety of inherent hazards and operating risks, including, but not limited to, gas leaks and over-pressurization, downed power lines, stray electrical voltage, excavation or vehicular damage to our infrastructure, outages, environmental spills, mechanical problems and other incidents, which could cause substantial financial losses. These hazards and risks have resulted and may result in serious injury or loss of life to employees and/or the general public, significant damage to property, environmental pollution, impairment of our operations, adverse regulatory rulings and reputational harm, which in turn could lead to substantial business and financial losses. The location of pipeline facilities, including regulator stations, liquefied natural gas and underground storage, or generation, transmission, substation and distribution facilities near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages resulting from such incidents. Hazardous incidents have subjected and may subject us to both civil and criminal litigation or administrative or other legal proceedings from time to time, which could result in substantial monetary judgments, fines, or penalties against us, be resolved on unfavorable terms, and require us to incur significant operational expenses. The occurrence of incidents has in certain instances adversely affected and could in the future adversely affect our reputation, cash flows, financial position and/or results of operations. We maintain insurance against some, but not all, of these risks and losses.

We currently conduct and may conduct in the future certain operations through a JV arrangement involving third-party investors that may result in operational impasses or litigation, including business delays as a result of such arrangements.
We have and may enter into JV arrangements involving third-party investors, including the NIPSCO Minority Interest Transaction. As part of a JV arrangement, third-party investors may hold certain protective rights that may impact our ability to make certain decisions, restricting our operational and corporate flexibility. Any such third-party investors may have interests and objectives which may differ from ours, we may be unable to cause these third parties to take action that we believe would be in the JV's best interest, and, accordingly, disputes may arise that may result in operational impasses or litigation, including business delays.

Failure to adapt to advances in technology, including alternative energy sources, and changes in laws or regulations to support such advances in technology or alternative energy sources, and our ability to manage such related costs could make us less competitive.

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A key element of our electric business model includes generating power at central station power plants to achieve economies of scale and produce power at a competitive cost. We continue to transition our generation portfolio in order to implement new and diverse technologies including renewable energy, distributed generation, energy storage, and energy efficiency designed to reduce regulated emissions. Advances in technology and potential competition supported by changes in laws or regulations could reduce the cost of electric generation and provide retail alternatives causing power sales to decline and the value of our generating facilities to decline.

Our natural gas business model depends on widespread utilization of natural gas for space heating as a core driver of revenues. Alternative energy sources, new technologies or alternatives to natural gas space heating, including cold climate heat pumps and/or efficiency of other products, and potential competition supported by changes in laws or regulations could reduce demand and increase customer attrition, which could impact our ability to recover on our investments in our gas distribution assets.

Our future success will depend, in part, on our ability to anticipate and successfully adapt to technological changes, to offer services that meet customer demands and evolving industry standards, including environmental impacts associated with our products and services, and to recover all, or a significant portion of, remaining investments in retired assets. A failure by us to effectively adapt to changes in technology, successfully implement such changes, and manage the related costs could harm the ability of our products and services to remain competitive in the marketplace and could have a material adverse impact on our business, results of operations and financial condition. Furthermore, if these changes do not provide the anticipated benefits or meet customer demands, such failure could materially adversely affect our business model as well as impact results of operations and financial condition.

Increased dependency on technology may hinder our business operations and adversely affect our financial condition and results of operation if such technology fails.
We use a variety of technological tools and systems including both Company-owned information technology and technological services provided by outside parties. These tools and systems support critical functions including scheduling and dispatching of service technicians, automated meter reading systems, customer care and billing, operational plant logistics, management reporting and external financial reporting. The failure of these or other similarly important technologies, or our inability to have these technologies supported, updated, expanded, recovered (including timely recovered), or integrated into other technologies, could hinder our business operations and adversely impact its financial condition and results of operations. Although the Company has, when possible, developed alternative sources of technology and built redundancy into its computer networks and tools, there can be no assurance that these efforts would protect against all potential issues related to the loss of any such technologies.

Aging infrastructure may lead to disruptions in operations and increased capital expenditures and maintenance costs .
We have risks associated with aging electric and gas infrastructure. These risks can be driven by threats such as, but not limited to, electrical faults, mechanical failure, internal corrosion, external corrosion, ground movement and stress corrosion and/or cracking. The age of these assets may result in a need for replacement, a higher level of maintenance costs or unscheduled outages, despite efforts by us to properly maintain or upgrade these assets through inspection, scheduled maintenance and capital investment. In addition, the nature of the information available on aging infrastructure assets, which in some cases is incomplete, may make the operation of the infrastructure, inspections, maintenance, upgrading and replacement of the assets particularly challenging. Missing or incorrect infrastructure data may lead to (1) difficulty properly locating facilities, which can result in excavator damage and operational or emergency response issues, and (2) configuration and control risks associated with the modification of system operating pressures in connection with turning off or turning on service to customers, which can result in unintended outages or operating pressures. Also, additional maintenance and inspections are required in some instances to improve infrastructure information and records and address emerging regulatory or risk management requirements, resulting in increased costs.

Supply chain issues related to shortages of materials, labor and transportation logistics may lead to delays in the maintenance and replacement of aging or damaged infrastructure, which could increase the probability and/or impact of a public safety incident. We lack diversity in suppliers of some gas materials. While we have implemented contractual protections with suppliers and stockpile some materials in inventory for such supply risks, we may not be effective in ensuring that we can obtain adequate emergency supply on a timely basis in each state, that no compromises are being made on quality and that we

have alternate suppliers available. The failure to operate our assets as desired could result in interruption of electric service, major component failure at generating facilities and electric substations, gas leaks and other incidents, and an inability to meet firm service and compliance obligations, which could adversely impact revenues, and could also result in increased capital expenditures and maintenance costs, which, if not fully recovered from customers, could negatively impact our financial results.

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We may be unable to obtain insurance on acceptable terms or at all, and the insurance coverage we do obtain may not provide protection against all significant losses.
Our ability to obtain insurance, as well as the cost and coverage of such insurance, is impacted by various events and developments affecting our industry and the financial condition and underwriting considerations of insurers. For example, some insurers have discontinued underwriting certain carbon-intensive energy-related businesses such as those in the coal industry or excluded coverage for specific perils such as wildfires or punitive damage risks. Certain perils, such as cyber liability, are now being excluded from some master policies for property and casualty insurance, requiring, where we have the ability, procurement of additional policies to maintain consistent coverage at an additional cost. Specific natural catastrophe events, such as hail and tornado, may not be covered with the same limits as other perils in certain property policies, as full coverage for these events is unavailable in the marketplace without costly specialty policies. Insurance coverage may not continue to be available at limits, rates or terms acceptable to us. In addition, our insurance is not sufficient or effective under all circumstances and against all hazards or liabilities to which we are subject. Certain types of damages, expenses or claimed costs, such as fines and penalties, have been and in the future may be excluded under the policies. In addition, insurers providing insurance to us may raise defenses to coverage under the terms and conditions of the respective insurance policies that could result in a denial of coverage or limit the amount of insurance proceeds available to us. Any losses for which we are not fully insured or that are not covered by insurance at all could materially adversely affect our results of operations, cash flows and financial position.

Aspects of the implementation of our electric generation strategy, including the timing of the retirement of our coal generation units or the addition of new generation resources, may be delayed and may not achieve intended results.
We intend to retire the remaining two coal units at R.M. Schahfer Generating Station by the end of 2025 and the remaining coal-fired generation by the end of 2028, to be replaced by lower-cost, reliable and cleaner options. Our 2021 Integrated Resource Plan (“2021 Plan”) validated the activities underway pursuant to our prior Integrated Resource Plans and calls for the retirement of the Michigan City Generating Station, replacement of existing vintage gas peaking facilities at the R.M. Schahfer Generating Station and upgrades to the electric transmission system. Macro supply chain issues and U.S. federal policy actions could create uncertainty around the availability of key input materials necessary to develop and place our renewable energy projects in service.

In the U.S., solar industry supply chain issues include the U.S. Department of Commerce regulations related to antidumping and countervailing duties circumvention, the Uyghur Forced Labor Protection Act, Section 201 Tariffs and persistent general global supply chain and labor availability issues. The most prominent effect of these issues is the curtailment of imported solar panels and other key components required to complete utility scale solar projects in the U.S. Any available solar panels may not meet the cost and efficiency standards of our currently approved projects and the incremental cost may not be recoverable through customer rates. As a result of the challenges in obtaining solar panels, many solar projects in the U.S. have been delayed or canceled. As we are in the midst of a transition to an electric generation portfolio with more renewable resources, including solar, our projects are vulnerable to the effects of these issues.

Our expectation has been that renewable or alternative energy sources would be some of the primary ways in which we will meet our electric generation capacity and reliability obligations to the MISO market and reliably serve our customers when we retire our coal generation capacity. The uncertainty surrounding the completion of generation resource projects could create significant risks for us to reliably meet our capacity and energy obligations to MISO and to provide reliable and affordable energy to our customers. Any additional delays to the completion dates of our planned and approved solar projects or other electric generation projects, including our proposed gas peaking facility could impact our capacity position and our ability to meet our resource adequacy obligations to MISO. Delays to the completion dates of our projects could also include delays in the financial return of certain investments and impact the overall timing of our electric generation transition.

Our electric generation strategy may require additional investment to meet our MISO obligations and may require significant future capital expenditures, operating costs and charges to earnings that may negatively impact our financial position, financial results and cash flows. An inability to secure and deliver on renewable projects has negatively impacted, and could in the future negatively impact, our generation transition timeline and could negatively impact our achievement of decarbonization goals and reputation.

Our capital projects and programs subject us to construction and supply risks, and are subject to regulatory oversight, including requirements for permits, approvals and certificates from various governmental agencies.

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Our business requires substantial capital expenditures for investments in, among other things, capital improvements to our electric generating facilities, electric and natural gas distribution infrastructure, natural gas storage and other projects, including projects for environmental compliance. As we undertake these projects and programs, we may be unable to complete them on schedule or at the anticipated costs. Additionally, we may construct or purchase some of these projects and programs to capture anticipated future growth, which may not materialize, and may cause the construction to occur over an extended period of time.

Construction risks include, but are not limited to, changes in the availability or costs of materials, equipment, commodities or labor (including changes to tariffs on materials), delays caused by construction incidents or injuries, work stoppages, poor initial cost estimates, unforeseen engineering issues, and general contractors and subcontractors not performing as required under their contracts.

We are monitoring risks related to increasing delivery lead times for certain construction and other materials, increasing risk associated with the unavailability of materials due to global shortages in raw materials and issues with transportation logistics, and risk of decreased construction labor productivity in the event of disruptions in the availability of materials critical to our gas and electric operations. Our efforts to enhance our resiliency to supply chain shortages may not be effective. We continue to see increasing prices associated with certain materials, equipment and products, which impacts our ability to complete major capital projects at the cost that was planned and approved. To the extent that delays occur, costs increase, costs become unrecoverable or recovery is delayed, or we otherwise become unable to effectively manage our affordability and complete our capital projects, our business operations, results of operations, cash flows, and financial condition may be adversely affected. In addition, to the extent that delays occur on projects that target system integrity, the risk of an operational incident could increase.

Our existing and planned capital projects require numerous permits, approvals and certificates from federal, state, and local governmental agencies, including obtaining necessary rights-of-way, easements and transmissions connections, as well as complying with various environmental statutes, rules and regulations, among other items. If there is a delay in obtaining any required regulatory approvals or if we fail to obtain or maintain any required approvals or to comply with any applicable laws or regulations, we may not be able to construct or operate our facilities, we may be forced to incur additional costs or we may be unable to recover any or all amounts invested in a project. We also may not receive the anticipated increases in revenue and cash flows resulting from such projects and programs until after their completion.

A significant portion of the gas and electricity we sell is used by residential and commercial customers for heating and air conditioning. Accordingly, fluctuations in weather, gas and electricity commodity costs, and economic conditions impact customer demand.

Energy sales are sensitive to variations in weather. Forecasts of energy sales are based on “normal” weather, which represents a long-term historical average. Significant variations from normal weather resulting from climate change or other factors could have, and have had, a material impact on energy sales. Additionally, residential usage, and to some degree commercial usage, is sensitive to fluctuations in commodity costs for gas and electricity, whereby usage declines with increased costs, thus affecting our financial results. Commodity prices have been and may continue to be volatile as described in more detail in the below risk factor. Rising gas costs could heighten regulator and stakeholder sensitivity relative to the impact of base rate increases on customer affordability. Lastly, residential and commercial customers’ usage is sensitive to economic conditions and factors such as recession, inflation, unemployment, consumption and consumer confidence. Therefore, prevailing economic conditions affecting the demand of our customers may in turn affect our financial results.

Fluctuations in the price of energy commodities or their related transportation costs, or an inability to obtain an adequate, reliable and cost- effective fuel supply may impact our ability to meet customer demand.

Our current electric generating fleet has dependencies on coal and natural gas for fuel, and our gas distribution operations purchase and resell a portion of the natural gas we deliver to our customers. These energy commodities are subject to price fluctuations and fluctuations in associated transportation costs. We use physical hedging through the use of storage assets and use financial products in certain jurisdictions in order to offset fluctuations in commodity supply prices. We rely on regulatory recovery mechanisms in the various jurisdictions in order to fully recover the commodity costs incurred in selling energy to our customers. While we have historically been successful in the recovery of costs related to such commodity prices, there can be no assurance that such costs will be fully recovered through rates in a timely manner.

In addition, we depend on electric transmission lines, natural gas pipelines, and other transportation and storage facilities owned and operated by third parties to deliver the electricity and natural gas we sell to wholesale markets, supply natural gas to our gas storage and electric generation facilities, and provide retail energy services to our customers. If transportation is disrupted, if

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capacity is inadequate or if supply is interrupted due to issues at the wellhead, we may be unable to sell and deliver our gas and electric services to some or all of our customers. As a result, we may be required to procure additional or alternative electricity and/or natural gas supplies at then-current market rates, which, if recovery of related costs is disallowed, could have a material adverse effect on our businesses, financial condition, cash flows, results of operations and/or prospects.

Failure to attract, retain or re-skill an appropriately qualified workforce, and maintain good labor relations, could adversely impact safety, service reliability, and customer satisfaction.
Although our attrition rates have stabilized and are improving, we face increased competition for talent which may result in longer hire times or increased cost due to the competitive nature of certain positions.

We operate in an industry that requires many of our employees and contractors to possess unique technical skill sets. An aging workforce without appropriate replacements, the mismatch of skill sets to future needs, the unavailability of talent for internal positions and the unavailability of contract resources may lead to operating challenges or increased costs. These operating challenges include lack of resources, loss of knowledge and a lengthy time period associated with skill development. For example, certain skills, such as those related to construction, maintenance and repair of transmission and distribution systems, are in high demand and have a limited supply. Current and prospective employees may determine that they do not wish to work for us due to market, economic, employment or other conditions, including those related to organizational changes as described in the risk factor below.

Further, as part of our strategic plan, which includes enhanced technology, transmission and distribution investments, and a reduction in reliance on coal-fired generation, we will need to attract and retain personnel that are qualified to implement such a strategy and may need to retrain or re-skill certain employees to support our long-term objectives. Additionally, successful implementation of our strategic plan is dependent on our ability to recruit and retain key executive officers to oversee its progress.

A significant portion of our workforce is subject to collective bargaining agreements. Our collective bargaining agreements are generally negotiated on an operating company basis with some companies having multiple bargaining agreements, which may span different geographies. Any failure to reach an agreement on new labor contracts or to renegotiate these labor contracts might result in strikes, boycotts or other labor disruptions. Our workforce continuity plans may not be effective in avoiding work stoppages that may result from labor negotiations or mass resignations. Labor disruptions, strikes or significant negotiated wage and benefit increases, whether due to union activities, employee turnover or otherwise, could have a material adverse effect on our businesses, results of operations and/or cash flows.

Failure to attract, retain, or re-skill qualified employees, including the ability to transfer significant internal historical knowledge and expertise to the new employees, could result in a loss of momentum, loss of high-level employees to our peers and could materially adversely affect our business, results of operations, cash flow and financial condition. If we are unable to successfully attract and retain an appropriately qualified workforce and maintain satisfactory labor relations, safety, service reliability, customer satisfaction and our results of operations could be adversely affected.

If we cannot effectively manage new initiatives and organizational changes, we will be unable to address the opportunities and challenges presented by our strategy and the business and regulatory environment.
In order to execute on our sustainable growth strategy and enhance our culture of ongoing continuous improvement, we must effectively manage the complexity and frequency of new initiatives and organizational changes. The organizational changes from our transformation initiatives have put short-term pressure on employees due to the volume and pace of change and, in some cases, the loss of personnel. Front-line workers are being impacted by the variety of process and technology changes that are currently in progress.

If we are unable to make decisions quickly, assess our opportunities and risks, and successfully implement new governance, managerial and organizational processes as needed to execute our strategy in this increasingly dynamic and competitive business and regulatory environment, our financial condition, results of operations and relationships with our business partners, regulators, customers, employees and stockholders may be negatively impacted.

Actions of activist stockholders could negatively affect our business and stock price and cause us to incur significant expenses.

We may be subject to actions or proposals from activist stockholders or others that may not be aligned with our long-term strategy or the interests of our other stockholders. Our response to suggested actions, proposals, director nominations and

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contests for the election of directors by activist stockholders could disrupt our business and operations, divert the attention of our board of directors, management and employees, and be costly and time-consuming. Potential actions by activist stockholders or others may interfere with our ability to execute our strategic plans; create perceived uncertainties as to the future direction of our business or strategy; cause uncertainty with our regulators; make it more difficult to attract and retain qualified personnel; and adversely affect our relationships with our existing and potential business partners. Any of the foregoing could adversely affect our business, financial condition and results of operations. Also, we may be required to incur significant fees and other expenses related to responding to stockholder activism, including for third-party advisors. Moreover, our stock price could be subject to significant fluctuation or otherwise be adversely affected by the events, risks and uncertainties of any stockholder activism.

We outsource certain business functions to third-party suppliers and service providers, and may be impacted by substandard performance or quality by third parties.

Utilities rely on extensive networks of business partners and suppliers to support critical enterprise capabilities across their organizations. Like other companies in the utilities industry, we outsource certain services to third parties in areas including construction services, information technology, materials, fleet, environmental, operational services, corporate and other areas. We are seeing slowing deliveries from suppliers and in some cases materials and labor shortages for capital projects. In addition to delays and unavailability, at times, outsourcing of services to third parties could expose us to inferior service quality or substandard deliverables, which may result in non-compliance (including with applicable legal requirements and industry standards), interruption of service, accidents, or reputational harm, which could negatively impact our business, financial condition and results of operations. The nature of indirect supply chain, including a potential lack of control or certain visibility into sourcing by vendors, may also impact our ability to serve customers in a safe, reliable and cost-effective manner. These risks include the risk of operational failure, reputation damage, disruption due to new supply chain disruptions, exposure to significant commercial losses and fines and poorly positioned and distressed suppliers. If we continue to see delayed deliveries and shortages or if any other difficulties in the operations of these third-party suppliers and service providers, including their systems, were to occur, they could adversely affect our results of operations, or adversely affect our ability to work with regulators, unions, customers, or employees.

A cyber-attack or security breach on any of our or certain third-party technology systems, including but not limited to information systems, infrastructure, software and hardware, upon which we rely may adversely affect our ability to operate, could lead to a loss or misuse of confidential and proprietary information, or potential liability.

We are reliant on technology to run our business, which is dependent upon technology systems to process critical information necessary to conduct various elements of our business, including the generation, transmission and distribution of electricity; operation of our gas pipeline facilities; and the recording and reporting of commercial and financial transactions to regulators, investors and other stakeholders. In addition to general information and cybersecurity risks that all large corporations face (e.g., ransomware, malware, unauthorized access attempts, phishing attacks, malicious intent by insiders, third-party software vulnerabilities and inadvertent disclosure of sensitive information), the utility industry faces evolving and increasingly complex cybersecurity risks associated with protecting electric grid and natural gas infrastructure as well as sensitive and confidential customer and employee information. Deployment of new business technologies, along with maintaining legacy technology, represents a large-scale opportunity for attacks on our information systems and confidential customer and employee information, as well as on the integrity of the energy grid and the natural gas infrastructure. Increasing large-scale corporate cyber-attacks in conjunction with more sophisticated threats continue to challenge power and utility companies. Additionally, international conflicts, as well as increased surveillance activity from China, has increased the likelihood of a cyber-attack or security breach on critical infrastructure systems.

Additionally, our information systems experience ongoing, often sophisticated, cyber-attacks or security breaches by a variety of sources, including foreign sources, with the apparent aim to breach our cyber-defenses. While we have implemented and maintain a cybersecurity program designed to protect our information technology, operational technology, and data systems from such cyber-attacks or security breaches, our cybersecurity program does not prevent all breaches, cyber-attack or security breach incidents. We have experienced an increase in the number of attempts by external parties to access our networks or our company data without authorization. We have experienced, and expect to continue to experience, cybersecurity intrusions and attacks or security breaches to our information systems. To our knowledge, none of these intrusions or attacks have resulted in a material cybersecurity intrusion or data breach. The risk of a disruption or breach of our operational technology, or the

compromise of the data processed in connection with our operations, through cybersecurity breach or ransomware attack has increased as attempted cyber-attacks or security breaches have advanced in sophistication and number around the world. Technological complexities combined with advanced cyber- attack or security breach techniques, lack of cybersecurity hygiene and human error can result in a cybersecurity incident, such as a ransomware attack. Supplier non-compliance with

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cybersecurity controls can also result in a cybersecurity incident. We are aware of vendor cyber incidents that have impacted our business, although no such events have had a material impact. Cyber-attacks or security breaches can occur at any point in the supply chain or with any suppliers, and future supplier non-compliance with cybersecurity controls could result in material cybersecurity incidents. In addition, we use unmanned aircraft systems (UAS) or drones in our business operations. UASs are also being used for malicious activities and the cybersecurity risk in connection with operating UASs is increasing.

In addition, we collect and retain personally identifiable information of our customers and employees. Customers and employees expect that we will adequately protect their personal information. The legal and regulatory environment surrounding information security and privacy is increasingly demanding.

Although we attempt to maintain adequate defenses to these cyber-attacks or security breaches and work through industry groups and trade associations to identify common threats and assess our countermeasures, a security breach of our information systems or operational technology, or a security breach of the information systems of our customers, suppliers or others with whom we do business, could (i) adversely impact our ability to safely and reliably deliver electricity and natural gas to our customers through our generation, transmission and distribution systems and potentially negatively impact our compliance with certain mandatory reliability and gas flow standards, (ii) subject us to reputational and other harm or liabilities associated with theft or inappropriate release of certain types of information such as system operating information or information, personal or otherwise, relating to our customers or employees, (iii) impact our ability to manage our businesses, and/or (iv) subject us to legal and regulatory proceedings and claims from third parties, in addition to remediation costs, any of which, in turn, could have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects. Although we do maintain cybersecurity insurance, it is possible that such insurance will not adequately cover any losses or liabilities we may incur as a result of a cybersecurity incident.

Compliance with and changes in cybersecurity requirements have a cost and operational impact on our business, and failure to comply with such laws and regulations could adversely impact our reputation, results of operations, financial condition and/or cash flows.

As cyber-attacks or security breaches are becoming more sophisticated, critical infrastructure assets, including pipelines and electric infrastructure, may be specifically targeted. In 2021, the TSA announced two new security directives in response to a ransomware attack on the Colonial Pipeline that occurred earlier in the year. These directives, including updates or amendments to such TSA directives, require critical pipeline owners to comply with mandatory reporting measures, designate a cybersecurity coordinator, provide vulnerability assessments, and ensure compliance with certain cybersecurity requirements. NiSource continues to work with the TSA to ensure that compliance with the security directives are being met. Additionally, on November 30, 2022, the TSA issued an advance notice of proposed rulemaking (ANPRM) seeking public comment on more comprehensive, formal cybersecurity regulations for the pipeline industry. Such directives or additional legal requirements may require expenditure of significant additional resources to respond to cyber-attacks or security breaches, to continue to modify or enhance protective measures, or to assess, investigate and remediate any critical infrastructure security vulnerabilities. Increased costs and the operational impacts of compliance and changes in cybersecurity requirements, including any failure to comply with government regulations or any failure in our cybersecurity protective measures may result in enforcement actions, all of which may have a material adverse effect on our business, results of operations and financial condition. In addition, there is no certainty that costs incurred related to securing against threats will be recovered through rates.

The impacts of natural disasters, acts of terrorism, acts of war, civil unrest, accidents, public health emergencies or other catastrophic events may disrupt operations and reduce the ability to service customers.

A disruption or failure of natural gas distribution systems, or within electric generation, transmission or distribution systems, in the event of a major hurricane, tornado, wildfire, or other major weather event, or terrorist attack, acts of war, international military invasions, including the political and economic disruption and uncertainty related to such terrorist attack, acts of war, or international military invasions (e.g. Russia’s military invasion of Ukraine, Israel/Hamas conflict), civil unrest, accident, public health emergency (e.g. pandemic), or other catastrophic event could cause delays in completing sales, providing services, or performing other critical functions. We have experienced disruptions in the past from hurricanes and tornadoes and other events of this nature. Also, companies in our industry face a heightened risk of exposure to and have experienced acts of terrorism and vandalism. Our electric and gas physical infrastructure may be targets of physical security threats or terrorist activities that could disrupt our operations. We have increased security given the current environment and may be required by regulators or by

the future threat environment to make investments in security that we cannot currently predict. In addition, the supply chain constraints that we are experiencing could impact our ability to timely restore services. The occurrence of such events could materially adversely affect our business, financial position and results of operations. In accordance with customary industry practice, we maintain insurance against some, but not all, of these risks and losses. As a result, the amount and scope

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of insurance coverage maintained against losses resulting from any such event may not be sufficient to cover such losses or otherwise adequately compensate for any business disruptions that could result.

We are exposed to significant reputational risks, which make us vulnerable to a loss of cost recovery, increased litigation and negative public perception.
As a utility company, we are subject to adverse publicity focused on the reliability of our services, the speed with which we are able to respond effectively to electric outages, natural gas leaks or events and related accidents and similar interruptions caused by storm damage, physical or cybersecurity incidents, or other unanticipated events, as well as our own or third parties' actions or failure to act. We are subject to prevailing labor markets and potential high attrition, which may impact the speed of our customer service response. We are also facing supply chain challenges, the impacts of which may adversely impact our reputation in several areas as described elsewhere in these risk factors. We are also subject to adverse publicity related to actual or perceived environmental impacts. If customers, legislators or regulators have or develop a negative opinion of us, this could result in less favorable legislative and regulatory outcomes or increased regulatory oversight, increased litigation and negative public perception. The foregoing may have adverse effects on our business, results of operations, cash flow and financial condition.

The physical impacts of climate change and the transition to a lower carbon future are impacting our business and could materially adversely affect our results of operations.
Climate change is exacerbating risks to our physical infrastructure by increasing the frequency of extreme weather, including heat stresses to power lines, cold temperature stress to our electric and gas systems, and storms and floods that damage infrastructure. In addition, climate change is likely to cause lake and river level changes that affect the manner in which services are currently provided and droughts or other limits on water used to supply services, and other extreme weather conditions. We have adapted and will continue to evolve our infrastructure and operations to meet current and future needs of our stakeholders. With higher frequency of these and other possible extreme weather events it may become more costly for us to safely and reliably deliver certain products and services to our customers. Further, as our generation profile increases geographically, it is potentially more vulnerable to certain weather hazards than centralized fossil generation, thereby increasing the frequency of weather impacts to overall electric reliability and such distributed renewables. Some of these costs may not be recovered. To the extent that we are unable to recover those costs, or if higher rates arising from recovery of such costs result in reduced demand for services, our future financial results may be adversely impacted. Further, as the intensity and frequency of significant weather events increases, insurers may reprice or remove themselves from insuring risks for which the company has historically maintained insurance, resulting in increased cost or risk to us.

Our strategy may be impacted by policy and legal, technology, market and reputational risks and opportunities that are associated with the transition to a lower-carbon economy, as disclosed in other risk factors in this section. As a result of increased awareness regarding climate change, coupled with adverse economic conditions, availability of alternative energy sources, including private solar, microturbines, fuel cells, energy-efficient buildings and energy storage devices, and new regulations restricting emissions, including potential regulations of methane emissions, some consumers and companies may use less energy, meet their own energy needs through alternative energy sources or avoid expansions of their facilities, including natural gas facilities, which may result in less demand for our services. As these technologies become a more cost-competitive option over time, whether through cost effectiveness or government incentives and subsidies, certain customers may choose to meet their own energy needs and subsequently decrease usage of our systems and services, which may result in, among other things, our facilities becoming less competitive and economical. Further, evolving investor sentiment related to the use of fossil fuels and initiatives to restrict continued production of fossil fuels could result in a significant impact on our electric generation and natural gas businesses in the future.

We are unable to forecast the future of commodity markets. Some of our baseload generation is dependent on natural gas and coal, and we pass through the costs for these energy sources to our customers. In addition, in our gas distribution business, we procure natural gas on behalf of certain customers, and we pass through the actual cost of the gas consumed. Diminished investor interest in funding fossil fuel development could reduce the amount of exploration and production of natural gas or coal, or investment in gas transmission pipelines. Reduced production and transportation of natural gas could, in the long-term, lead to supply shortages leading to baseload generation outages. Given that we pass through commodity costs to customers, this could also create the potential for regulatory questions resulting from increased customer costs, reduced fossil fuel investment,

due to evolving investor sentiment, could lead to higher commodity prices and shortages impacting our generation and our reputation with regulators. Conversely, demand for our services may increase as a result of customer changes in response to climate change. For example, as the utilization of electric vehicles increases, demand for electricity may increase, resulting in increased usage of our systems and services.

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Any negative views with respect to our environmental practices or our ability to meet the challenges posed by climate change from regulators, customers, investors or legislators could harm our reputation and adversely affect the perceived value of our products and services. Changes in policy to combat climate change, and technology advancement, each of which can also accelerate the implications of a transition to a lower carbon economy, may materially adversely impact our business, financial position, results of operations, and cash flows . For example, in February 2023, the Maryland Office of People's Counsel filed a petition with the Maryland PSC seeking an investigation regarding planning, practices, and future operations of natural gas suppliers in the state and this initiated a proceeding related to Near-Term, Priority Actions and Comprehensive, Long-Term Planning for Maryland's Gas Companies, and in December 2023 the Maryland Department of Environment proposed a Building Efficiency Performance Standard regulation that could require buildings of a certain size and type eliminate Scope 1 GHG emissions by 2040.

We are subject to operational and financial risks and liabilities associated with the implementation and efforts to achieve our carbon emission reduction goals.

On November 7, 2022, we announced our goal of reaching net zero Scope 1 and 2 greenhouse gas emissions by 2040 (the “Net Zero Goal”). Achieving the Net Zero Goal will require supportive regulatory and legislative policies, favorable stakeholder environments and advancement of technologies that are not currently economical to deploy, the impacts and costs of which are not fully understood at this time. NIPSCO’s electric generation transition is a key element of the Net Zero Goal. Our analysis and plan for execution, which is outlined in the NIPSCO 2021 Integrated Resource Plan, requires us to make a number of assumptions. These goals and underlying assumptions involve risks and uncertainties and are not guarantees. Should one or more of our underlying assumptions prove incorrect, our actual results and ability to achieve our emissions goal could differ materially from our expectations. Certain of the assumptions that could impact our ability to meet our emissions goal include, but are not limited to: the accuracy of current emission measurements, service territory size and capacity needs remaining in line with expectations; regulatory approval; impacts of future environmental regulations or legislation; impact of future GHG pricing regulations or legislation, including a future carbon tax or methane fee; price, availability and regulation of carbon offsets; price of fuel, such as natural gas; cost of energy generation technologies, such as wind and solar, natural gas and storage solutions; adoption of alternative energy, including adoption of electric vehicles; rate of technology innovation with regards to alternative energy resources; our ability to implement our modernization plans for our pipelines and facilities; the ability to complete and implement generation alternatives to NIPSCO’s coal generation and retirement dates of NIPSCO’s coal facilities by 2028; the ability to construct and/or permit new natural gas pipelines; the ability to procure resources needed to build at a reasonable cost, the lack of scarcity of resources and labor, project cancellations, construction delays or overruns and the ability to appropriately estimate costs of new generation; impact of any supply chain disruptions; and advancement of energy efficiencies. Any negative opinions with respect to these goals or our environmental practices, including any inability to achieve, or a scaling back of these goals, formed by regulators, customers, investors or legislators could harm our reputation and have an adverse effect on our financial condition.

FINANCIAL, ECONOMIC AND MARKET RISKS

We have substantial indebtedness which could adversely affect our financial condition.

Our business is capital intensive and we rely significantly on long-term debt to fund a portion of our capital expenditures and repay outstanding debt, and on short-term borrowings to fund a portion of day-to-day business operations. We had total consolidated indebtedness of $14,127.9 million outstanding as of December 31, 2023. Our substantial indebtedness could have important consequences. For example, it could:

- limit our ability to borrow additional funds or increase the cost of borrowing additional funds;
- reduce the availability of cash flow from operations to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in the business and the industries in which we operate;
- lead parties with whom we do business to require additional credit support, such as letters of credit, in order for us to transact such business;
- place us at a competitive disadvantage compared to competitors that are less leveraged;
- increase vulnerability to general adverse economic and industry conditions; and
- limit our ability to execute on our growth strategy, which is dependent upon access to capital to fund our substantial infrastructure investment program.

Some of our debt obligations contain financial covenants related to debt-to-capital ratios and cross-default provisions. Our failure to comply with any of these covenants could result in an event of default, which, if not cured or waived, could result in the acceleration of outstanding debt obligations. Additionally, non-compliance with debt covenants could adversely affect our

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ability to obtain future borrowings and as a result materially adversely affect our business, financial condition, results of operations, and liquidity.

A drop in our credit ratings could adversely impact our cash flows, results of operation, financial condition and liquidity.

The availability and cost of credit for our businesses may be greatly affected by credit ratings. The credit rating agencies periodically review our ratings, taking into account factors such as our capital structure, earnings profile, and overall shifts in the economy or business environment. We are committed to maintaining investment grade credit ratings; however, there is no assurance we will be able to do so in the future. Our credit ratings could be lowered or withdrawn entirely by a rating agency if, in its judgment, the circumstances warrant. Any negative rating action could adversely affect our ability to access capital at rates and on terms that are attractive. A negative rating action could also adversely impact our business relationships with suppliers and operating partners, who may be less willing to extend credit or offer us similarly favorable terms as secured in the past under such circumstances.

Certain of our subsidiaries have agreements that contain “ratings triggers” that require increased collateral in the form of cash, a letter of credit or other forms of security for new and existing transactions if our credit ratings (including the standalone credit ratings of certain of our subsidiaries) are dropped below investment grade. These agreements are primarily for insurance purposes and for the physical purchase or sale of gas or power. As of December 31, 2023, the collateral requirement that would be required in the event of a downgrade below the ratings trigger levels would amount to approximately $90.1 million. In addition to agreements with ratings triggers, there are other agreements that contain “adequate assurance” or “material adverse change” provisions that could necessitate additional credit support such as letters of credit and cash collateral to transact business.

If our or certain of our subsidiaries’ credit ratings were downgraded, especially below investment grade, financing costs and the principal amount of borrowings would likely increase due to the additional risk of our debt and because certain counterparties may require additional credit support as described above. Such amounts may be material and could adversely affect our cash flows, results of operations and financial condition. Losing investment grade credit ratings may also result in more restrictive covenants and reduced flexibility on repayment terms in debt issuances, lower share price and greater stockholder dilution from common equity issuances, in addition to reputational damage within the investment community.

Adverse economic and market conditions, including increases in inflation or interest rates, recession or changes in investor sentiment could materially and adversely affect our business, results of operations, cash flows, financial condition and liquidity.

Deteriorating, sluggish or volatile economic conditions in our operating jurisdictions could adversely impact our ability to maintain or grow our customer base and collect revenues from customers, which could reduce our revenue or growth rate and increase operating costs. A continued economic downturn or recession, or slowing or stalled recovery from such economic downturn or recession, may have a material adverse effect on our business, financial condition, or results of operations.

We rely on access to the capital markets to finance our liquidity and long-term capital requirements, including expenditures for our utility infrastructure and to comply with future regulatory requirements, to the extent not satisfied by the cash flow generated by our operations. We have historically relied on long-term debt and on the issuance of equity securities to fund a portion of our capital expenditures and repay outstanding debt, and on short-term borrowings to fund a portion of day-to-day business operations. Actions to reduce inflation, including raising interest rates, increase our cost of borrowing, which in turn could make it more difficult to obtain financing for our operations or investments on favorable terms. Successful implementation of our long-term business strategies, including capital investment, is dependent upon our ability to access the capital and credit markets, including the banking and commercial paper markets, on competitive terms and rates. An economic downturn or uncertainty, market turmoil, changes in interest rates, changes in tax policy, challenges faced by financial institutions, changes in our credit ratings, or a change in investor sentiment toward us or the utilities industry generally could adversely affect our ability to raise additional capital or refinance debt. For example, because NIPSCO’s current generating facilities substantially rely on coal for its operations, certain financial institutions may choose not to participate in our financing arrangements. In addition, large institutional investors may choose to sell or choose not to purchase our stock due to environmental, social and governance (“ESG”) concerns or concerns regarding renewable energy supply chain challenges. Reduced access to capital markets, increased borrowing costs, and/or lower equity valuation levels could reduce future earnings

per share and cash flows. In addition, any rise in interest rates may lead to higher borrowing costs, which may adversely impact reported earnings, cost of capital and capital holdings.

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If, in the future, we face limits to the credit and capital markets or experience significant increases in the cost of capital or are unable to access the capital markets, it could limit our ability to implement, or increase the costs of implementing, our business plan, which, in turn, could materially and adversely affect our results of operations, cash flows, financial condition and liquidity.

Most of our revenues are subject to economic regulation and are exposed to the impact of regulatory rate reviews and proceedings.
Most of our revenues are subject to economic regulation at either the federal or state level. As such, the revenues generated by us are subject to regulatory review by the applicable federal or state authority. These rate reviews determine the rates charged to customers and directly impact revenues. Our financial results are dependent on frequent regulatory proceedings in order to ensure timely recovery of costs and investments. As described in more detail in the risk factor below, the outcomes of these proceedings are uncertain, potentially lengthy and could be influenced by many factors, some of which may be outside of our control, including the cost of providing service, the necessity of expenditures, the quality of service, regulatory interpretations, customer intervention, economic conditions and the political environment. Further, the rate orders are subject to appeal, which creates additional uncertainty as to the rates that will ultimately be allowed to be charged for services.

The actions of regulators and legislators could result in outcomes that may adversely affect our earnings and liquidity.
The rates that our electric and natural gas companies charge their customers are determined by their state regulatory commissions and by the FERC. These state regulatory commissions also regulate the companies' accounting, operations, the issuance of certain securities and certain other matters. The FERC also regulates the transmission of electric energy, the sale of electric energy at wholesale, accounting, issuance of certain securities and certain other matters, including reliability standards through the North American Electric Reliability Corporation (NERC).

Under state and federal law, our electric and natural gas companies are entitled to charge rates that are sufficient to allow them an opportunity to recover their prudently incurred operating and capital costs and a reasonable rate of return on invested capital, to attract needed capital and maintain their financial integrity, while also protecting relevant public interests. Our electric and natural gas companies are required to engage in regulatory approval proceedings as a part of the process of establishing the terms and rates for their respective services. Each of these companies prepares and submits periodic rate filings with their respective regulatory commissions for review and approval, which allows for various entities to challenge our current or future rates, structures or mechanisms and could alter or limit the rates we are allowed to charge our customers. These proceedings typically involve multiple parties, including governmental bodies and officials, consumer advocacy groups, and various consumers of energy, who have differing interests. Any change in rates, including changes in allowed rate of return, are subject to regulatory approval proceedings that can be contentious, lengthy, and subject to appeal. This may lead to uncertainty as to the ultimate result of those proceedings. Established rates are also subject to subsequent prudency reviews by state regulators, whereby various portions of rates could be adjusted, subject to refund or disallowed, including cost recovery mechanisms. The ultimate outcome and timing of regulatory rate proceedings could have a significant effect on our ability to recover costs or earn an adequate return. Adverse decisions in our proceedings could adversely affect our financial position, results of operations and cash flows.

There can be no assurance that regulators will approve the recovery of all costs incurred by our electric and natural gas companies, including costs for construction, operation and maintenance, and compliance with current and future changes in environmental, federal pipeline safety, critical infrastructure and cyber-security laws and regulations. Challenges arise with state regulators on inflationary pricing for electric and gas materials and potential price increases, ensuring that updated pricing for electric and gas materials is included in plans and regulatory assumptions, and ensuring there is a regulatory recovery model. There is debate among state regulators and other stakeholders over how to transition to a decarbonized economy and prudency arguments relative to investing in natural gas assets when the depreciable life of the assets may be shortened due to electrification. The inability to recover a significant amount of operating costs could have an adverse effect on a company's financial position, results of operations and cash flows.

Changes to rates may occur at times different from when costs are incurred. Additionally, catastrophic events at other utilities could result in our regulators and legislators imposing additional requirements that may lead to additional costs or operational requirements for the companies.

In addition to the risk of disallowance of incurred costs, regulators may also impose downward adjustments in a company's allowed ROE as well as assess penalties and fines. Regulators may reduce ROE to mitigate potential customer bill increases due to items unrelated to capital investments. These actions would have an adverse effect on our financial position, results of

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Our electric business is subject to mandatory reliability and critical infrastructure protection standards established by NERC and enforced by the FERC. The critical infrastructure protection standards focus on controlling access to critical physical and cybersecurity assets. Compliance with the mandatory reliability standards could subject our electric utilities to higher operating costs. In addition, compliance with PHMSA regulations, including the expected final ruling around leak detection and repair requirements could subject our gas utilities to higher operating costs and divert business resources from other activities in order to remain compliant. If our businesses are found to be in noncompliance, we could be subject to sanctions, including substantial monetary penalties, or damage to our reputation.

Changes in tax laws, as well as the potential tax effects of business decisions, could negatively impact our business, results of operations (including our expected project returns from our planned renewable energy projects), financial condition and cash flows.

Our business operations are subject to economic conditions in certain industries.
Business operations throughout our service territories have been and may continue to be adversely affected by economic events at the national and local level where our businesses operate. In particular, sales to large industrial customers, such as those in the steel, oil refining, industrial gas and related industries, are impacted by economic downturns and recession; geographic or technological shifts in production or production methods; and consumer demand for environmentally friendly products and practices. The U.S. manufacturing industry continues to adjust to changing market conditions including international competition, inflation and increasing costs, government and societal pressure to decarbonization, and fluctuating demand for its products. In addition, our results of operations are negatively impacted by lower revenues resulting from higher bankruptcies, predominately focused on commercial and industrial customers not able to sustain operations through the economic disruptions related to the pandemic.

We are exposed to risk that customers will not remit payment for delivered energy or services, and that suppliers or counterparties will not perform under various financial or operating agreements.
Our extension of credit is governed by a Corporate Credit Risk Policy, involves judgment by our employees and is based on an evaluation of customer, supplier, or counterparty's financial condition, credit history and other factors. We monitor our credit risk exposure by obtaining credit reports and updated financial information for customers and suppliers, and by evaluating the financial status of our banking partners and other counterparties by reference to market-based metrics such as credit default swap pricing levels, and to traditional credit ratings provided by the major credit rating agencies. Adverse economic conditions could result in an increase in defaults by customers, suppliers and counterparties We are also exposed to the risk that due to adverse economic conditions one or more suppliers or counterparties may fail or delay the performance of their contractual obligations. such risks could negatively impact our business, financial condition and cash flow.

We are a holding company and are dependent on cash generated by our subsidiaries to meet our debt obligations and pay dividends on our stock.
We are a holding company and conduct our operations primarily through our subsidiaries, which are separate and distinct legal entities. Substantially all of our consolidated assets are held by our subsidiaries. Accordingly, our ability to meet our debt obligations or pay dividends on our common stock and preferred stock is largely dependent upon cash generated by these subsidiaries. In the event a major subsidiary is not able to pay dividends or transfer cash flows to us, our ability to service our debt obligations or pay dividends could be negatively affected.

Capital market performance and other factors may decrease the value of benefit plan assets, which then could require significant additional funding and impact earnings.
The performance of the capital markets affects the value of the assets that are held in trust to satisfy future obligations under defined benefit pension and other postretirement benefit plans. We have significant obligations in these areas and hold significant assets in these trusts. These assets are subject to market fluctuations and may yield uncertain returns, which could fall below our projected rates of return. A decline in the market value of assets may increase the funding requirements of the obligations under the defined benefit pension plans. Additionally, changes in interest rates affect the liabilities under these benefit plans; as interest rates decrease, the liabilities increase, which could potentially increase funding requirements. Further, the funding requirements of the obligations related to these benefits plans may increase due to changes in governmental regulations and participant demographics, including increased numbers of retirements or longer life expectancy assumptions, as well as voluntary early retirements. In addition, lower asset returns result in increased expenses. Ultimately, significant funding requirements and increased pension or other postretirement benefit plan expenses could negatively impact our results of operations and financial position.

We have significant goodwill. Any future impairments of goodwill could result in a significant charge to earnings in a future period and negatively impact our compliance with certain covenants under financing agreements.

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NISOURCE INC.

In accordance with GAAP, we test goodwill for impairment at least annually and review our definite-lived intangible assets for impairment when events or changes in circumstances indicate its fair value might be below its carrying value. Goodwill is also tested for impairment when factors, examples of which include reduced cash flow estimates, a sustained decline in stock price or market capitalization below book value, indicate that the carrying value may not be recoverable and results in a significant charge to earnings. We cannot predict the timing, magnitude, or duration of such changes. In general, the carrying value of goodwill would not be recoverable, in which case we may record a non-cash impairment charge, which could materially impact our results of operations and financial position.

A significant impairment charge in the future could impact the capitalization ratio covenant under certain financing agreements. We are subject to a financial covenant under our revolving credit facility, which requires us to maintain a debt to capitalization ratio that does not exceed 70%. As of December 31, 2023, the ratio was 58.2 %.

LITIGATION, REGULATORY AND LEGISLATIVE RISKS

The outcome of legal and regulatory proceedings, investigations, inquiries, claims and litigation related to our business operations may have a material adverse effect on our results of operations, financial position or liquidity.
We are, or may be, involved in legal and regulatory proceedings, investigations, inquiries, claims and litigation in connection with our business operations, the most significant of which are summarized in, Note 19, "Other Commitments and Contingencies," in the Notes to Consolidated Financial Statements. While we have insurance, it may not cover all costs or expenses incurred relating to litigation. Due to the inherent uncertainty of the outcomes of such matters, there can be no assurance that the resolution of any particular claim or proceeding would not have a material adverse effect on our results of operations, financial position or liquidity.

Our businesses are subject to various federal, state and local laws, regulations, tariffs and policies and a failure to comply with changes in, or new or different interpretations of, such laws, regulations, tariffs and policies could have an adverse impact on our business.
Our businesses are subject to various federal, state and local laws, regulations, tariffs and policies, including, but not limited to, those relating to natural gas pipeline safety, employee safety, the environment and our energy infrastructure. In particular, we are subject to significant federal, state and local regulations applicable to utility companies, including regulations by the various utility commissions in the states where we serve customers. These regulations significantly influence our operating environment, may affect our ability to recover costs from utility customers, and cause us to incur substantial compliance and other costs. Existing laws, regulations, tariffs and policies may be revised or become subject to new interpretations, and new laws, regulations, tariffs and policies may be adopted or become applicable to us and our operations. In some cases, compliance with new or different laws, regulations, tariffs and policies increases our costs or risks of liability. Supply chain constraints may challenge our ability to remain in compliance if we cannot obtain the materials that we need to operate our business in a compliant manner. If we fail to comply with laws, regulations and tariffs applicable to us or with any changes in or new interpretations of such laws, regulations, tariffs or policies, our financial condition, results of operations, regulatory outcomes and cash flows may be materially adversely affected.

Our businesses are regulated under numerous environmental laws and regulations. The cost of compliance with these laws and regulations, and changes to or additions to, or reinterpretations of the laws and regulations, could be significant, and the cost of compliance may not be recoverable. Liability from the failure to comply with existing or changed laws and regulations could have a material adverse effect on our business, results of operations, cash flows and financial condition.
Our businesses are subject to extensive federal, state and local environmental laws and rules that regulate, among other things, air emissions, water usage and discharges, leak detection and repair, GHG and waste products such as CCR. Compliance with these legal obligations require us to make significant expenditures for installation of pollution control equipment, remediation, environmental monitoring, emissions fees, and permits at many of our facilities. Furthermore, if we fail to comply with environmental laws and regulations or are found to have caused damage to the environment or persons, that failure or harm may result in the assessment of civil or criminal penalties and damages against us, injunctions to remedy the failure or harm, and the inability to operate facilities as designed and intended. Further, failing to comply with such laws and regulations or a determination that we have caused damage to the environment or persons, could result in reputational damage.

Existing environmental laws and regulations may be revised and new laws and regulations may be adopted or become applicable to us, with an increasing focus on the impact of coal and natural gas facilities that may result in significant additional expense and operating restrictions on our facilities, which may not be fully recoverable from customers and could materially affect the continued economic viability of our facilities.

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ITEM 1A. RISK FACTORS

NISOURCE INC.

An area of significant uncertainty and risk are potential changes to the laws concerning emission of GHG. While we continue to execute our plan to reduce our Scope 1 GHG emissions through the retirement of coal-fired electric generation, increased sourcing of renewable energy, priority pipeline replacement, leak detection and repair, and other methods, and while we have set a Net Zero Goal, GHG emissions are anticipated to be associated with energy delivery for many years. Future GHG legislation and/or regulation related to the generation of electricity or the extraction, production, distribution, transmission, storage and end use of natural gas could materially impact our gas supply, financial position, financial results and cash flows.

Another area of significant uncertainty and risk are the regulations concerning CCR. The EPA has issued regulations and plans to promulgate additional regulations concerning the management, transformation, transportation and storage of CCRs. NIPSCO is also incurring or will incur costs associated with closing, corrective action, and ongoing monitoring of certain CCR impoundments. Further, a release of CCR to the environment could result in remediation costs, penalties, claims, litigation, increased compliance costs, and reputational damage.

We currently have a pending application with the EPA to continue operation of a CCR impoundment that is tied to operation of R.M. Schahfer Generating Station Units 17 and 18 to the end of 2025, with the CCR impoundment closing by October 2028. In proposed and final EPA actions denying continued operation of CCR impoundments at other utilities, EPA said that CCR impoundments should cease receipt of CCRs within 135 days of final EPA action unless certain conditions are demonstrated, such as potential reliability issues. In the event that approval is not obtained, future operations could be impacted.

The actual future expenditures to achieve environmental compliance depends on many factors, including the nature and extent of impact, the method of improvement, the cost of raw materials, contractor costs, and requirements established by environmental authorities. Changes or increases in costs and the ability to recover under regulatory mechanisms could affect our financial position, financial results and cash flows.

Changes in tax laws or the interpretation thereof and challenges to tax positions could adversely affect our financial results.

We are subject to taxation by the various taxing authorities at the federal, state and local levels where we do business. Legislation or regulation which could affect our tax burden could be enacted or interpreted by any of these governmental authorities. The IRA imposed a 15 percent minimum tax rate on book earnings for corporations with higher than $1 billion of annual income, along with a 1 percent excise tax on corporate stock repurchases while providing tax incentives to promote various clean energy initiatives. Separately, a challenge by a taxing authority, changes in taxing authorities' administrative interpretations, decisions, policies and positions, our ability to utilize tax benefits such as carryforwards or tax credits, or a deviation from other tax-related assumptions may cause actual financial results to deviate from previous estimates.

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ITEM 1B. UNRESOLVED STAFF COMMENTS

NISOURCE INC.

None.

ITEM 1C. CYBERSECURITY

NiSource has implemented and maintains a comprehensive cybersecurity program that includes a variety of security controls and measures designed to identify, assess, and manage material cybersecurity risks. The program is a part of NiSource's enterprise risk management strategy. The enterprise risk team and the Risk Management Committee review material risks to any NiSource operating company based on perspectives from external experts, peer surveys, and the potential impact to NiSource's enterprise assets and strategic objectives.

Risk events are classified based on both the timing of impact and NiSource's ability to preventatively mitigate the risk. For the cybersecurity risks that can be preventively mitigated, the enterprise risk team gathers quarterly updates on mitigation gap closure from risk owners. The Risk Management Committee reviews any mitigation gaps identified by risk owners and approves or rejects the pace of mitigation activities as a statement of risk tolerance and then directs that mitigation activities be included in budgets and the business plan as appropriate.

The NiSource cybersecurity program includes the following key components:

Risk assessment NiSource regularly assesses its cybersecurity risks to identify and prioritize the most significant threats. The risk assessment process considers a variety of factors, including those specific to the utility/energy industry, the types of data NiSource collects and stores, and the threats posed by known vulnerabilities. NiSource engages third parties to perform independent assessments of its cybersecurity program, provide intelligence about the threat environment, and to provide operational assistance in managing the program. Annually, a third-party independent assessment is performed to evaluate NiSource cybersecurity maturity against a framework of cybersecurity controls. NiSource also performs bi-annual penetration testing and social engineering assessments performed by a third-party.

Third-party risk management: NiSource performs cyber assessments periodically on third-party vendors and service providers with whom NiSource shares data, relies on for critical business functions, or provides access to the NiSource network or systems. NiSource's Supply Chain function works with legal counsel and the Cyber function to periodically update cybersecurity contractual provisions in its vendor agreements, with deviations from such provisions requiring approval from the Legal Department and Cyber function. NiSource's Supplier Code of Business Conduct requires, among other things, that suppliers ensure safe and secure use of information assets, comply with applicable law relating to personal information, and adhering to standards relative to the use and protection of Company information, including that of our employees, customers, vendors and other stakeholders. In addition, all vendors and contractors that have access and/or connectivity to the NiSource environment must complete cybersecurity training annually.

Security controls: NiSource has implemented a variety of security controls to mitigate cybersecurity risks. These controls include technical controls, such as firewalls and intrusion detection systems, as well as administrative controls, such as employee training and security awareness programs. To ensure cybersecurity controls, NiSource Operational Technology (OT) within the electric business adheres to the North American Electric Reliability Corporation Critical Infrastructure Protection (NERC CIP). Within the natural gas business, cybersecurity controls are managed and monitored based on the Transportation Security Administration (TSA) Security Directives.

Incident response: NiSource has a comprehensive incident response plan in place to respond to cybersecurity incidents. The plan includes steps for detection, analysis, containment, eradication, and recovery from incidents, as well as steps for notifying affected individuals and regulators.

The NiSource Board of Directors' Audit Committee has responsibility for oversight of the cybersecurity program and risks from cybersecurity threats. The Audit Committee meets quarterly to review NiSource's cybersecurity posture and make recommendations for improvement. The Chief Information Security Officer (CISO) regularly briefs the Audit Committee on cybersecurity risks and the efforts to address them. In addition, the Board of Directors is briefed regularly, through written reports and updates by the Audit Committee, about key and emerging cybersecurity risks.

At the management level, the CISO leads the cybersecurity program and is responsible for assessing and managing cybersecurity risks. Our CISO has expertise and experience in cybersecurity derived from over 15 years of cyber related work experience and possess several certifications including Certified Information Systems Security Professional (CISSP), Certified

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ITEM 2. PROPERTIES

in Risk and Information Systems Control (CRISC), and Certified Information Systems Auditor (CISA). The CISO is supported by the NiSource Enterprise Security team which performs the cybersecurity function and engages directly on the prevention, detection, mitigation, and remediation of cybersecurity incidents.

As of the date of filing this Annual Report on Form 10-K, NiSource is not aware of any material cybersecurity incidents during the past year. NiSource monitors the increasing sophistication of cybersecurity threats and continues to contribute resources to improve its cybersecurity program to protect its information systems and assets. No cybersecurity program is effective to identify and mitigate all threats, and NiSource cannot guarantee that it will be able to prevent all cybersecurity incidents. Such an incident could interrupt our normal operations and require us to incur significant costs to remediate any such incident and could have a material impact on our businesses, operations and financial condition. For more information regarding the risks associated with cybersecurity, see “A cyber-attack or security breach on any of our or certain third-party technology systems, including information systems, upon which we rely may adversely affect our ability to operate, could lead to a loss or misuse of confidential and proprietary information, or potential liability.” included in Part I, “Item 1A. Risk Factors” of this Annual Report on Form 10-K.

ITEM 2. PROPERTIES

Discussed below are the principal properties held by us and our subsidiaries as of December 31, 2023.

Gas Distribution Operations
Refer to Item 1, "Business - Gas Distribution Operations," of this report for further information on Gas Distribution Operations properties.

Electric Operations
Refer to Item 1, "Business - Electric Operations," of this report for further information on Electric Operations properties.

Corporate and Other Operations
We own the Southlake Complex, our 325,000 square foot headquarters building located in Merrillville, Indiana.

Character of Ownership
Our principal properties and our subsidiaries' principal properties are owned free from encumbrances, subject to minor exceptions, none of which are of such a nature as to impair substantially the usefulness of such properties. Many of our subsidiary offices in various communities served are occupied under leases. All properties are subject to routine liens for taxes, assessments and undetermined charges (if any) incidental to construction. It is our practice to regularly pay such amounts, as and when due, unless contested in good faith. In general, the electric lines, gas pipelines and related facilities are located on land not owned by us or our subsidiaries, but are covered by necessary consents of various governmental authorities or by appropriate rights obtained from owners of private property. We do not, however, generally have specific easements from the owners of the property adjacent to public highways over, upon or under which our electric lines and gas distribution pipelines are located. At the time each of the principal properties was purchased, a title search was made. In general, no examination of titles as to rights-of-way for electric lines, gas pipelines or related facilities was made, other than examination, in certain cases, to verify the grantors’ ownership and the lien status thereof.

ITEM 3. LEGAL PROCEEDINGS

For a description of our legal proceedings, see Note 19, "Other Commitments and Contingencies - C. Legal Proceedings," in the Notes to Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

NISOURCE INC.

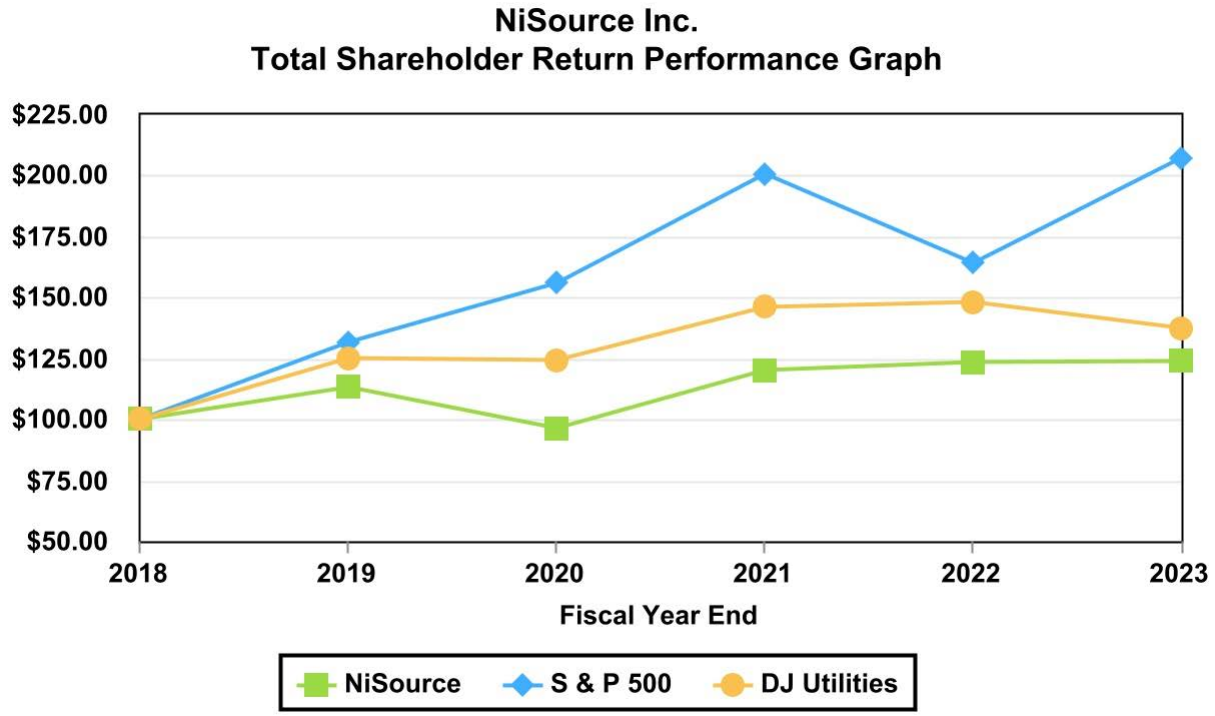
NiSource's common stock is listed and traded on the New York Stock Exchange under the symbol "NI."

Holders of shares of NiSource's common stock are entitled to receive dividends if and when declared by the Board out of funds legally available, subject to the prior dividend rights of holders of our preferred stock or the depositary shares representing such preferred stock outstanding, and if full dividends have not been declared and paid on all outstanding shares of preferred stock in any dividend period, no dividend may be declared or paid or set aside for payment on our common stock. The policy of the Board has been to declare cash dividends on a quarterly basis payable on or about the 20th day of February, May, August, and November. At its January 25, 2024 meeting, the Board declared a quarterly common dividend of $0.265 per share, payable on February 20, 2024 to holders of record on February 5, 2024.

Although the Board currently intends to continue the payment of regular quarterly cash dividends on common shares, the timing and amount of future dividends will depend on the earnings of NiSource's subsidiaries, their financial condition, cash requirements, regulatory restrictions, any restrictions in financing agreements and other factors deemed relevant by the Board. There can be no assurance that NiSource will continue to pay such dividends or the amount of such dividends.

As of February 14, 2024, NiSource had 15,832 common stockholders of record and 447,524,529 shares outstanding.

The graph below compares the cumulative total shareholder return of NiSource's common stock for the period commencing December 31, 2018 and ending December 31, 2023 with the cumulative total return for the same period of the S&P 500 and the Dow Jones Utility indices.



The foregoing performance graph is being furnished as part of this Annual Report on Form 10-K solely in accordance with the requirement under Rule 14a-3(b)(9) to furnish stockholders with such information, and therefore, shall not be deemed to be filed or incorporated by reference into any filings by NiSource under the Securities Act or the Exchange Act.

The total shareholder return for NiSource common stock and the two indices is calculated from an assumed initial investment of $100 and assumes dividend reinvestment.

Purchases of Equity Securities by Issuer and Affiliated Purchasers. For the three months ended December 31, 2023, no equity securities that are registered by NiSource Inc. pursuant to Section 12 of the Securities Exchange Act of 1934 were purchased by or on behalf of us or any of our affiliated purchasers.

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ITEM 6. RESERVED

NISOURCE INC.

Not applicable.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

NISOURCE INC.

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EXECUTIVE SUMMARY

This Management's Discussion and Analysis of Financial Condition and Results of Operations ("Management's Discussion") includes management's analysis of past financial results and certain potential factors that may affect future results, potential future risks and approaches that may be used to manage those risks. See "Note regarding forward-looking statements" and Item 1A, "Risk Factors" at the beginning of this report for a list of factors that may cause results to differ materially.

This Management's Discussion is designed to provide an understanding of our operations and financial performance and should be read in conjunction with our Consolidated Financial Statements and related Notes to Consolidated Financial Statements in this Annual Report on Form 10-K.

We are an energy holding company under the Public Utility Holding Company Act of 2005 whose subsidiaries are fully regulated natural gas and electric utility companies serving customers in six states. We generate substantially all of our operating income through these rate-regulated businesses, which are summarized for financial reporting purposes into two primary reportable segments: Gas Distribution Operations and Electric Operations.

Refer to the "Business" section under Item 1 of this Annual Report on Form 10-K and Note 21, "Business Segment Information," in the Notes to Consolidated Financial Statements for further discussion of our regulated utility business segments.

Our goal is to develop strategies that benefit all stakeholders as we (i) focus on long-term infrastructure investment and safety programs to better serve our customers, (ii) align our tariff structures with our cost structure, and (iii) address changing customer energy demand. These strategies focus on improving safety and reliability, enhancing customer experience, pursuing regulatory and legislative initiatives to increase accessibility for customers currently not on our gas and electric service, ensuring customer affordability and reducing emissions while generating sustainable returns. The safety of our customers, communities and employees remains our focus. Serving as a guiding practice for our SMS, NiSource is certified in conformance to the American Petroleum Institute Recommended Practice 1173, which is the foundation to our journey towards operational excellence.

2023 Overview: In 2023, we continued to make significant progress towards our strategic and financial goals and objectives by achieving in-service status in June 2023 and substantial completion in August 2023 for our first two solar BTA projects, Indiana Crossroads Solar and Dunns Bridge I. We continue to progress on the remaining portfolio of projects that will enable our electric generation transition. During the year, we received orders for four cases: Columbia of Virginia, Columbia of Ohio, Columbia of Maryland, and NIPSCO Electric. In addition, the NIPSCO Gas rate case filed in 2023 is anticipated to be resolved in the third quarter of 2024. These cases represent balanced outcomes supporting all stakeholders. Between our Gas Distribution and Electric Operating Segments, we added 22,000 customers. We also invested $1.5 billion in infrastructure modernization to enhance safe, reliable service, including replacement of 339 miles of distribution main and service lines, 34 miles of underground cable and 1,942 electric poles.

We also made advancements in key strategic initiatives, described in further detail below.

Your Energy, Your Future: We continue to advance Your Energy, Your Future primarily through the continuation and enhancement of existing programs, such as retiring and replacing remaining coal-fired electric generation by 2028 with a balanced mix of low or zero-emission electric generation, ongoing pipe replacement and modernization programs, and

deployment of advanced leak detection and repair. Our electric generation transition, initiated through our 2018 Integrated Resource Plan ("2018 Plan") is well underway, and we are continually adjusting to the dynamic energy landscape. As of

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December 31, 2023, we have executed and received IURC approval for BTAs and PPAs with a combined nameplate capacity of 1,950 MW and 1,400 MW, respectively, under the 2018 Plan. We have also taken contractual actions on a number of our other renewable projects to address the timing of these projects as well as consider the broad market issues facing the industry. We remain on track to retire R.M Schahfer's remaining two coal units by the end of 2025. On January 1, 2023, the provisions of the IRA became effective. On January 17, 2024, the IURC approved full ownership of the Cavalry and Dunns Bridge II projects, allowing NIPSCO to leverage provisions of the IRA to monetize tax credits for the benefit of customers in lieu of utilizing tax equity partnerships. We are evaluating the impact of this legislation on our remaining projects, with potential to drive increased value to customers. For additional information, see "Results and Discussion of Operations - Electric Operations," in this Management's Discussion.

In 2021, we announced and filed with the IURC the Preferred Energy Resource Plan associated with our 2021 Integrated Resource Plan ("2021 Plan"). The 2021 Plan lays out a timeline to retire the Michigan City Generating Station by the end of 2028. The 2021 Plan calls for the replacement of the retiring units with a diverse portfolio of resources including demand side management resources, incremental solar, stand-alone energy storage and upgrades to existing facilities at the Sugar Creek Generating Station, among other steps. Additionally, the 2021 Plan calls for a new natural gas peaking facility to replace existing vintage gas peaking facilities at the R.M. Schahfer Generating Station to support system reliability and resiliency, and upgrades to to the electric transmission system. In September of 2023, we filed a request for issuance of a certificate of public convenience and necessity for an approximately 400 MW natural gas peaking generation facility with the IURC. The planned retirement of the two vintage gas peaking facilities at the R.M. Schahfer Generating Station is also expected to occur by the end of 2028. Final retirement dates for these units, as well as Michigan City, will be subject to MISO approval.

We continue to enhance safety and reduce methane emissions on our gas systems through modernization programs and utilization of advanced leak detection and repair. Advanced mobile methane-detection vehicles are being deployed across our service territory. These vehicles are designed to identify potential natural gas leaks using proven technology that is more sensitive than traditional leak-detection equipment. Resources like these vehicles are advancing the company's commitment to safety and reaching our goal of net zero greenhouse gas emissions by 2040.

In addition, we plan to advance other low- or zero-emission energy resources and technologies, such as hydrogen and renewable natural gas. In 2023, we launched a multi-phase pilot project at the Columbia Gas of Pennsylvania Training Center's Safety Town to better understand the impact of blending hydrogen into the natural gas system. We have partnered with outside experts to conduct a series of field trials blending hydrogen with the natural gas system at various percentages. The blending system allows blending from 0% to 20% hydrogen, by volume. The field trials have initially focused on the customer experience and are now moving toward system operations and other procedures. This pilot is designed to help us understand hydrogen blending into the natural gas system, identify best practices, and analyze the operational and safety impact on company infrastructure and customer appliances. Carbon offsets and renewable energy credits may also be used to assist with achieving GHG reductions and our Net Zero Goal.

NIPSCO Minority Interest Transaction: On December 31, 2023, we consummated the closing of the NIPSCO Minority Interest Transaction and issued the 19.9% equity interest in NIPSCO Holdings II to BIP in exchange for a capital contribution of $2.16 billion in cash. Refer to Note 4, "Noncontrolling Interest," in the Notes to the Consolidated Financial Statements for more information on this transaction.

Transformation: Our enterprise-wide transformation roadmap focuses on operational excellence, safety, operation and maintenance management, and unlocking efficiencies. We are committed to identifying and implementing initiatives that will enable us to streamline work and improve logistics company-wide. These efforts include investments in proven technologies backed with standardized processes that will change the way we plan, schedule, and execute work in the field and how we engage and provide service to our customers. Taken together, all of our optimization initiatives will prioritize safety and continue to optimize our long-term growth profile.

Economic Environment: We continue to monitor risks related to order and delivery lead times for construction and other materials, potential unavailability of materials due to global shortages in raw materials, and decreased construction labor productivity in the event of disruptions in the availability of materials. We continue to see increasing prices associated with certain materials and supplies. To the extent that work plan delays occur or our costs increase, our business operations, results

of operations, cash flows, and financial condition could be materially adversely affected. Refer to Item 1A. Risk Factors, "Financial, Economic and Market Risks" of this Annual Report on Form 10-K for further detail.

We are faced with increased competition for employee and contractor talent in the current labor market which has resulted in increased costs to attract and retain talent. We are ensuring that we use all internal human capital programs (development,

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leadership enablement programs, succession, performance management) to promote retention of our current employees along with having a competitive and attractive appeal for potential recruits. With a focus on workforce planning, we are evaluating our future talent footprint by creating flexible work arrangements where possible to ensure we have the right people, in the right role, and at the right time. Refer to Item 1A. Risk Factors, "Operational Risks" of this Annual Report on Form 10-K for further detail.

The market price of natural gas has been stable during the last half of 2023 at lower levels than 2022 and with little volatility. Similar to natural gas pricing, electric commodity costs have stayed subdued due to plentiful supplies of natural gas and coal and the growing influence of renewable generation on power market pricing. Changes in commodity prices do not have a material impact on our results of operations, however higher commodity prices can impact our cash flows and liquidity. For more information on our commodity price impacts, see Item 1A. Risk Factors, "Operational Risks" of this Annual Report on Form 10-K, "Results and Discussion of Segment Operations - Gas Distribution Operations," "Results and Discussion of Segment Operations - Electric Operations," and "Market Risk Disclosures."

Due to rising interest rates, we experienced higher interest expense during 2023 compared to 2022 associated with short-term borrowings. We continue to evaluate our financing plan to manage interest expense and exposure to rates. For more information on interest rate risk, see "Market Risk Disclosures" and Item 1A. Risk Factors, "Financial, Economic and Market Risks" of this Annual Report on Form 10-K.

Summary of Consolidated Financial Results

A summary of our consolidated financial results for the years ended December 31, 2023, 2022 and 2021, are presented below:

				Favorable (Unfavorable)	
Year Ended December 31 , *(in millions, except per share amounts)*	**2023**	2022	2021	2023 vs. 2022	2022 vs. 2021
Operating Revenues	**$ 5,505.4**	$ 5,850.6	$ 4,899.6	$ (345.2)	$ 951.0
Operating Expenses					
Cost of energy	**1,533.3**	2,110.5	1,392.3	577.2	(718.2)
Other Operating Expenses	**2,676.6**	2,474.3	2,500.4	(202.3)	26.1
Total Operating Expenses	**4,209.9**	4,584.8	3,892.7	374.9	(692.1)
Operating Income	**1,295.5**	1,265.8	1,006.9	29.7	258.9
Total Other Deductions, Net	**(481.6)**	(309.4)	(300.3)	(172.2)	(9.1)
Income Taxes	**139.5**	164.6	117.8	25.1	(46.8)
Net Income	**674.4**	791.8	588.8	(117.4)	203.0
Net (loss) income attributable to noncontrolling interest	**(39.9)**	(12.3)	3.9	27.6	16.2
Net Income attributable to NiSource	**714.3**	804.1	584.9	(89.8)	219.2
Preferred dividends and redemption premium	**(52.6)**	(55.1)	(55.1)	2.5	—
Net Income Available to Common Shareholders	**661.7**	749.0	529.8	(87.3)	219.2
Basic Earnings Per Share	**$ 1.59**	$ 1.84	$ 1.35	$ (0.25)	$ 0.49
Diluted Earnings Per Share	**$ 1.48**	$ 1.70	$ 1.27	$ (0.22)	$ 0.43

The majority of the costs of energy in both segments are tracked costs that are passed through directly to the customer, resulting in an equal and offsetting amount reflected in operating revenues.

The decrease in net income available to common shareholders during 2023 was primarily due to lower revenue resulting from the effects of weather, the receipt of the insurance settlement related to the Greater Lawrence Incident in 2022, higher other deductions due to higher interest expense in 2023, partially offset by lower tax expense and favorable impact from net loss attributable to noncontrolling interest. The decrease in preferred dividends during 2023 was due primarily to the redemption of Series A Preferred Stock in the second quarter 2023. See Note 6, "Equity," for additional information.

For additional information on operating income variance drivers see "Results and Discussion of Operations" for Gas and Electric Operations in this Management's Discussion.

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Other Deductions, Net

The change in Other deductions, net in 2023 compared to 2022 is primarily driven by higher long-term and short-term debt interest in 2023 and higher non-service pension costs offset by increases in AFUDC. See Note 7, "Short-Term Borrowings," Note 8, "Long-Term Debt," and Note 16, "Pension and Other Postemployment Benefits," in the Notes to Consolidated Financial Statements for additional information.

Income Taxes

The decrease in income tax expense in 2023 compared to the same period in 2022 is primarily attributable to lower pre-tax income.

Refer to Note 15, "Income Taxes," in the Notes to Consolidated Financial Statements for additional information on income taxes and the change in the effective tax rate.

RESULTS AND DISCUSSION OF OPERATIONS

Presentation of Segment Information

Our operations are divided into two primary reportable segments: Gas Distribution Operations and Electric Operations. The remainder of our operations, which are not significant enough on a stand-alone basis to warrant treatment as an operating segment, are presented as "Corporate and Other" within the Notes to the Consolidated Financial Statements and primarily are comprised of interest expense on holding company debt, and unallocated corporate costs and activities.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.
Gas Distribution Operations

Financial and operational data for the Gas Distribution Operations segment for the years ended December 31, 2023, 2022 and 2021, are presented below:

				Favorable (Unfavorable)	
Year Ended December 31, *(in millions)*	**2023**	2022	2021	2023 vs. 2022	2022 vs. 2021
Operating Revenues	**$ 3,732.7**	$ 4,019.8	$ 3,183.5	$ (287.1)	$ 836.3
Operating Expenses					
Cost of energy	**1,087.0**	1,534.8	962.7	447.8	(572.1)
Operation and maintenance	**1,061.3**	1,045.3	993.8	(16.0)	(51.5)
Depreciation and amortization	**464.6**	415.9	383.0	(48.7)	(32.9)
(Gain) loss on sale of fixed assets and impairments, net	**—**	(103.9)	8.7	(103.9)	112.6
Other taxes	**217.9**	211.9	217.8	(6.0)	5.9
Total Operating Expenses	**2,830.8**	3,104.0	2,566.0	273.2	(538.0)
Operating Income	**$ 901.9**	$ 915.8	$ 617.5	$ (13.9)	$ 298.3
Revenues					
Residential	**$ 2,517.7**	$ 2,609.6	$ 2,143.4	$ (91.9)	$ 466.2
Commercial	**855.3**	942.4	731.0	(87.1)	211.4
Industrial	**226.4**	221.5	197.2	4.9	24.3
Off-System	**60.7**	192.9	71.3	(132.2)	121.6
Other	**72.6**	53.4	40.6	19.2	12.8
Total	**$ 3,732.7**	$ 4,019.8	$ 3,183.5	$ (287.1)	$ 836.3
Sales and Transportation (MMDth)					
Residential	**215.4**	249.0	231.2	(33.6)	17.8
Commercial	**164.3**	181.3	167.0	(17.0)	14.3
Industrial	**517.1**	490.7	507.1	26.4	(16.4)
Off-System	**31.8**	32.3	21.6	(0.5)	10.7
Other	**0.3**	0.3	0.3	—	—
Total	**928.9**	953.6	927.2	(24.7)	26.4
Heating Degree Days	**4,583**	5,436	5,002	(853)	434
Normal Heating Degree Days	**5,347**	5,347	5,427	—	(80)
% (Warmer) Colder than Normal	**(14)%**	2 %	(8)%		
% (Warmer) Colder than Prior Year	**(16)%**	9 %	(2)%		
Gas Distribution Customers					
Residential	**3,010,949**	2,991,913	2,970,157	19,036	21,756
Commercial	**254,866**	254,436	253,987	430	449
Industrial	**4,794**	4,870	4,921	(76)	(51)
Other	**4**	3	4	1	(1)
Total	**3,270,613**	3,251,222	3,229,069	19,391	22,153

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NI SOURCE INC.
Gas Distribution Operations (continued)

Comparability of operation and maintenance expenses, depreciation and amortization, and other taxes may be impacted by regulatory, depreciation and tax trackers that allow for the recovery in rates of certain costs.

The underlying reasons for changes in our operating revenues and expenses from 2023 to 2022 are presented in the respective tables below. Please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Results and Discussion of Operations - Gas Distribution Operations," of the Company's 2022 Annual Report on Form 10-K for discussion of underlying reasons for changes in our operating revenues and expenses for 2022 versus 2021.

		Favorable (Unfavorable)
Changes in Operating Revenues *(in millions)*		**2023 vs 2022**
New rates from base rate proceedings and regulatory capital programs	$	241.1
The effects of customer growth		7.5
Higher revenue related to off system sales		2.7
Increased customer usage		1.5
The effects of weather in 2023 compared to 2022		(59.9)
Other		7.4
Change in operating revenues (before cost of energy and other tracked items)	$	200.3
Operating revenues offset in operating expense		
Lower cost of energy billed to customers		(447.8)
Lower tracker deferrals within operation and maintenance, depreciation, and tax		(31.2)
Reduction in gross receipts tax, offset in operating expenses		(8.4)
Total change in operating revenues	**$**	**(287.1)**

Weather
In general, we calculate the weather-related revenue variance based on changing customer demand driven by weather variance from normal heating degree days, net of weather normalization mechanisms. Our composite heating degree days reported do not directly correlate to the weather-related dollar impact on the results of Gas Distribution Operations. Heating degree days experienced during different times of the year or in different operating locations may have more or less impact on volume and dollars depending on when and where they occur. When the detailed results are combined for reporting, there may be weather-related dollar impacts on operations when there is not an apparent or significant change in our aggregated composite heating degree day comparison.

Throughput
The decrease in total volumes sold and transported in 2023 compared to 2022 of 24.7 MMDth is primarily attributable to the effects of warmer weather offset by increased industrial usage.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.
Gas Distribution Operations (continued)

Commodity Price Impact

Cost of energy for the Gas Distribution Operations segment is principally comprised of the cost of natural gas used while providing transportation and distribution services to customers. All of our Gas Distribution Operations companies have state-approved recovery mechanisms that provide a means for full recovery of prudently incurred gas costs. These are tracked costs that are passed through directly to the customer, and the gas costs included in revenues are matched with the gas cost expense recorded in the period. The difference is recorded on the Consolidated Balance Sheets as under-recovered or over-recovered gas cost to be included in future customer billings. Therefore, increases in these tracked operating expenses are offset by increases in operating revenues and have essentially no impact on net income. Certain Gas Distribution Operations companies continue to offer choice opportunities, where customers can choose to purchase gas from a third-party supplier, through regulatory initiatives in their respective jurisdictions.

Changes in Operating Expenses *(in millions)*		**Favorable (Unfavorable) 2023 vs 2022**
Property insurance settlement related to the Greater Lawrence Incident in 2022	$	(105.0)
Higher depreciation and amortization expense		(50.6)
Higher employee and administrative related expenses		(38.3)
Higher property tax		(14.9)
Impact from Columbia of Ohio's rate case settlement		(9.1)
Higher expenses related to uncollectible customer accounts		(3.8)
Lower environmental remediation costs		12.4
Other		(4.9)
Change in operating expenses (before cost of energy and other tracked items)	$	(214.2)
Operating expenses offset in operating revenue		
Lower cost of energy billed to customers		447.8
Lower tracker deferrals within operation and maintenance, depreciation, and tax		31.2
Increase in gross receipts tax		8.4
Total change in operating expense	**$**	**273.2**

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.
Electric Operations

Financial and operational data for the Electric Operations segment for the years ended December 31, 2023, 2022 and 2021, are presented below:

				Favorable (Unfavorable)	
Year Ended December 31, *(in millions)*	**2023**	2022	2021	2023 vs. 2022	2022 vs. 2021
Operating Revenues	**$ 1,785.0**	$ 1,831.7	$ 1,697.1	$ (46.7)	$ 134.6
Operating Expenses					
Cost of energy	**446.4**	575.8	429.7	129.4	(146.1)
Operation and maintenance	**518.0**	486.2	493.6	(31.8)	7.4
Depreciation and amortization	**400.9**	362.9	329.4	(38.0)	(33.5)
Loss (gain) on sale of fixed assets and impairments, net	**2.2**	—	(0.9)	(2.2)	(0.9)
Other taxes	**38.8**	44.4	57.5	5.6	13.1
Total Operating Expenses	**1,406.3**	1,469.3	1,309.3	63.0	(160.0)
Operating Income	**$ 378.7**	$ 362.4	$ 387.8	$ 16.3	$ (25.4)
Revenues					
Residential	**$ 583.9**	$ 592.4	$ 568.0	$ (8.5)	$ 24.4
Commercial	**578.1**	571.0	534.9	7.1	36.1
Industrial	**475.0**	561.4	494.1	(86.4)	67.3
Wholesale	**32.0**	13.5	15.7	18.5	(2.2)
Other	**116.0**	93.4	84.4	22.6	9.0
Total	**$ 1,785.0**	$ 1,831.7	$ 1,697.1	$ (46.7)	$ 134.6
Sales (Gigawatt Hours)					
Residential	**3,262.9**	3,482.9	3,546.8	(220.0)	(63.9)
Commercial	**3,614.2**	3,682.4	3,698.0	(68.2)	(15.6)
Industrial	**7,820.3**	7,915.3	8,253.7	(95.0)	(338.4)
Wholesale	**556.4**	50.0	124.7	506.4	(74.7)
Other	**78.9**	89.5	108.5	(10.6)	(19.0)
Total	**15,332.7**	15,220.1	15,731.7	112.6	(511.6)
Cooling Degree Days	**710**	942	1,020	(232)	(78)
Normal Cooling Degree Days	**831**	831	803	—	28
% (Colder) Warmer than Normal	**(15)%**	13 %	27 %		
% (Colder) Warmer than prior year	**(25)%**	(8)%	13 %		
Electric Customers					
Residential	**427,217**	424,735	422,436	2,482	2,299
Commercial	**58,779**	58,374	58,010	405	364
Industrial	**2,126**	2,130	2,137	(4)	(7)
Wholesale	**708**	710	714	(2)	(4)
Other	**3**	3	2	—	1
Total	**488,833**	485,952	483,299	2,881	2,653

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.
Electric Operations (continued)

Comparability of operation and maintenance expenses and depreciation and amortization may be impacted by regulatory and depreciation trackers that allow for the recovery in rates of certain costs.

The underlying reasons for changes in our operating revenues and expenses from 2023 to 2022 are presented in the respective tables below. Please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Results and Discussion of Operations - Electric Operations," of the Company's 2022 Annual Report on Form 10-K for discussion of underlying reasons for changes in our operating revenues and expenses for 2022 versus 2021.

		Favorable (Unfavorable)
Changes in Operating Revenues *(in millions)*		**2023 vs 2022**
New rates from base rate proceedings, regulatory capital, and DSM programs	$	103.5
Renewable Joint Venture revenue, fully offset by Joint Venture operating expense and noncontrolling interest net income (loss)		10.2
2022 FAC refund to customers		8.0
FAC over earnings reserve		5.8
The effects of weather in 2023 compared to 2022		(25.6)
Decreased customer usage		(12.8)
Other		0.6
Change in operating revenues (before cost of energy and other tracked items)	$	89.7
Operating revenues offset in operating expense		
Lower cost of energy billed to customers		(129.4)
Reduction in gross receipts tax, offset in operating expenses		(12.0)
Higher tracker deferrals within operation and maintenance, depreciation and tax		5.0
Total change in operating revenues	**$**	**(46.7)**

Weather
In general, we calculate the weather-related revenue variance based on changing customer demand driven by weather variance from normal cooling degree days. Our composite cooling degree days reported do not directly correlate to the weather-related dollar impact on the results of Electric Operations. Cooling degree days experienced during different times of the year may have more or less impact on volume and dollars depending on when they occur. When the detailed results are combined for reporting, there may be weather-related dollar impacts on operations when there is not an apparent or significant change in our aggregated composite cooling degree day comparison.

Sales
NIPSCO's Electric Segment results remains closely linked to the performance of the steel industry. MWh sales to steel-related industries accounted for approximately 49.3% and 47.4% of the total industrial MWh sales for the years ended December 31, 2023 and 2022, respectively.

Commodity Price Impact
Cost of energy for the Electric Operations segment is principally comprised of the cost of coal, natural gas purchased for internal generation of electricity at NIPSCO, and the cost of power purchased from generators of electricity. NIPSCO has a state-approved recovery mechanism that provides a means for full recovery of prudently incurred costs of energy. The majority of these costs of energy are passed through directly to the customer, and the costs of energy included in operating revenues are matched with the cost of energy expense recorded in the period. The difference is recorded on the Consolidated Balance Sheets as under-recovered or over-recovered fuel cost to be included in future customer billings. Therefore, increases in these tracked operating expenses are offset by increases in operating revenues and have essentially no impact on net income.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.
Electric Operations (continued)

Changes in Operating Expenses *(in millions)*		**Favorable (Unfavorable) 2023 vs 2022**
Renewable Joint Venture operating expense, partially offset by Joint Venture operating revenues	$	(44.7)
Higher depreciation and amortization expense driven by new base rates		(25.0)
Higher outside services expenses		(6.9)
Lower materials and supplies		9.4
Other		(6.2)
Change in operating expenses (before cost of energy and other tracked items)	$	(73.4)
Operating expenses offset in operating revenue		
Lower cost of energy billed to customers		129.4
Reduction in gross receipts tax, offset in operating revenues		12.0
Higher tracker deferrals within operation and maintenance, depreciation and tax		(5.0)
Total change in operating expense	**$**	**63.0**

Electric Supply and Generation Transition

NIPSCO continues to execute on an electric generation transition consistent with the 2018 Plan and 2021 Plan, which outline the path to retire the remaining two coal units at R.M. Schahfer by the end of 2025 and the remaining coal-fired generation at Michigan City by the end of 2028, to be replaced by lower-cost, reliable and cleaner options. See "Project Status" discussion, below, and "Liquidity and Capital Resources" in this Management's Discussion for information on anticipated in-service dates related to our electric generation transition and additional information on our capital investment spend.

NIPSCO continues to work with the EPA to obtain an administrative approval associated with the operation of R.M. Schahfer's remaining two coal units until 2025. In the event that the approval is not obtained, future operations could be impacted. We cannot estimate the financial impact on us if this approval is not obtained. Refer to Item 1A. Risk Factors, "Operational Risks," of this Annual Report on Form 10-K for further detail.

The current replacement plan is aligned with the Preferred Energy Resource Plan outlined in the 2021 Plan and primarily includes renewable sources of energy, including wind, solar, battery storage, and flexible natural gas resources to be obtained through a combination of NIPSCO ownership and PPAs. NIPSCO has sold, and may in the future sell, renewable energy credits from its renewable generation to third parties to offset customer costs. NIPSCO has executed several PPAs to purchase 100% of the output from renewable generation facilities at a fixed price per MWh. Each facility supplying the energy will have an associated nameplate capacity, and payments under the PPAs will not begin until the associated generation facility is constructed by the owner/seller. NIPSCO has also executed several BTAs with developers to construct renewable generation facilities.

Since 2020, two wind PPA projects, two wind BTA projects and two solar BTA projects have been placed into service, totaling 1,465 MW of nameplate capacity. NIPSCO has executed commercial agreements for each of the eight remaining identified projects. Dunns Bridge II, Cavalry, Fairbanks, Gibson, GreenRiver, Appleseed, Carpenter and Templeton have received IURC approval. Additional approvals by the IURC may be required to obtain recovery for increases in projects costs. NIPSCO has filed for a new gas peaking facility to be located at R.M. Schahfer Generating Station. On November 22, 2023 the IURC approved NIPSCO's request to convert the Gibson project from a PPA to a BTA. On January 17, 2024 the IURC approved increases to the project costs as well as the full ownership of Cavalry and Dunns Bridge II, allowing NIPSCO to leverage provisions of the IRA to monetize tax credits for the benefit of customers in lieu of utilizing tax equity partnerships. See "Executive Summary - Your Energy, Your Future" in this Management's Discussion for additional information.

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NISOURCE INC.
Electric Operations (continued)

Remaining Renewables Projects	Transaction Type	Technology	Nameplate Capacity (MW)	Storage Capacity (MW)
Cavalry	BTA	Solar & Storage	200	60
Dunns Bridge II	BTA	Solar & Storage	435	75
Fairbanks [(1)]	BTA	Solar	250	—
Gibson [(1)]	BTA	Solar	200	—
Green River	20 year PPA	Solar	200	—
Templeton	20 year PPA	Wind	200	—
Carpenter	20 year PPA	Wind	200	—
Appleseed	20 year PPA	Solar	200	—

[(1)] Under the structure approved by the IURC ownership of Fairbanks and Gibson will be transferred to JVs whose members are expected to include NIPSCO and an unrelated tax equity partner. NIPSCO is evaluating leveraging provisions of the IRA to monetize tax credits for the benefit of customers in lieu of utilizing tax equity partnerships. NIPSCO may seek IURC approval for full ownership of the Fairbanks and Gibson projects.

Project Status . We expect the majority of our remaining BTA and PPA projects to be placed in service in 2024 and 2025. Our contract amendments for these projects formally address inflationary cost pressures communicated from the developers of our solar and storage projects that are primarily due to (i) limited supply of solar panels and other uncertainties related to the U.S. Department of Commerce investigation on Antidumping and Countervailing Duties petition filed by a domestic solar manufacturer (the "DOC Investigation"), (ii) the U.S. Department of Homeland Security's June 2021 Withhold Release Order on silica-based products made by Hoshine Silicon Industry Co., Ltd./Uyghur Forced Labor Prevention Act, (iii) Section 201 Tariffs and (iv) persistent general global supply chain and labor availability issues. We are actively monitoring progress towards project milestones for each of our remaining projects.

In June 2022, the Biden Administration announced a 24-month tariff relief on solar panels subject to the DOC Investigation and authorized the use of the Defense Production Act, to accelerate domestic production of clean energy technologies, including solar panel parts. On August 18, 2023, the department of Commerce issued final determinations in the DOC Investigation and affirmed that tariff relief announced by the Biden Administration in June 2022 would remain in effect until June 2024. At this time, we do not anticipate any significant panel tariffs will impact our solar projects.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.

Liquidity and Capital Resources

We continually evaluate the availability of adequate financing to fund our ongoing business operations, working capital and core safety and infrastructure investment programs. Our financing is sourced through cash flow from operations and the issuance of debt and/or equity. External debt financing is provided primarily through the issuance of long-term debt, accounts receivable securitization programs and our $1.85 billion commercial paper program, which is backstopped by our committed revolving credit facility with a total availability from third-party lenders of $1.85 billion. We entered into a $1.0 billion term agreement in the fourth quarter of 2022 and a $650.0 million term credit agreement in the fourth quarter of 2023. On January 3, 2024, we terminated and repaid in full our $1.0 billion term credit agreemen t and our $650.0 million term credit agreement. On March 24, 2023, we completed the issuance and sale of $750.0 million of 5.25% senior unsecured notes maturing in 2028, which resulted in approximately $742.2 million of net proceeds after discount and debt issuance costs. On June 8, 2023, we completed the issuance and sale of a reopening of $300.0 million of 5.25% senior unsecured notes maturing in 2028 and $450.0 million of 5.40% senior unsecured notes maturing in 2033, which resulted in approximately $742.5 million of net proceeds after discount and debt issuance costs. On June 15, 2023, we redeemed all 400,000 shares of Series A Preferred Stock for a redemption price of $1,000 per share, or $400.0 million in total. As of December 31, 2023, the ATM program and the associated equity distribution agreements expired. On December 31, 2023, we consummated the NIPSCO Minority Interest Transaction in exchange for a capital contribution of $2.16 billion in cash. See Note 4, "Noncontrolling Interest,", Note 6, "Equity," Note 7, "Short-Term Borrowings," and Note 8, "Long-Term Debt," in the Notes to the Consolidated Financial Statements for more information.

We believe these sources provide adequate capital to fund our operating activities and capital expenditures in 2024 and beyond.

Operating Activities

Net cash from operating activities for the year ended December 31, 2023 was $1,935.1 million, an increase of $525.7 million from 2022. This increase in cash from operating activities was primarily driven by year over year change in accounts receivable collections driven by the implementation of new rates and the impact of lower gas prices as compared to 2022, partially offset by lower accounts payables also driven by lower gas prices.

Investing Activities

Net cash used for investing activities for the year ended December 31, 2023 was $3,571.6 million, an increase of $1,001.4 million from 2022. Our current year investing activities were comprised of increased capital expenditures related to system growth and reliability as well as payments to renewable generation asset developers related to milestone payments for certain of our BTA projects in 2023, as well as the property insurance settlement related to the Greater Lawrence Incident received in the prior year.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.

Capital Expenditures. The table below reflects actual capital expenditures and certain other investing activities by segment for 2023.

(in millions)	Actual 2023
Gas Distribution Operations	
System Growth and Tracker	$ 1,386.8
Maintenance	328.4
Total Gas Distribution Operations [1]	1,715.2
Electric Operations	
System Growth and Tracker	440.9
Maintenance	284.6
Generation Transition Investments	13.7
Total Electric Operations [1]	739.2
Corporate and Other Operations - Maintenance [1]	236.3
Total Capital Expenditures [2]	$ 2,690.7

[1] Amounts differ from those presented in Note 21, "Business Segment Information," in the Notes to Consolidated Financial Statements due to the allocation of Corporate and Other Maintenance Costs to the Gas Distribution and Electric Operations segments.
[2] Amounts differ from those presented on the Statements of Consolidated Cash Flows primarily due to the capitalized portion of the Corporate Incentive Plan payout, inclusion of capital expenditures included in current liabilities and AFUDC Equity.

In addition to these capital expenditures, we made $871.2 million of capital investments in the form of milestone and final payments to the renewable generation asset developers. Through December 2023, NiSource has added approximately $1 billion in renewable generation projects to its rate base.

We expect to make capital investments totaling approximately $16.0 billion during the 2024-2028 period related to infrastructure modernization, generation transition and customer growth over the next five years. This forecast incorporates an estimated $1.7 billion of additional investment in renewable generation projects.

(in billions)	2023 Actual	2024 Estimated	2025 Estimated	2026 Estimated	2027 Estimated	2028 Estimated
Capital Investments	$3.6	$3.3 - 3.5	$3.2 - 3.5	$2.9 - 3.2	$2.9 - 3.2	$2.9 - 3.2

Regulatory Capital Programs. We replace pipe and modernize our gas infrastructure to enhance safety and reliability and reduce leaks. An ancillary benefit of these programs is the reduction of GHG emissions. In 2023, we continued to move forward on core infrastructure and environmental investment programs supported by complementary regulatory and customer initiatives across all six states of our operating area.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.

The following table describes the most recent vintage of our regulatory programs to recover infrastructure replacement and other federally mandated compliance investments:

(in millions)

Company	Program	Capital Investment	Investment Period	Filing Date	Costs Covered [1]
Approved					
Columbia of Ohio	IRP - 2023	$ 522.1	4/21-12/22	2/24/2023	Replacement of hazardous service lines, cast iron, wrought iron, uncoated steel, and bare steel pipe.
Columbia of Ohio	CEP - 2023	$ 482.1	4/21-12/22	2/24/2023	Assets not included in the IRP.
NIPSCO - Gas	TDSIC - 6	$ 237.8	1/23-2/23	4/28/2023	New or replacement projects undertaken for the purpose of safety, reliability, system modernization or economic development.
NIPSCO - Gas	FMCA - 1	$ 22.1	1/23-3/23	5/30/2023	Project costs to comply with federal mandates.
Columbia of Virginia	SAVE - 2024	$ 166.5	10/22-12/24	8/15/2023	Replacement projects that (1) enhance system safety or reliability, or (2) reduce, or potentially reduce, greenhouse gas emissions. Includes costs associated with Advanced Leak Detection and Repair.
Columbia of Kentucky	SMRP - 2023	$ 41.6	1/23-12/23	10/14/2022	Replacement of mains and inclusion of system safety investments.
Columbia of Maryland [2]	STRIDE - 2023	$ 18.0	1/23-12/23	10/31/2022	Pipeline upgrades designed to improve public safety or infrastructure reliability.
NIPSCO - Electric [3]	TDSIC - 3	$ 144.8	7/22-1/23	3/28//2023	New or replacement projects undertaken for the purpose of safety, reliability, system modernization or economic development.
Pending Commission Approval					
NIPSCO - Gas	TDSIC - 7	$ 444.9	1/23-8/23	10/31/2023	New or replacement projects undertaken for the purpose of safety, reliability, system modernization or economic development.
NIPSCO - Gas [4]	FMCA - 2	$ 49.0	1/23-9/23	11/29/2023	Project costs to comply with federal mandates.
Columbia of Kentucky [5]	SMRP - 2024	$ 81.9	1/23-12/24	10/13/2023	Replacement of mains and inclusion of system safety investments.

[1] Programs do not include any costs already included in base rates.
[2] Columbia of Maryland's STRIDE expired December 31, 2023. On June 23, 2023, CMD filed an application for approval of a new five-year STRIDE. On November 21, 2023, the filing was withdrawn. Effective January 1, 2024, the STRIDE capital investments previously recovered are no longer earning a current return.
[3] Coincident with the implementation of Step-1 base rates in August 2023 in Cause No. 45772, TDSIC-3 cumulative capital investment of $554.7 million moved out of this tracker and into base rates.
[4] NIPSCO received approval for a new certificate of public convenience and necessity on December 28, 2022 for an additional Pipeline Safety III Compliance Plan, including $235.3M in capital and $34.1M in operation and maintenance expense project investments.
[5] Columbia of Kentucky placed these rates into effect, as of January 3, 2024, subject to refund, depending on a Commission order ruling on the Application.

On March 30, 2022, NIPSCO Electric filed a petition with the IURC seeking approval of NIPSCO's federally mandated costs for closure of Michigan City Generating Station's CCR ash ponds. The project includes a total estimated $40.0 million of federally mandated retirement costs. On November 2, 2022, NIPSCO Electric filed a petition with the IURC seeking approval of NIPSCO's federally mandated costs for closure of R.M. Schahfer Generation Station's multi-cell unit. The project includes a total estimated $53.0 million of federally mandated retirement costs. Due to the NIPSCO Electric settlement agreement filed on March 10, 2023, both FMCA cases were stayed pending the outcome of the NIPSCO Electric base rate case, which proposed these pond closure costs be recovered through base rates, rather than the FMCA Tracker. NIPSCO received an order approving its electric base rate case settlement on August 2, 2023. Pursuant to that settlement agreement, NIPSCO filed and the IURC approved motions to dismiss the independent FMCA cases related to CCR ash pond recovery, as that recovery will now occur through NIPSCO's electric base rates. Refer to Note 19, "Other Commitments and Contingencies - D. Environmental Matters," in the Notes to Consolidated Financial Statements for further discussion of the CCRs.

Refer to Note 12, "Regulatory Matters," in the Notes to Consolidated Financial Statements for a further discussion of regulatory developments during 2023.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.

Financing Activities

Common Stock, Preferred Stock and Equity Unit Sale. Refer to Note 6, "Equity," in the Notes to Consolidated Financial Statements for information on common stock, preferred stock and equity units activity.

Short-term Debt. Refer to Note 7, "Short-Term Borrowings," in the Notes to Consolidated Financial Statements for information on short-term debt.

Long-term Debt. Refer to Note 8, "Long-Term Debt," in the Notes to Consolidated Financial Statements for information on long-term debt.

Non-controlling Interest . We received $2.16 billion upon closing the NIPSCO Minority Interest Transaction. Proceeds from the closing of the NIPSCO Minority Interest Transaction were used to repay short-term debt, including our credit agreements. Under the terms of the LLC Agreement, Blackstone will provide up to $250 million in additional capital contributions over a three-year period after the Closing, which obligation is backed by an Equity Commitment Letter from an affiliate of Blackstone. Refer to Note 4, "Noncontrolling Interest," and Note 7, "Short-Term Borrowings," in the Notes to Consolidated Financial Statements for more information.

Sources of Liquidity

The following table displays our liquidity position as of December 31, 2023 and 2022:

Year Ended December 31, *(in millions)*	**2023**	2022
Current Liquidity		
Revolving Credit Facility	**$ 1,850.0**	$ 1,850.0
Accounts Receivable Programs [(1)]	**383.9**	447.2
Less:		
Commercial Paper	**1,061.0**	415.0
Accounts Receivable Programs Utilized	**337.6**	347.2
Letters of Credit Outstanding Under Credit Facility	**9.9**	10.2
Add:		
Cash and Cash Equivalents	**2,245.4**	40.8
Net Available Liquidity	**$ 3,070.8**	$ 1,565.6

[(1)] Represents the lesser of the seasonal limit or maximum borrowings supportable by the underlying receivables.

Debt Covenants . We are subject to a financial covenant under our revolving credit facility which requires us to maintain a debt to capitalization ratio that does not exceed 70%. As of December 31, 2023, the ratio was 58.2%.

Credit Ratings . The credit rating agencies periodically review our ratings, taking into account factors such as our capital structure and earnings profile. The following table includes our and NIPSCO's credit ratings and ratings outlook as of December 31, 2023. There have been no changes to our credit ratings or outlooks since February 2020.

A credit rating is not a recommendation to buy, sell or hold securities, and may be subject to revision or withdrawal at any time by the assigning rating organization.

	S&P		Moody's		Fitch	
	Rating	Outlook	Rating	Outlook	Rating	Outlook
NiSource	BBB+	Stable	Baa2	Stable	BBB	Stable
NIPSCO	BBB+	Stable	Baa1	Stable	BBB	Stable
Commercial Paper	A-2	Stable	P-2	Stable	F2	Stable

Certain of our subsidiaries have agreements that contain “ratings triggers” that require increased collateral if our credit ratings or the credit ratings of certain of our subsidiaries are below investment grade. These agreements are primarily for insurance purposes and for the physical purchase or sale of power. As of December 31, 2023, a collateral requirement of approximately $90.1 million would be required in the event of a downgrade below investment grade. In addition to agreements with ratings triggers, there are other agreements that contain “adequate assurance” or “material adverse change” provisions that could

necessitate additional credit support such as letters of credit and cash collateral to transact business.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NISOURCE INC.

Equity. Our authorized capital stock consists of 770,000,000 shares, $0.01 par value, of which 750,000,000 are common stock and 20,000,000 are preferred stock. As of December 31, 2023, 447,381,671 shares of common stock and 40,000 shares of preferred stock were outstanding. For more information regarding our common and preferred stock, see Note 6, "Equity," in the Notes to Consolidated Financial Statements.

Contractual Obligations, Cash Requirements and Off-Balance Sheet Arrangements

We have certain contractual obligations requiring payments at specified periods. Our material cash requirements are detailed below. We intend to use funds from the liquidity sources referenced above to meet these cash requirements.

At December 31, 2023, we had $11,079.3 million in long-term debt and $3,048.6 million in short-term borrowings outstanding.

During 2024 and 2025, we expect to make cash payments of $652.0 million and $485.7 million, respectively, related to pipeline service obligations including demand for gas transportation, gas storage and gas purchases.

Our expected payments include employer contributions to pension and other postretirement benefits plans expected to be made in 2024. Plan contributions beyond 2024 are dependent upon a number of factors, including actual returns on plan assets, which cannot be reliably estimated at this time. In 2024, we expect to make contributions of approximately $2.2 million to our pension plans and approximately $23.1 million to our postretirement medical and life plans. Refer to Note 16, "Pension and Other Postemployment Benefits," in the Notes to Consolidated Financial Statements for more information.

We cannot reasonably estimate the settlement amounts or timing of cash flows related to certain of our long-term obligations classified as "Total Other Liabilities" on the Consolidated Balance Sheets.

We have uncertain income tax positions for which we are unable to predict when the matters will be resolved. Refer to Note 15, "Income Taxes," in the Notes to Consolidated Financial Statements for more information.

NIPSCO has executed several PPAs to purchase 100% of the output from renewable generation facilities at a fixed price per MWh. NIPSCO has also executed several BTAs with developers to construct renewable generation facilities. See Note 19, "Other Commitments and Contingencies - A. Contractual Obligations," and Note 19, "Other Commitments and Contingencies," - E. "Other Matters - Generation Transition," in the Notes to Consolidated Financial Statements for additional information.

In addition, we, along with certain of our subsidiaries, enter into various agreements providing financial or performance assurance to third parties on behalf of certain subsidiaries. Such agreements include guarantees and stand-by letters of credit.

Refer to Note 19, "Other Commitments and Contingencies," in the Notes to Consolidated Financial Statements for additional information regarding our contractual obligations over the next 5 years and thereafter and our off-balance sheet arrangements.

Market Risk Disclosures

Risk is an inherent part of our businesses. The extent to which we properly and effectively identify, assess, monitor and manage each of the various types of risk involved in our businesses is critical to our profitability. We seek to identify, assess, monitor and manage, in accordance with defined policies and procedures, the following principal market risks that are involved in our businesses: commodity price risk, interest rate risk and credit risk. We manage risk through a multi-faceted process with oversight by the Risk Management Committee that requires constant communication, judgment and knowledge of specialized products and markets. Our senior management takes an active role in the risk management process and has developed policies and procedures that require specific administrative and business functions to assist in the identification, assessment and control of various risks. These may include, but are not limited to market, operational, financial, compliance and strategic risk types. In recognition of the increasingly varied and complex nature of the energy business, our risk management process, policies and procedures continue to evolve and are subject to ongoing review and modification.

Commodity Price Risk

Our Gas and Electric Operations have commodity price risk primarily related to the purchases of natural gas and power. To manage this market risk, our subsidiaries use derivatives, including commodity futures contracts, swaps, forwards and options. We do not participate in speculative energy trading activity.

Commodity price risk resulting from derivative activities at our rate-regulated subsidiaries is limited and does not bear

significant exposure to earnings risk, since our current regulatory mechanisms allow recovery of prudently incurred purchased power, fuel and gas costs through the rate-making process, including gains or losses on these derivative instruments. These changes are included in the GCA and FAC regulatory rate-recovery mechanisms. If these mechanisms were to be adjusted or

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eliminated, these subsidiaries may begin providing services without the benefit of the traditional rate-making process and may be more exposed to commodity price risk. For additional information, see "Results and Discussion of Operations" in this Management's Discussion.

Certain of our subsidiaries are required to make cash margin deposits with their brokers to cover actual and potential losses in the value of outstanding exchange traded derivative contracts. The amount of these deposits, some of which are reflected in our restricted cash balance, may fluctuate significantly during periods of high volatility in the energy commodity markets.

Refer to Note 13, "Risk Management Activities," in the Notes to Consolidated Financial Statements for further information on our commodity price risk assets and liabilities as of December 31, 2023 and 2022.

Interest Rate Risk

We are exposed to interest rate risk as a result of changes in interest rates on borrowings under our revolving credit agreement, commercial paper program, term credit agreements and accounts receivable programs, which have interest rates that are indexed to short-term market interest rates. Based upon average borrowings and debt obligations subject to fluctuations in short-term market interest rates, an increase (or decrease) in short-term interest rates of 100 basis points (1%) would have increased (or decreased) interest expense by $18.9 million and $8.7 million for 2023 and 2022, respectively. We are also exposed to interest rate risk as a result of changes in benchmark rates that can influence the interest rates of future debt issuances. From time to time, we may enter into forward interest rate instruments to lock in long term interest costs and/ or rates.

Credit Risk

Due to the nature of the industry, credit risk is embedded in many of our business activities. Our extension of credit is governed by a Corporate Credit Risk Policy. In addition, Risk Management Committee guidelines are in place which document management approval levels for credit limits, evaluation of creditworthiness, and credit risk mitigation efforts. Exposures to credit risks are monitored by the risk management function, which is independent of commercial operations. Credit risk arises due to the possibility that a customer, supplier or counterparty will not be able or willing to fulfill its obligations on a transaction on or before the settlement date. For derivative-related contracts, credit risk arises when counterparties are obligated to deliver or purchase defined commodity units of gas or power to us at a future date per execution of contractual terms and conditions. Exposure to credit risk is measured in terms of both current obligations and the market value of forward positions net of any posted collateral such as cash and letters of credit.

We evaluate the financial status of our banking partners through the use of market-based metrics such as credit default swap pricing levels, and also through traditional credit ratings provided by major credit rating agencies.

Other Information

Critical Accounting Estimates

We apply certain accounting policies in accordance with GAAP, which require that we make estimates and judgments that have had, and may continue to have, significant impacts on our operations and Consolidated Financial Statements. We evaluate our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. We believe the following represent the more significant items requiring the use of judgment in preparing our Consolidated Financial Statements:

Basis of Accounting for Rate-Regulated Subsidiaries. ASC Topic 980, *Regulated Operations* , provides that rate-regulated subsidiaries account for and report assets and liabilities consistent with the economic effect of the way in which regulators establish rates, if the rates established are designed to recover the costs of providing the regulated service and if the competitive environment makes it probable that such rates can be billed and collected. Accordingly, certain expenses and credits subject to utility regulation or rate determination normally reflected in income may be deferred on the Consolidated Balance Sheets and recognized in income as the related amounts are included in service rates and recovered from or refunded to customers. The total amounts of regulatory assets and liabilities reflected on the Consolidated Balance Sheets were $2,460.2 million and $1,789.3 million at December 31, 2023, and $2,580.8 million and $2,012.6 million at December 31, 2022, respectively. For

additional information, refer to Note 12, "Regulatory Matters," in the Notes to Consolidated Financial Statements.

In the event that regulation significantly changes the opportunity for us to recover our costs in the future, all or a portion of our regulated operations may no longer meet the criteria for the application of ASC Topic 980, *Regulated Operations* . In such

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event, a write-down of all or a portion of our existing regulatory assets and liabilities could result. If transition cost recovery is approved by the appropriate regulatory bodies that would meet the requirements under GAAP for continued accounting as regulatory assets and liabilities during such recovery period, the regulatory assets and liabilities would be reported at the recoverable amounts. If we were unable to continue to apply the provisions of ASC Topic 980, *Regulated Operations* , we would be required to apply the provisions of ASC Topic 980-20, *Discontinuation of Rate-Regulated Accounting* . In management's opinion, our regulated subsidiaries will be subject to ASC Topic 980, *Regulated Operations* for the foreseeable future.

Certain of the regulatory assets reflected on our Consolidated Balance Sheets require specific regulatory action in order to be included in future service rates. Although recovery of these amounts is not guaranteed, we believe that these costs meet the requirements for deferral as regulatory assets. If we determine that the amounts included as regulatory assets are no longer probable of recovery, a charge to income would immediately be required to the extent of the unrecoverable amounts.

One of the more significant items recorded through the application of this accounting guidance is the regulatory overlay for JV accounting. The application of HLBV to consolidated VIEs generally results in the recognition of profit from the related JVs over a time frame that is different from when the regulatory return is earned. In accordance with the principles of ASC 980, we have recognized a regulatory deferral of certain amounts representing the timing difference between the profit earned from the JVs and the amount included in regulated rates to recover our approved investments in consolidated JVs. For additional information, refer to Note 1, "Nature of Operations and Summary of Significant Accounting Policies - S. Noncontrolling Interest," in the Notes to Consolidated Financial Statements.

Pension and Postretirement Benefits. We have defined benefit plans for both pension and other postretirement benefits. The calculation of the net obligations and annual expense related to the plans requires a significant degree of judgment regarding the discount rates to be used in bringing the liabilities to present value, expected long-term rates of return on plan assets, health care trend rates, and mortality rates, among other assumptions. Due to the size of the plans and the long-term nature of the associated liabilities, changes in the assumptions used in the actuarial estimates could have material impacts on the measurement of the net obligations and annual expense recognition. Differences between actuarial assumptions and actual plan results are deferred into AOCI or a regulatory balance sheet account, depending on the jurisdiction of our entity. These deferred gains or losses are then amortized into the income statement when the accumulated differences exceed 10% of the greater of the projected benefit obligation or the fair value of plan assets (known in GAAP as the "corridor" method) or when settlement accounting is triggered.

The discount rates, expected long-term rates of return on plan assets, health care cost trend rates and mortality rates are critical assumptions. Methods used to develop these assumptions are described below. While a third party actuarial firm assists with the development of many of these assumptions, we are ultimately responsible for selecting the final assumptions.

The discount rate is utilized principally in calculating the actuarial present value of pension and other postretirement benefit obligations and net periodic pension and other postretirement benefit plan costs. Our discount rates for both pension and other postretirement benefits are determined using spot rates along an AA-rated above median yield curve with cash flows matching the expected duration of benefit payments to be made to plan participants.

The expected long-term rate of return on plan assets is a component utilized in calculating annual pension and other postretirement benefit plan costs. We estimate the expected return on plan assets by evaluating expected bond returns, equity risk premiums, target asset allocations, the effects of active plan management, the impact of periodic plan asset rebalancing and historical performance. We also consider the guidance from our investment advisors in making a final determination of our expected rate of return on assets. For measurement of 2023 net periodic benefit cost, we selected a weighted-average assumption of the expected pre-tax long-term rate of return of 7.00% and 6.96% for our pension and other postretirement benefit plan assets, respectively. For measurement of 2024 net periodic benefit cost, we selected a weighted-average assumption of the expected pre-tax long-term rate of return o f 7.02% and 7.06 % respectively, for our pension and other postretirement benefit plan assets.

We estimate the assumed health care cost trend rate, which is used in determining our other postretirement benefit net expense, based upon our actual health care cost experience, the effects of recently enacted legislation, third-party actuarial surveys and general economic conditions.

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We utilize a full yield curve approach to estimate the service and interest components of net periodic benefit cost for pension and other postretirement benefits by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows. For further discussion of our pension and other postretirement benefits, see Note 16, "Pension and Other Postemployment Benefits," in the Notes to Consolidated Financial Statements.

Typically, we use the Society of Actuaries' most recently published mortality data in developing a best estimate of mortality as part of the calculation of the pension and other postretirement benefit obligations. We adopted Aon's U.S. Endemic Mortality Improvement scale MP-2021, accounting for both the near-term and long-term COVID-19 impacts.

The following tables illustrate the effects of changes in these actuarial assumptions while holding all other assumptions constant:

	Impact on December 31, 2023 Projected Benefit Obligation Increase/(Decrease)	
Change in Assumptions *(in millions)*	Pension Benefits	Other Postretirement Benefits
+50 basis points change in discount rate	$ (51.8)	$ (20.5)
-50 basis points change in discount rate	55.9	22.3

	Impact on 2023 Expense Increase/(Decrease) [1]	
Change in Assumptions *(in millions)*	Pension Benefits	Other Postretirement Benefits
+50 basis points change in discount rate	$ (1.6)	$ 0.3
-50 basis points change in discount rate	1.4	(0.3)
+50 basis points change in expected long-term rate of return on plan assets	(6.8)	(1.1)
-50 basis points change in expected long-term rate of return on plan assets	6.8	1.1

[1] Before labor capitalization and regulatory deferrals.

Goodwill and Other Intangible Assets. We have six goodwill reporting units, comprised of the six state operating companies within the Gas Distribution Operations reportable segment. Our goodwill assets at December 31, 2023 were $1,486 million, most of which resulted from the acquisition of Columbia on November 1, 2000.

As required by GAAP, we test for impairment of goodwill on an annual basis and on an interim basis when events or circumstances indicate that a potential impairment may exist. Our annual goodwill test takes place in the second quarter of each year and was performed on May 1, 2023. A qualitative ("Step 0") test was completed on May 1, 2023, for all reporting units. In the Step 0 analysis, we assessed various assumptions, events and circumstances that would have affected the estimated fair value of the applicable reporting units as compared to the baseline "step 1" fair value measurement performed May 1, 2020. The results of this assessment indicated that it was more likely than not that the estimated fair value of the reporting units substantially exceeded the related carrying values of our reporting units; therefore, no "step 1" analysis was required and no impairment charges were indicated. Since the annual evaluation, there have been no indications that the fair values of the goodwill reporting units have decreased below the carrying values.

As noted above, application of the qualitative goodwill impairment test requires evaluating various events and circumstances to determine whether it is not more likely than not that the fair value of a reporting unit is less than its carrying amount. Although we believe all relevant factors were considered in the qualitative impairment analysis to reach the conclusion that goodwill is not impaired, significant changes in any one of the assumptions could potentially result in the recording of an impairment that could have significant impacts on the Consolidated Financial Statements.

See Note 10, "Goodwill," in the Notes to Consolidated Financial Statements for further information.

Unbilled Revenue. We record utility operating revenues when energy is delivered to our customers. However, the determination of energy sales to individual customers is based upon the reading of their meters, which occurs on a systematic basis throughout the month. At the end of each month, amounts of energy delivered to customers since the date of their last meter reading are

estimated and corresponding unbilled revenues are calculated. This unbilled revenue is estimated each month based upon historical usage, customer rates and weather. As of December 31, 2023, we recorded $337.6 million of customer

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accounts receivable for unbilled revenue. Significant fluctuations in energy demand for the unbilled period or changes in the composition of customer classes could impact the accuracy of the unbilled revenue estimate. Refer to Note 3, "Revenue Recognition," in the Notes to Consolidated Financial Statements for additional information regarding our significant judgments and estimates related to unbilled revenue recognition.

Income Taxes. The consolidated income tax provision and deferred income tax assets and liabilities, as well as any unrecognized tax benefits and valuation allowances, require use of estimates and significant management judgement. Although we believe that current estimates for deferred tax assets and liabilities are reasonable, actual results could differ from these estimates for a variety of reasons, including reasonable projections of taxable income, the ability and intent to implement tax planning strategies if necessary, and interpretations of applicable tax laws and regulations across multiple taxing jurisdictions. Ultimate resolution or clarification of income tax matters may result in favorable or unfavorable impacts to net income and cash flows, and adjustments to tax-related assets and liabilities could be material.

We account for uncertain income tax positions using a benefit recognition model with a two-step approach including a more-likely-than-not recognition threshold and a measurement approach based on the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement. We evaluate each position based solely on the technical merits and facts and circumstances of the position, assuming the position will be examined by a taxing authority having full knowledge of all relevant information. Significant judgment is required to determine whether the recognition threshold has been met and, if so, the appropriate amount of tax benefits to be recorded in the consolidated financial statements. At December 31, 2023 and 2022, we had $21.7 million of unrecognized tax benefits. Changes in these unrecognized tax benefits may result from remeasurement of amounts expected to be realized, settlements with tax authorities and expiration of statutes of limitations.

On a quarterly basis, we evaluate our deferred tax assets by considering current and historical financial results, expectations for future taxable income and the availability of tax planning strategies that can be implemented, if necessary, to realize deferred tax assets. Failure to achieve forecasted taxable income or successfully implement tax planning strategies may affect the realization of deferred tax assets. We establish a valuation allowance when we conclude it is more likely than not that all, or a portion, of a deferred tax asset will not be realized in future periods. Significant judgment is required to determine the amount of tax benefits expected to be realized. At December 31, 2023 and 2022, we had established $6.4 million and $7.8 million, respectively, of valuation allowances (net of federal benefit) related to certain state net operating loss carryforwards. Refer to Note 15, "Income Taxes," in the Notes to Consolidated Financial Statements for additional information.

Recently Issued Accounting Pronouncements

Refer to Note 2, "Recent Accounting Pronouncements," in the Notes to Consolidated Financial Statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Quantitative and Qualitative Disclosures about Market Risk are reported in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Market Risk Disclosures.”

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

NISOURCE INC.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of NiSource Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of NiSource Inc. and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related statements of consolidated income, comprehensive income, stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2023, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 21, 2024, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Non-Controlling Interest - Minority Interest Investment in NIPSCO Holdings II LLC – Refer to Notes 1, 4, 6, and 15 to the financial statements

Critical Audit Matter Description

On December 31, 2023, the Company consummated the closing of the issuance of a 19.9% equity interest in NIPSCO Holdings II LLC, a wholly-owned subsidiary of the Company and the sole owner of Northern Indiana Public Service Company LLC (“NIPSCO”), to BIP BLUE BUYER L.L.C., an affiliate of Blackstone Infrastructure Partners. At closing, BIP BLUE BUYER L.L.C., acquired a 19.9% equity interest in NIPSCO Holdings II LLC in exchange for making a capital contribution of $2.16 billion in cash to NIPSCO Holdings II LLC. Upon consummation of the minority interest transaction, the Company owns an 80.1% controlling indirect equity interest in NIPSCO LLC while BIP BLUE BUYER L.L.C., owns the remaining 19.9% indirect equity interest.

We identified the $2.16 billion minority interest investment in NIPSCO Holdings II LLC as a critical audit matter due to the significant degree of judgement involved in complex accounting and tax conclusions. This required a significant degree of auditor judgment when performing audit procedures, including the need to involve professionals in our firm with the

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NISOURCE INC.
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

appropriate expertise to assist us in evaluating management's conclusions around the accounting and tax treatment for the transaction.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the minority interest investment in NIPSCO Holdings II LLC included the following, among others:

- We tested the effectiveness of controls over the accounting assessment for this transaction, including the controls over technical accounting conclusions and income tax treatment of this transaction.
- We evaluated management's conclusions related to accounting for the transaction by:
  - Obtaining and reading the contractual agreements related to this transaction,
  - Involving professionals in our firm with the appropriate expertise in accounting for minority interest transactions to evaluate the work performed by management related to the accounting treatment of the transaction,
  - Involving professionals in our firm with the appropriate expertise in income taxes to evaluate the work performed by management related to the tax treatment of the transaction,
- We evaluated the appropriateness of the Company's disclosures related to the minority interest investment, including balances recorded.

Regulatory Matters - Impact of Rate Regulation on the Financial Statements - Refer to Notes 1, 9, and 12 to the financial statements

Critical Audit Matter Description

The Company's subsidiaries are fully regulated natural gas and electric utility companies serving customers in six states. These rate-regulated subsidiaries account for and report assets and liabilities consistent with the economic effect of the manner in which regulators establish rates, if the rates established are designed to recover the costs of providing the regulated service and it is probable that such rates can be charged to and collected from customers. Certain expenses and credits subject to utility regulation or rate determination normally reflected in income are deferred on the consolidated balance sheets and are later recognized in income as the related amounts are included in customer rates and recovered from or refunded to customers.

The Company's subsidiaries' rates are subject to regulatory rate-setting processes. Rates are determined and approved in regulatory proceedings based on an analysis of the subsidiaries' costs to provide utility service and a return on, and recovery of, the subsidiaries' investment in the utility business. Regulatory decisions can have an impact on the recovery of costs, the rate of return earned on investment, and the timing and amount of assets to be recovered by rates. The respective commission's regulation of rates is premised on the full recovery of prudently incurred costs and a reasonable rate of return on invested capital. Decisions to be made by the commission in the future will impact the accounting for regulated operations, including decisions about the amount of allowable costs and return on invested capital included in rates and any refunds that may be required. While the Company has indicated it expects to recover costs from customers through regulated rates, there is a risk that the commission will not approve: (1) full recovery of the costs of providing utility service, or (2) full recovery of all amounts invested in the utility business and a reasonable return on that investment.

We identified the impact of rate regulation, specifically certain regulatory assets and liabilities at the Company's Northern Indiana Public Service Company LLC and Columbia Gas of Ohio, Inc. subsidiaries, as a critical audit matter due to the significant judgments made by management to support its assertions about certain account balances and the significant degree of subjectivity involved in assessing the likelihood of recovery of incurred costs in current or future rates due in part to uncertainty related to future decisions by the rate regulators. This required specialized knowledge of accounting for rate regulation and the rate setting process due to its inherent complexities and a significant degree of auditor judgment when performing audit procedures to evaluate the reasonableness of management's conclusions.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the application of specialized rules to account for the effects of cost-based rate regulation related

to the uncertainty of future decisions by the rate regulators, specifically the Indiana Utility Regulatory Commission (IURC) and the Public Utility Commission of Ohio (PUCO), included the following, among others:

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NISOURCE INC.
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

- We tested the effectiveness of management's controls over (1) the evaluation of the likelihood of (a) the recovery of costs deferred as regulatory assets in future periods, and (b) regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates; and (2) the evaluation of Hypothetical Liquidation Book Value (HLBV) Models for the company's Renewable Joint Ventures and its impact on the Company's regulatory assets for recovery in rate base.
- We read relevant regulatory orders issued by the IURC and the PUCO, including regulatory statutes, interpretations, procedural memorandums, filings made by interveners, and other publicly available information to assess the likelihood of recovery in future rates or a future reduction in rates based on precedents of the commissions' treatment of similar costs under similar circumstances. We evaluated the external information and compared to management's recorded regulatory asset and liability balances for completeness, including the implementation of new rate orders at Northern Indiana Public Service Company LLC's electric business and Columbia Gas of Ohio, Inc.
- For the Northern Indiana Public Service Company LLC gas base rate case proceeding, we inspected the Company's and intervenors' filings with the commissions that may impact the Company's future rates, for any evidence that might contradict management's assertions related to recoverability of recorded assets.
- We inquired of management about property, plant, and equipment that may be abandoned with an emphasis on the generation strategy related to Northern Indiana Public Service Company LLC's R.M. Schahfer and Michigan City Generating Stations. We inspected minutes of the board of directors and regulatory orders and other filings with the IURC to identify evidence that may contradict management's assertion regarding probability of an abandonment.
- We read the relevant regulatory orders issued by the IURC for the Company's renewable energy investments. We evaluated the appropriateness of recognizing a regulatory liability or asset representing timing differences between the profit allocated under the HLBV method related to the consolidated joint ventures and the allowed earnings included in regulatory rates. We also evaluated the appropriateness of the offset to the regulatory liability or asset recorded in depreciation expense.

/s/ DELOITTE & TOUCHE LLP
Columbus, Ohio
February 21, 2024

We have served as the Company's auditor since 2002.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
STATEMENTS OF CONSOLIDATED INCOME

Year Ended December 31 , *(in millions, except per share amounts)*	**2023**	2022	2021
Operating Revenues			
Customer revenues	**$ 5,347.8**	$ 5,738.6	$ 4,731.3
Other revenues	**157.6**	112.0	168.3
Total Operating Revenues	**5,505.4**	5,850.6	4,899.6
Operating Expenses			
Cost of energy	**1,533.3**	2,110.5	1,392.3
Operation and maintenance	**1,494.9**	1,489.4	1,456.0
Depreciation and amortization	**908.2**	820.8	748.4
Loss (gain) on sale of assets, net	**2.9**	(104.2)	7.7
Other taxes	**270.6**	268.3	288.3
Total Operating Expenses	**4,209.9**	4,584.8	3,892.7
Operating Income	**1,295.5**	1,265.8	1,006.9
Other Income (Deductions)			
Interest expense, net	**(489.6)**	(361.6)	(341.1)
Other, net	**8.0**	52.2	40.8
Total Other Deductions, Net	**(481.6)**	(309.4)	(300.3)
Income before Income Taxes	**813.9**	956.4	706.6
Income Taxes	**139.5**	164.6	117.8
Net Income	**674.4**	791.8	588.8
Net (loss) income attributable to noncontrolling interest	**(39.9)**	(12.3)	3.9
Net Income attributable to NiSource	**714.3**	804.1	584.9
Preferred dividends	**(42.8)**	(55.1)	(55.1)
Preferred redemption premium	**(9.8)**	—	—
Net Income Available to Common Shareholders	**661.7**	749.0	529.8
Earnings Per Share			
Basic Earnings Per Share	**$ 1.59**	$ 1.84	$ 1.35
Diluted Earnings Per Share	**$ 1.48**	$ 1.70	$ 1.27
Basic Average Common Shares Outstanding	**416.1**	407.1	393.6
Diluted Average Common Shares	**447.9**	442.7	417.3

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
STATEMENTS OF CONSOLIDATED COMPREHENSIVE INCOME

Year Ended December 31, *(in millions, net of taxes)*	**2023**	2022	2021
Net Income	**$ 674.4**	$ 791.8	$ 588.8
Other comprehensive income:			
Net unrealized gain (loss) on available-for-sale securities [1]	**3.9**	(13.3)	(3.9)
Net unrealized (loss) gain on cash flow hedges [2]	**(0.2)**	109.9	25.4
Unrecognized pension and OPEB benefit (costs) [3]	**(0.2)**	(6.9)	8.4
Total other comprehensive income	**3.5**	89.7	29.9
Total Comprehensive Income	**$ 677.9**	$ 881.5	$ 618.7

[1] Net unrealized gain (loss) on available-for-sale securities, net of $ 1.0 million tax expense, $ 3.5 million tax benefit and $ 1.0 million tax benefit in 2023, 2022 and 2021, respectively.
[2] Net unrealized (loss) gain on derivatives qualifying as cash flow hedges, net of $ 0.1 million tax benefit, $ 36.4 million tax expense and $ 8.4 million tax expense in 2023, 2022 and 2021, respectively.
[3] Unrecognized pension and OPEB benefit (costs), net of $ 0.1 million tax benefit, $ 2.3 million tax benefit and $ 3.8 million tax expense in 2023, 2022 and 2021, respectively.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
CONSOLIDATED BALANCE SHEETS

(in millions)	**December 31, 2023**	December 31, 2022
ASSETS		
Property, Plant and Equipment		
Plant	**$ 30,482.1**	$ 27,551.3
Accumulated depreciation and amortization	**(8,207.2)**	(7,708.7)
Net Property, Plant and Equipment [(1)]	**22,274.9**	19,842.6
Investments and Other Assets		
Unconsolidated affiliates	**5.3**	1.6
Available-for-sale debt securities (amortized cost of $ 169.0 and $ 166.7 , allowance for credit losses of $ 0.6 and $ 0.9 , respectively)	**159.1**	151.6
Other investments	**82.7**	71.0
Total Investments and Other Assets	**247.1**	224.2
Current Assets		
Cash and cash equivalents	**2,245.4**	40.8
Restricted cash	**35.7**	34.6
Accounts receivable	**884.9**	1,065.8
Allowance for credit losses	**(22.9)**	(23.9)
Accounts receivable, net	**862.0**	1,041.9
Gas storage	**265.8**	531.7
Materials and supplies, at average cost	**172.1**	151.4
Electric production fuel, at average cost	**65.3**	68.8
Exchange gas receivable	**66.0**	128.1
Regulatory assets	**214.3**	233.2
Deposits to renewable generation asset developer	**454.2**	143.8
Prepayments and other	**118.6**	210.0
Total Current Assets [(1)]	**4,499.4**	2,584.3
Other Assets		
Regulatory assets	**2,245.9**	2,347.6
Goodwill	**1,485.9**	1,485.9
Deferred charges and other	**324.0**	252.0
Total Other Assets	**4,055.8**	4,085.5
Total Assets	**$ 31,077.2**	$ 26,736.6

[(1)] Includes $ 1,369.8 million and $ 978.5 million in 2023 and 2022, respectively, of net property, plant and equipment assets and $ 63.6 million and $ 25.7 million in 2023 and 2022, respectively, of current assets of consolidated VIEs that may be used only to settle obligations of the consolidated VIEs. Refer to Note 4, "Noncontrolling Interest," for additional information.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
CONSOLIDATED BALANCE SHEETS

(in millions, except share amounts)	**December 31, 2023**	December 31, 2022
CAPITALIZATION AND LIABILITIES		
Capitalization		
Stockholders' Equity		
Common stock - $ 0.01 par value, 750,000,000 shares authorized; 447,381,671 and 412,142,602 shares outstanding, respectively	**$ 4.5**	$ 4.2
Preferred stock - $ 0.01 par value, 20,000,000 shares authorized; 40,000 and 1,302,500 shares outstanding, respectively	**486.1**	1,546.5
Treasury stock	**(99.9)**	(99.9)
Additional paid-in capital	**8,879.5**	7,375.3
Retained deficit	**(967.0)**	(1,213.6)
Accumulated other comprehensive loss	**(33.6)**	(37.1)
Total NiSource Stockholders' Equity	**8,269.6**	7,575.4
Noncontrolling interest in consolidated subsidiaries	**1,866.7**	326.4
Total Stockholders' Equity	**10,136.3**	7,901.8
Long-term debt, excluding amounts due within one year	**11,055.5**	9,523.6
Total Capitalization	**21,191.8**	17,425.4
Current Liabilities		
Current portion of long-term debt	**23.8**	30.0
Short-term borrowings	**3,048.6**	1,761.9
Accounts payable	**749.4**	899.5
Customer deposits and credits	**294.4**	324.7
Taxes accrued	**166.2**	246.2
Interest accrued	**136.1**	138.4
Asset retirement obligations	**72.5**	35.5
Exchange gas payable	**50.5**	147.6
Regulatory liabilities	**278.6**	236.8
Accrued compensation and employee benefits	**227.6**	167.5
Obligations to renewable generation asset developer	**—**	347.2
Other accruals	**217.4**	325.2
Total Current Liabilities [(1)]	**5,265.1**	4,660.5
Other Liabilities		
Deferred income taxes	**2,080.4**	1,854.5
Accrued liability for postretirement and postemployment benefits	**250.1**	245.5
Regulatory liabilities	**1,510.7**	1,775.8
Asset retirement obligations	**480.5**	478.1
Other noncurrent liabilities and deferred credits	**298.6**	296.8
Total Other Liabilities [(1)]	**4,620.3**	4,650.7
Commitments and Contingencies (Refer to Note 19, "Other Commitments and Contingencies")		
Total Capitalization and Liabilities	**$ 31,077.2**	$ 26,736.6

[(1)] Includes $ 68.3 million and $ 128.2 million in 2023 and 2022, respectively, of current liabilities and $ 55.7 million and $ 30.6 million in 2023 and 2022, respectively, of other liabilities of consolidated VIEs that creditors do not have recourse to our general credit. Refer to Note 4, "Noncontrolling Interest," for additional information.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
STATEMENTS OF CONSOLIDATED CASH FLOWS

Year Ended December 31, *(in millions)*	2023	2022	2021
Operating Activities			
Net Income	**$ 674.4**	$ 791.8	$ 588.8
Adjustments to Reconcile Net Income to Net Cash from Operating Activities:			
Depreciation and amortization	**908.2**	820.8	748.4
Deferred income taxes and investment tax credits	**134.1**	156.9	111.9
Stock compensation expense and 401(k) profit sharing contribution	**33.5**	24.9	24.3
Loss (gain) on sale of assets	**2.9**	(105.3)	5.6
Other adjustments	**(17.9)**	5.7	(0.7)
Changes in Assets and Liabilities:			
Accounts receivable	**184.1**	(216.3)	(40.3)
Gas storage and other inventories	**233.9**	(258.9)	(112.9)
Accounts payable	**(171.8)**	165.0	54.9
Exchange gas receivable/payable	**126.5**	57.8	(114.2)
Other accruals	**(102.9)**	73.4	43.0
Prepayments and other current assets	**36.7**	(9.8)	(36.6)
Regulatory assets/liabilities	**(26.2)**	(129.4)	76.8
Postretirement and postemployment benefits	**(22.0)**	84.7	(96.4)
Deferred charges and other noncurrent assets	**(10.1)**	(4.1)	(4.7)
Other noncurrent liabilities and deferred credits	**(48.3)**	(47.8)	(30.0)
Net Cash Flows from Operating Activities	**1,935.1**	1,409.4	1,217.9
Investing Activities			
Capital expenditures	**(2,645.8)**	(2,203.1)	(1,838.0)
Insurance Recoveries	**3.0**	105.0	—
Cost of removal	**(160.8)**	(151.7)	(121.1)
Purchases of available-for-sale securities	**(42.8)**	(73.5)	(102.9)
Sales of available-for-sale securities	**39.9**	75.7	97.8
Milestone and final payments to renewable generation asset developer	**(761.4)**	(323.9)	(240.4)
Other investing activities	**(3.7)**	1.3	(1.0)
Net Cash Flows used for Investing Activities	**(3,571.6)**	(2,570.2)	(2,204.9)
Financing Activities			
Proceeds from issuance of long-term debt	**1,488.7**	345.6	—
Repayments of long-term debt and finance lease obligations	**(33.1)**	(60.3)	(25.7)
Issuance of short term credit agreements	**650.0**	1,000.0	—
Net change in commercial paper and other short-term borrowings	**636.4**	202.2	57.0
Issuance of common stock, net of issuance costs	**12.9**	154.3	299.6
Payment of obligation to renewable generation asset developer	**(347.2)**	—	—
Equity costs, premiums and other debt related costs	**(30.2)**	(13.0)	(18.2)
Contributions from noncontrolling interests	**2,402.8**	21.2	245.1
Distributions to noncontrolling interest	**(14.1)**	(6.0)	(0.6)
Issuance of equity units, net of underwriting costs	**—**	—	839.9
Redemption of preferred stock	**(393.9)**	—	—
Dividends paid - common stock	**(413.5)**	(381.5)	(345.2)
Preferred stock redemption premium	**(6.2)**	—	—
Dividends paid - preferred stock	**(43.8)**	(55.1)	(55.1)
Contract liability payment	**(66.6)**	(66.1)	(40.5)
Net Cash Flows from Financing Activities	**3,842.2**	1,141.3	956.3
Change in cash, cash equivalents and restricted cash	**2,205.7**	**(19.5)**	**(30.7)**
Cash, cash equivalents and restricted cash at beginning of period	**75.4**	94.9	125.6
Cash, Cash Equivalents and Restricted Cash at End of Period	**$ 2,281.1**	$ 75.4	$ 94.9

Reconciliation to Balance Sheet	2023	2022	2021
Cash and cash equivalents	**2,245.4**	40.8	84.2
Restricted Cash	**35.7**	34.6	10.7
Total Cash, Cash Equivalents and Restricted Cash	**2,281.1**	75.4	94.9

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
STATEMENTS OF CONSOLIDATED STOCKHOLDERS' EQUITY

(in millions)	Common Stock	Preferred Stock [1]	Treasury Stock	Additional Paid-In Capital	Retained Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interest in Consolidated Subsidiaries	Total
Balance as of January 1, 2021	**$ 3.9**	**$ 880.0**	**$ (99.9)**	**$ 6,890.1**	**$ (1,765.2)**	**$ (156.7)**	**$ 85.6**	**$ 5,837.8**
Comprehensive Income:								
Net Income	—	—	—	—	584.9	—	3.9	588.8
Other comprehensive income, net of tax	—	—	—	—	—	29.9	—	29.9
Dividends:								
Common stock ($ 0.88 per share)	—	—	—	—	(345.5)	—	—	(345.5)
Preferred stock (See Note 6)	—	—	—	—	(55.1)	—	—	(55.1)
Contributions from noncontrolling interest	—	—	—	—	—	—	236.7	236.7
Distributions to noncontrolling interest	—	—	—	—	—	—	(0.6)	(0.6)
Stock issuances:								
Equity Units	—	666.5	—	—	—	—	—	666.5
Employee stock purchase plan	—	—	—	5.0	—	—	—	5.0
Long-term incentive plan	—	—	—	11.8	—	—	—	11.8
401(k) and profit sharing	—	—	—	9.5	—	—	—	9.5
ATM Program	0.2	—	—	287.9	—	—	—	288.1
Balance as of December 31, 2021	**$ 4.1**	**$ 1,546.5**	**$ (99.9)**	**$ 7,204.3**	**$ (1,580.9)**	**$ (126.8)**	**$ 325.6**	**$ 7,272.9**
Comprehensive Income:								
Net Income (Loss)	—	—	—	—	804.1	—	(12.3)	791.8
Other comprehensive income, net of tax	—	—	—	—	—	89.7	—	89.7
Dividends:								
Common stock ($ 0.94 per share)	—	—	—	—	(381.7)	—	—	(381.7)
Preferred stock (See Note 6)	—	—	—	—	(55.1)	—	—	(55.1)
Contributions from noncontrolling interest	—	—	—	—	—	—	19.1	19.1
Distributions to noncontrolling interest	—	—	—	—	—	—	(6.0)	(6.0)
Stock issuances:								
Employee stock purchase plan	—	—	—	5.2	—	—	—	5.2
Long-term incentive plan	—	—	—	14.3	—	—	—	14.3
401(k) and profit sharing	—	—	—	9.7	—	—	—	9.7
ATM Program	0.1	—	—	141.8	—	—	—	141.9
Balance as of December 31, 2022	**$ 4.2**	**$ 1,546.5**	**$ (99.9)**	**$ 7,375.3**	**$ (1,213.6)**	**$ (37.1)**	**$ 326.4**	**$ 7,901.8**
Comprehensive Income:								
Net Income (Loss)	—	—	—	—	714.3	—	(39.9)	674.4
Other comprehensive income, net of tax	—	—	—	—	—	3.5	—	3.5
Dividends:								
Common stock ($ 1.00 per share)	—	—	—	—	(414.1)	—	—	(414.1)
Preferred stock (See Note 6)	—	—	—	—	(43.8)	—	—	(43.8)
Noncontrolling Interests:								
Issuance of noncontrolling interest [2]	—	—	—	809.6	—	—	1,361.1	2,170.7
Contributions from noncontrolling interest [3]	—	—	—	—	—	—	233.2	233.2
Distributions to noncontrolling interest	—	—	—	—	—	—	(14.1)	(14.1)
Stock issuances (redemptions):								
Equity Units	0.3	(666.5)	—	666.2	—	—	—	—
Series A Preferred stock redemption	—	(393.9)	—	—	—	—	—	(393.9)
Series A Preferred stock redemption premium	—	—	—	—	(9.8)	—	—	(9.8)
Employee stock purchase plan	—	—	—	5.9	—	—	—	5.9
Long-term incentive plan	—	—	—	12.6	—	—	—	12.6
401(k) and profit sharing	—	—	—	9.9	—	—	—	9.9
Balance as of December 31, 2023	**$ 4.5**	**$ 486.1**	**$ (99.9)**	**$ 8,879.5**	**$ (967.0)**	**$ (33.6)**	**$ 1,866.7**	**$ 10,136.3**

[1] Series A and Series C shares had an aggregate liquidation preference of $ 400 M and $ 863 M, respectively. Series B has an aggregate liquidation preference of $ 500 M See Note 6, "Equity," for additional information.
[2] Relates to the NIPSCO Minority Interest Transaction. See Note 4, "Noncontrolling Interest," for additional discussion.
[3] Contributions from noncontrolling interest is net of transaction costs.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.
STATEMENTS OF CONSOLIDATED STOCKHOLDERS' EQUITY (continued)

	Preferred	Common		
(in thousands)	**Shares**	**Shares**	**Treasury**	**Outstanding**
Balance as of January 1, 2021	**440**	**395,723**	**(3,963)**	**391,760**
Issued:				
Equity Units [1]	863	—	—	—
Employee stock purchase plan	—	209	—	209
Long-term incentive plan	—	418	—	418
401(k) and profit sharing plan	—	391	—	391
ATM Program	—	12,525	—	12,525
Balance as of December 31, 2021	**1,303**	**409,266**	**(3,963)**	**405,303**
Issued:				
Employee stock purchase plan	—	186	—	186
Long-term incentive plan	—	375	—	375
401(k) and profit sharing plan	—	337	—	337
ATM Program	—	5,942	—	5,942
Balance as of December 31, 2022	**1,303**	**416,106**	**(3,963)**	**412,143**
Issued/(Redeemed):				
Employee stock purchase plan	—	216	—	216
Long-term incentive plan	—	758	—	758
401(k) and profit sharing plan	—	366	—	366
Equity Units [1]	(863)	33,899	—	33,899
Series A Preferred Stock	(400)	—	—	—
Balance as of December 31, 2023	**40**	**451,345**	**(3,963)**	**447,382**

[1] See Note 6, "Equity," for additional information.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

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1. Nature of Operations and Summary of Significant Accounting Policies

A. Company Structure and Principles of Consolidation. We are an energy holding company incorporated in Delaware and headquartered in Merrillville, Indiana. Our subsidiaries are fully regulated natural gas and electric utility companies serving approximately 3.8 million customers in six states. We generate substantially all of our operating income through these rate-regulated businesses. The consolidated financial statements include the accounts of us, our majority-owned subsidiaries, and VIEs of which we are the primary beneficiary after the elimination of all intercompany accounts and transactions.

B. Use of Estimates. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

C. Cash, Cash Equivalents and Restricted Cash. We consider all highly liquid investments with original maturities of three months or less to be cash equivalents. We report amounts deposited in brokerage accounts for margin requirements as restricted cash. In addition, we have amounts deposited in trusts to satisfy requirements for the provision of various property, liability, workers compensation, and long-term disability insurance, and holdbacks related to certain joint venture development agreements which is classified as restricted cash on the Consolidated Balance Sheets and disclosed with cash and cash equivalents on the Statements of Consolidated Cash Flows.

D. Accounts Receivable and Unbilled Revenue. Accounts receivable on the Consolidated Balance Sheets includes both billed and unbilled amounts. Unbilled amounts of accounts receivable relate to a portion of a customer's consumption of gas or electricity from their last cycle billing date through the last day of the month (balance sheet date). Factors taken into consideration when estimating unbilled revenue include historical usage, customer rates, weather and reasonable and supportable forecasts. Accounts receivable fluctuates from year to year depending in large part on weather impacts and price volatility. Our accounts receivable on the Consolidated Balance Sheets include unbilled revenue, less reserves. The reserve for uncollectible receivables is our best estimate of the amount of probable credit losses in the existing accounts receivable. We determined the reserve based on historical collection experience, current market conditions and reasonable and supportable forecasts. Account balances are charged against the allowance when it is anticipated the receivable will not be recovered. Refer to Note 3, "Revenue Recognition," for additional information on customer-related accounts receivable, including amounts related to unbilled revenues.

E. Investments in Debt Securities. Our investments in debt securities are carried at fair value and are designated as available-for-sale. These investments are included within "Available-for-sale debt securities" on the Consolidated Balance Sheets. Unrealized gains and losses, net of deferred income taxes, are recorded to accumulated other comprehensive income or loss. At each reporting period these investments are qualitatively and quantitatively assessed to determine whether a decline in fair value below the amortized cost basis has resulted from a credit loss or other factors. Impairments related to credit loss are recorded through an allowance for credit losses. Impairments that are not related to credit losses are included in other comprehensive income and are reflected in the Statements of Consolidated Income. No material impairment charges were recorded for the years ended December 31, 2023, 2022 or 2021. Refer to Note 14, "Fair Value," for additional information.

F. Basis of Accounting for Rate-Regulated Subsidiaries. Rate-regulated subsidiaries account for and report assets and liabilities consistent with the economic effect of the way in which regulators establish rates, if the rates established are designed to recover the costs of providing the regulated service and it is probable that such rates can be billed and collected. Certain expenses and credits subject to utility regulation or rate determination normally reflected in income are deferred on the Consolidated Balance Sheets and are later recognized in income as the related amounts are included in customer rates and recovered from or refunded to customers.

We continually evaluate whether or not our operations are within the scope of ASC 980 and rate regulations. As part of that analysis, we evaluate probability of recovery for our regulatory assets. In management's opinion, our regulated subsidiaries will be subject to regulatory accounting for the foreseeable future. Refer to Note 12, "Regulatory Matters," for additional information.

G. Plant and Other Property and Related Depreciation and Maintenance. Property, plant and equipment (principally utility plant) is stated at cost. Our rate-regulated subsidiaries record depreciation using composite rates on a straight-line basis over the remaining service lives of the electric, gas and common properties, as approved by the appropriate regulators.

Non-utility property includes renewable generation assets owned by JVs of which we are the primary beneficiary and is generally depreciated over the life of the associated assets. Refer to Note 9, "Property, Plant and Equipment," for additional information related to depreciation expense.

For rate-regulated companies where provided for in rates, AFUDC is capitalized on all classes of property except organization costs, land, autos, office equipment, tools and other general property purchases. The allowance is applied to construction costs for that period of time between the date of the expenditure and the date on which such project is placed in service. Our consolidated pre-tax rate for AFUDC was 3.9 % in 2023, 3.4 % in 2022 and 3.3 % in 2021.

Generally, our subsidiaries follow the practice of charging maintenance and repairs, including the cost of removal of minor items of property, to expense as incurred. When our subsidiaries retire regulated property, plant and equipment, original cost plus the cost of retirement, less salvage value, is charged to accumulated depreciation. However, when it becomes probable a regulated asset will be retired substantially in advance of its original expected useful life or is abandoned, the cost of the asset and the corresponding accumulated depreciation is recognized as a separate asset. If the asset is still in operation, the gross amounts are classified as "Non-Utility and Other " as described in Note 9, "Property, Plant and Equipment." If the asset is no longer operating but still subject to recovery, the net amount is classified in "Regulatory assets" on the Consolidated Balance Sheets. If we are able to recover a full return of and on investment, the carrying value of the asset is based on historical cost. If we are not able to recover a full return on investment, a loss on impairment is recognized to the extent the net book value of the asset exceeds the present value of future revenues discounted at the incremental borrowing rate.

External and internal costs associated with on-premise computer software developed for internal use are capitalized. Capitalization of such costs commences upon the completion of the preliminary stage of each project. Once the installed software is ready for its intended use, such capitalized costs are amortized on a straight-line basis generally over a period of five years. External and internal up-front implementation costs associated with cloud computing arrangements that are service contracts are deferred on the Consolidated Balance Sheets. Once the installed software is ready for its intended use, such deferred costs are amortized on a straight-line basis to "Operation and maintenance," over the minimum term of the contract plus contractually-provided renewal periods that are reasonably expected to be exercised.

H. Goodwill and Other Intangible Assets. Substantially all of our goodwill relates to the excess of cost over the fair value of the net assets acquired in the Columbia acquisition on November 1, 2000. We test our goodwill for impairment annually as of May 1, or more frequently if events and circumstances indicate that goodwill might be impaired. Fair value of our reporting units is determined using a combination of income and market approaches. See Note 10, "Goodwill," for additional information.

I. Accounts Receivable Transfer Programs. Certain of our subsidiaries have agreements with third parties to transfer certain accounts receivable without recourse. These transfers of accounts receivable are accounted for as secured borrowings. The entire gross receivables balance remains on the December 31, 2023 and 2022 Consolidated Balance Sheets. When amounts are securitized, the short-term debt is recorded in the amount of proceeds received from the transferees involved in the transactions. Refer to Note 7, "Short-Term Borrowings," for further information.

J. Gas Cost and Fuel Adjustment Clause. Our regulated subsidiaries defer most differences between gas and fuel purchase costs and the recovery of such costs in revenues and adjust future billings for such deferrals on a basis consistent with applicable state-approved tariff provisions. These deferred balances are recorded as "Regulatory assets" or "Regulatory liabilities," as appropriate, on the Consolidated Balance Sheets. Refer to Note 12, "Regulatory Matters," for additional information.

K. Gas Storage and Other Inventories. Both the LIFO inventory methodology and the weighted average cost methodology are used to value natural gas in storage, as approved by regulators for all of our regulated subsidiaries. Inventory valued using LIFO was $ 43.9 million and $ 43.0 million at December 31, 2023 and 2022, respectively. Based on the average cost of gas using the LIFO method, the estimated replacement cost of gas in storage was less than the stated LIFO cost by $ 22.5 million at December 31, 2023 and was greater than the stated LIFO cost by $ 7.7 million at December 31, 2022. As all LIFO inventory costs are collected from customers through our rate-regulated subsidiaries, no inventory impairment has been recorded. Gas inventory valued using the weighted average cost methodology was $ 222.0 million at December 31, 2023 and $ 488.7 million at December 31, 2022.

Electric production fuel is valued using the weighted average cost inventory methodology, as approved by NIPSCO's regulator.

Materials and supplies are valued using the weighted average cost inventory methodology. Materials and supplies are charged to expense or capitalized to property, plant and equipment when issued.

L. Accounting for Exchange and Balancing Arrangements of Natural Gas. Our Gas Distribution Operations segment enters into balancing and exchange arrangements of natural gas as part of its operations and off-system sales programs. We record a receivable or payable for any of our respective cumulative gas imbalances, as well as for any gas inventory borrowed or lent under a Gas Distribution Operations exchange agreement. Exchange gas is valued based on individual regulatory jurisdiction requirements (for example, historical spot rate, spot at the beginning of the month). These receivables and payables are recorded as “Exchange gas receivable” or “Exchange gas payable” on our Consolidated Balance Sheets, as appropriate.

M. Accounting for Risk Management Activities. We account for our derivatives and hedging activities in accordance with ASC 815. We recognize all derivatives as either assets or liabilities on the Consolidated Balance Sheets at fair value, unless such contracts are exempted as a normal purchase normal sale under the provisions of the standard. The accounting for changes in the fair value of a derivative depends on the intended use of the derivative and resulting designation.

We do not offset the fair value amounts recognized for any of our derivative instruments against the fair value amounts recognized for the right to reclaim cash collateral or obligation to return cash collateral for derivative instruments executed with the same counterparty under a master netting arrangement. See Note 13, "Risk Management Activities," for additional information.

N. Income Taxes and Investment Tax Credits. We record income taxes to recognize full interperiod tax allocations. Under the asset and liability method, deferred income taxes are provided for the tax consequences of temporary differences by applying enacted statutory tax rates applicable to future years to differences between the financial statement carrying amount and the tax basis of existing assets and liabilities. Investment tax credits associated with regulated operations are deferred and amortized as a reduction to income tax expense over the estimated useful lives of the related properties.

To the extent certain deferred income taxes of the regulated companies are recoverable or payable through future rates, regulatory assets and liabilities have been established. Regulatory assets for income taxes are primarily attributable to property-related tax timing differences for which deferred taxes had not been provided in the past when regulators did not recognize such taxes as costs in the rate-making process. Regulatory liabilities for income taxes are primarily attributable to the regulated companies’ obligation to refund to ratepayers deferred income taxes provided at rates higher than the current Federal income tax rate. Such property-related amounts are credited to ratepayers using either the average rate assumption method or the reverse South Georgia method. Non property-related amounts are credited to ratepayers consistent with state utility commission direction.

Pursuant to the Internal Revenue Code and relevant state taxing authorities, we and our subsidiaries file consolidated income tax returns for federal and certain state jurisdictions. We and our subsidiaries are parties to a tax sharing agreement. Income taxes recorded by each party represent amounts that would be owed had the party been separately subject to tax.

O. Pension Remeasurement. We utilize a third-party actuary for the purpose of performing actuarial valuations of our defined benefit plans. Annually, as of December 31, we perform a remeasurement for our defined benefit plans. Quarterly, we monitor for significant events, and if a significant event is identified, we perform a qualitative and quantitative assessment to determine if the resulting remeasurement would materially impact the NiSource financial statements. If material, an interim remeasurement is performed. See Note 16, "Pension and Other Postemployment Benefits," for additional information.

P. Environmental Expenditures. We accrue for costs associated with environmental remediation obligations, including expenditures related to asset retirement obligations and cost of removal, when the incurrence of such costs is probable and the amounts can be reasonably estimated, regardless of when the expenditures are actually made. The undiscounted estimated future expenditures are based on currently enacted laws and regulations, existing technology and estimated site-specific costs where assumptions may be made about the nature and extent of site contamination, the extent of cleanup efforts, costs of alternative cleanup methods and other variables. The liability is adjusted as further information is discovered or circumstances change. The accruals for estimated environmental expenditures are recorded on the Consolidated Balance Sheets in “Other accruals” for short-term portions of these liabilities and “Other noncurrent liabilities” for the respective long-term

portions of these liabilities. Rate-regulated subsidiaries applying regulatory accounting establish regulatory assets on the Consolidated Balance Sheets to the extent that future recovery of environmental remediation costs is probable through the regulatory process. Refer to Note 11, "Asset Retirement Obligations," and Note 19, "Other Commitments and Contingencies," for further information.

Q. Excise Taxes. As an agent for some state and local governments, we invoice and collect certain excise taxes levied by state and local governments on customers and record these amounts as liabilities payable to the applicable taxing jurisdiction. Such balances are presented within "Other accruals" on the Consolidated Balance Sheets. These types of taxes collected from customers, comprised largely of sales taxes, are presented on a net basis affecting neither revenues nor cost of sales. We account for excise taxes for which we are liable by recording a liability for the expected tax with a corresponding charge to “Other taxes” expense on the Statements of Consolidated Income.

R. Accrued Insurance Liabilities. We accrue for insurance costs related to workers compensation, automobile, property, general and employment practices liabilities based on the most probable value of each claim. In general, claim values are determined by professional, licensed loss adjusters who consider the facts of the claim, anticipated indemnification and legal expenses, and respective state rules. Claims are reviewed by us at least quarterly and an adjustment is made to the accrual based on the most current information.

S. Noncontrolling Interest . We maintain a controlling financial interest in certain of our less than wholly owned subsidiaries. We consolidate these subsidiaries as either voting interest entities or VIEs and present the third-party investors' portion of our net income (loss), net assets and comprehensive income (loss) as noncontrolling interest. Noncontrolling interest is included as a component of equity on the Consolidated Balance Sheet.

On December 31, 2023, the NIPSCO Minority Interest Transaction closed and a 19.9 % equity interest in NIPSCO Holdings II, the sole owner of NIPSCO, was issued to an affiliate of Blackstone. NIPSCO Holdings II does not meet the criteria of a VIE and instead is consolidated under the voting interest model in accordance with ASC 810 as we maintain control through a majority interest in NIPSCO Holdings II. Refer to Note 4, "Noncontrolling Interest," for further discussion on the NIPSCO Minority Interest Transaction.

We fund a significant portion of our renewable generation assets through JVs with tax equity partners. We consolidate these JVs in accordance with ASC 810 as they are VIEs in which we hold a variable interest, and we control decisions that are significant to the JVs' ongoing operations and economic results (i.e., we are the primary beneficiary).

These JVs are subject to profit sharing arrangements in which the allocation of the JVs' cash distributions and tax benefits to members is based on factors other than members' relative ownership percentages. As such, we utilize the HLBV method to allocate proceeds to each partner at the balance sheet date based on the liquidation provisions of the related JV's operating agreement and adjusts the amount of the VIE's net income attributable to us and the noncontrolling tax equity member during the period.

In each reporting period, the application of HLBV to our consolidated VIEs results in a difference between the amount of profit from the consolidated JVs and the amount included in regulated rates. As discussed above in "F. Basis of Accounting for Rate-Regulated Subsidiaries," we are subject to the accounting and reporting requirements of ASC 980. In accordance with these principles, we recognize a regulatory liability or asset for amounts representing the timing difference between the profit earned from the JVs and the amount included in regulated rates to recover our approved investments in consolidated JVs. The amounts recorded in income will ultimately reflect the amount allowed in regulated rates to recover our investments over the useful life of the projects. The offset to the regulatory liability or asset associated with our renewable investments included in regulated rates is recorded in "Depreciation expense" on the Statements of Consolidated Income.

2. Recent Accounting Pronouncements

Recently Issued Accounting Pronouncements

In August 2023, the Financial Accounting Standards Board ("FASB") issued ASU 2023-05 , *Business Combinations- Joint Venture Formations.* This pronouncement codifies ASU 805-60 to provide guidance for the recognition and initial measurement of joint venture formations. This guidance requires that the initial assets contributed and liabilities assumed be recognized and measured at fair value, with additional disclosure requirements during the period a joint venture is formed. The pronouncement is effective for joint ventures formed on or after January 1, 2025. We are currently evaluating the impact of this pronouncement on the formation of future joint ventures.

In November 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment*

Disclosures . This pronouncement enhances annual and interim disclosure requirements over reportable segments, primarily through enhanced disclosures about significant segment expenses. Specifically, the pronouncement requires disclosure of significant segment expenses that are regularly provided to the Chief Operating Decision Maker ("CODM") and included within each reported measure of segment profit or loss, disclosure of an amount for other segment items representing the

difference between segment revenue and segment expenses already disclosed, disclosure of all required annual disclosures for interim periods and disclosure of title and position of the CODM and how the CODM uses reported measures. The pronouncement also allows for more than one measure of segment profit if the CODM uses more than one measure in assessing segment performance. The pronouncement is effective for annual periods beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. We are currently evaluating the impacts this ASU will have on our disclosures.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* . This pronouncement enhances required income tax disclosures. The pronouncement will require disclosure of specific categories and reconciling items included in the rate reconciliation, disaggregation between federal, state and local income taxes paid, and disclosure of income taxes paid by jurisdictions over a certain threshold. Additionally, the pronouncement eliminates certain required disclosures related to unrecognized tax benefits. This ASU is effective for annual periods beginning after December 15, 2024, with early adoption permitted, and is to be applied on a prospective basis with retrospective application permitted. We are currently evaluating the impacts this amendment will have on our income tax disclosures.

Recently Adopted Accounting Pronouncements

In September 2022, the FASB issued ASU 2022-04 , *Liabilities-Supplier Finance Programs (Topic 405-50) - Disclosure of Supplier Finance Program Obligations* . This pronouncement requires that a buyer in a supplier finance program disclose sufficient information to allow a user of financial statements to understand the program's nature, activity during the period, changes from period to period, and potential magnitude. This pronouncement is expected to improve financial reporting by requiring new disclosures about supplier finance programs, thereby allowing financial statement users to better consider the effect of such programs on an entity's working capital, liquidity, and cash flows. This pronouncement is effective for fiscal years beginning after December 15, 2022. The company adopted this pronouncement as of January 1, 2023. We had no active supplier finance programs as of December 31, 2023.

3. Revenue Recognition

Customer Revenues. Substantially all of our revenues are tariff-based. Under ASC 606, the recipients of our utility service meet the definition of a customer, while the operating company tariffs represent an agreement that meets the definition of a contract, which creates enforceable rights and obligations. Customers in certain of our jurisdictions participate in programs that allow for a fixed payment each month regardless of usage. Payments received that exceed the value of gas or electricity actually delivered are recorded as a liability and presented in "Customer Deposits and Credits" on the Consolidated Balance Sheets. Amounts in this account are reduced and revenue is recorded when customer usage exceeds payments received.

We have identified our performance obligations created under tariff-based sales as 1) the commodity (natural gas or electricity, which includes generation and capacity) and 2) delivery. These commodities are sold and / or delivered to and generally consumed by customers simultaneously, leading to satisfaction of our performance obligations over time as gas or electricity is delivered to customers. Due to the at-will nature of utility customers, performance obligations are limited to the services requested and received to date. Once complete, we generally maintain no additional performance obligations.

Transaction prices for each performance obligation are generally prescribed by each operating company's respective tariff. Rates include provisions to adjust billings for fluctuations in fuel and purchased power costs and cost of natural gas. Revenues are adjusted for differences between actual costs, subject to reconciliation, and the amounts billed in current rates. Under or over recovered revenues related to these cost recovery mechanisms are included in "Regulatory Assets" or "Regulatory Liabilities" on the Consolidated Balance Sheets and are recovered from or returned to customers through adjustments to tariff rates. As we provide and deliver service to customers, revenue is recognized based on the transaction price allocated to each performance obligation. Distribution revenues are generally considered daily or "at-will" contracts as customers may cancel their service at any time (subject to notification requirements), and revenue generally represents the amount we are entitled to bill customers.

In addition to tariff-based sales, our Gas Distribution Operations segment enters into balancing and exchange arrangements of natural gas as part of our operations and off-system sales programs. Performance obligations for these types of sales include transportation and storage of natural gas and can be satisfied at a point in time or over a period of time, depending on the specific transaction. For those transactions that span a period of time, we record a receivable or payable for any cumulative gas imbalances, as well as for any gas inventory borrowed or lent under a Gas Distributions Operations exchange agreement.

Revenue Disaggregation and Reconciliation. We disaggregate revenue from contracts with customers based upon reportable

segment, as well as by customer class. The Gas Distribution Operations segment provides natural gas service and transportation

for residential, commercial and industrial customers in Ohio, Pennsylvania, Virginia, Kentucky, Maryland, and Indiana. The Electric Operations segment provides electric service in 20 counties in the northern part of Indiana.

Other Revenues. As permitted by accounting principles generally accepted in the United States, regulated utilities have the ability to earn certain types of revenue that are outside the scope of ASC 606. These revenues primarily represent revenue earned under alternative revenue programs. Alternative revenue programs represent regulator-approved mechanisms that allow for the adjustment of billings and revenue for certain approved programs. We maintain a variety of these programs, including demand side management initiatives that recover costs associated with the implementation of energy efficiency programs, as well as normalization programs that adjust revenues for the effects of weather or other external factors. Additionally, we maintain certain programs with future test periods that operate similarly to FERC formula rate programs and allow for recovery of costs incurred to replace aging infrastructure. When the criteria to recognize alternative revenue have been met, we establish a regulatory asset and present revenue from alternative revenue programs on the Statements of Consolidated Income as "Other revenues". When amounts previously recognized under alternative revenue accounting guidance are billed, we reduce the regulatory asset and record a customer account receivable.

The tables below reconcile revenue disaggregation by customer class to segment revenue, as well as to revenues reflected on the Statements of Consolidated Income:

Year Ended December 31, 2023 (in millions)	Gas Distribution Operations [2]	Electric Operations [3]	Corporate and Other	Total
Customer Revenues [1]				
Residential	$ 2,462.5	$ 583.9	$ —	$ 3,046.4
Commercial	847.9	578.1	—	1,426.0
Industrial	226.0	474.1	—	700.1
Off-system	60.6	—	—	60.6
Wholesale	1.6	32.0	—	33.6
Public Authority	—	11.5	—	11.5
Miscellaneous [4]	48.2	21.4	—	69.6
Total Customer Revenues	$ 3,646.8	$ 1,701.0	$ —	$ 5,347.8
Other Revenues	73.6	83.2	0.8	157.6
Total Operating Revenues	$ 3,720.4	$ 1,784.2	$ 0.8	$ 5,505.4

[1] Customer revenue amounts exclude intersegment revenues. See Note 21, "Business Segment Information," for discussion of intersegment revenues.
[2] Amounts included in Gas Distributions Operations Other revenues primarily related to weather normalization adjustment mechanisms.
[3] Amounts included in Electric Operations Other revenues primarily relate to MISO multi-value projects and revenue from non-jurisdictional transmission assets.
[4] Amounts included in Gas Distributions are primarily related to earnings share mechanisms and late fees. Amounts included in Electric Operations are primarily related to late fees, property rentals, revenue refunds and adjustments.

Year Ended December 31, 2022 *(in millions)*	Gas Distribution Operations [2]	Electric Operations [3]	Corporate and Other [4]	Total
Customer Revenues [1]				
Residential	$ 2,609.7	$ 592.4	$ —	$ 3,202.1
Commercial	939.6	571.0	—	1,510.6
Industrial	220.6	560.6	—	781.2
Off-system	192.9	—	—	192.9
Wholesale	2.1	13.5	—	15.6
Public Authority	—	12.1	—	12.1
Miscellaneous [5]	38.2	(14.1)	—	24.1
Total Customer Revenues	$ 4,003.1	$ 1,735.5	$ —	$ 5,738.6
Other Revenues	4.1	95.4	12.5	112.0
Total Operating Revenues	$ 4,007.2	$ 1,830.9	$ 12.5	$ 5,850.6

(1) Customer revenue amounts exclude intersegment revenues. See Note 21, "Business Segment Information," for discussion of intersegment revenues.
(2) Amounts included in Gas Distributions Operations Other revenues primarily related to weather normalization adjustment mechanisms.
(3) Amounts included in Electric Operations Other revenues primarily relate to MISO multi-value projects and revenue from non-jurisdictional transmission assets.
(4) Other revenues related to the Transition Services Agreement entered into in connection with the sale of the Massachusetts Business, which was substantially completed as of June 30, 2022.
(5) Amounts included in Gas distributions are primarily related to earnings share mechanisms and late fees. Amounts included in Electric Operations are primarily related to revenue trackers, late fees, and property rentals.

Year Ended December 31, 2021 *(in millions)*	Gas Distribution Operations (2)	Electric Operations (3)	Corporate and Other (4)	Total
Customer Revenues (1)				
Residential	$ 2,109.4	$ 567.9	$ —	$ 2,677.3
Commercial	722.4	534.9	—	1,257.3
Industrial	195.7	493.4	—	689.1
Off-system	71.3	—	—	71.3
Wholesale	1.4	15.7	—	17.1
Public Authority	—	12.5	—	12.5
Miscellaneous (5)	25.9	(20.0)	0.8	6.7
Total Customer Revenues	$ 3,126.1	$ 1,604.4	$ 0.8	$ 4,731.3
Other Revenues	45.1	91.9	31.3	168.3
Total Operating Revenues	$ 3,171.2	$ 1,696.3	$ 32.1	$ 4,899.6

(1) Customer revenue amounts exclude intersegment revenues. See Note 21, "Business Segment Information," for discussion of intersegment revenues.
(2) Amounts included in Gas Distributions Operations Other revenues primarily related to weather normalization adjustment mechanisms.
(3) Amounts included in Electric Operations Other revenues primarily relate to MISO multi-value projects and revenue from non-jurisdictional transmission assets.
(4) Other revenues related to the Transition Services Agreement entered into in connection with the sale of the Massachusetts Business.
(5) Amounts included in Gas distributions are primarily related to earnings share mechanisms and late fees. Amounts included in Electric Operations are primarily related to revenue trackers, late fees and property rentals.

Customer Accounts Receivable. Accounts receivable on our Consolidated Balance Sheets includes both billed and unbilled amounts, as well as certain amounts that are not related to customer revenues. Unbilled amounts of accounts receivable relate to a portion of a customer's consumption of gas or electricity from the date of their last cycle billing through the last day of the month (balance sheet date). Factors taken into consideration when estimating unbilled revenue include historical usage, customer rates, and weather. A significant portion of our operations are subject to seasonal fluctuations in sales. During the heating season, primarily from November through March, revenues and receivables from gas sales are more significant than in other months. The opening and closing balances of customer receivables for the year ended December 31, 2023, are presented in the table below. We had no significant contract assets or liabilities during the period. Additionally, we have not incurred any significant costs to obtain or fulfill contracts.

(in millions)	Customer Accounts Receivable, Billed (less reserve)	Customer Accounts Receivable, Unbilled (less reserve)
Balance as of December 31, 2022	$ 560.5	$ 453.0
Balance as of December 31, 2023	479.4	337.6

Utility revenues are billed to customers monthly on a cycle basis. We expect that substantially all customer accounts receivable will be collected following customer billing, as this revenue consists primarily of periodic, tariff-based billings for service and usage. We maintain common utility credit risk mitigation practices, including requiring deposits and actively pursuing collection of past due amounts. Our regulated operations also utilize certain regulatory mechanisms that facilitate recovery of bad debt costs within tariff-based rates, which provides further evidence of collectibility. It is probable that substantially all of the consideration to which we are entitled from customers will be collected upon satisfaction of performance obligations.

Allowance for Credit Losses. To evaluate for expected credit losses, customer account receivables are pooled based on similar risk characteristics, such as customer type, geography, payment terms, and related macro-economic risks. Expected credit losses are established using a model that considers historical collections experience, current information, and reasonable and

supportable forecasts. Internal and external inputs are used in our credit model including, but not limited to, energy consumption trends, revenue projections, actual charge-offs data, recoveries data, shut-offs, customer delinquencies, final bill data, and inflation. We continuously evaluate available information relevant to assessing collectability of current and future receivables. We evaluate creditworthiness of specific customers periodically or following changes in facts and circumstances. When we become aware of a specific commercial or industrial customer's inability to pay, an allowance for expected credit losses is recorded for the relevant amount. We also monitor other circumstances that could affect our overall expected credit losses including, but not limited to, creditworthiness of overall population in service territories, adverse conditions impacting an industry sector, and current economic conditions.

At each reporting period, we record expected credit losses to an allowance for credit losses account. When deemed to be uncollectible, customer accounts are written-off. A rollforward of our allowance for credit losses as of December 31, 2023 and December 31, 2022, are presented in the tables below:

(in millions)	Gas Distribution Operations	Electric Operations	Corporate and Other	Total
Balance as of January 1, 2023	$ 17.2	$ 5.9	$ 0.8	$ 23.9
Current period provisions	33.8	6.0	—	39.8
Write-offs charged against allowance	(55.4)	(6.2)	—	(61.6)
Recoveries of amounts previously written off	20.4	0.4	—	20.8
Balance as of December 31, 2023	$ 16.0	$ 6.1	$ 0.8	$ 22.9

(in millions)	Gas Distribution Operations	Electric Operations	Corporate and Other	Total
Balance as of January 1, 2022	$ 18.9	$ 3.8	$ 0.8	$ 23.5
Current period provisions	29.1	6.9	—	36.0
Write-offs charged against allowance	(52.1)	(5.3)	—	(57.4)
Recoveries of amounts previously written off	21.3	0.5	—	21.8
Balance as of December 31, 2022	$ 17.2	$ 5.9	$ 0.8	$ 23.9

4. Noncontrolling Interest

Variable Interest Entities. A VIE is an entity in which the controlling interest is determined through means other than a majority voting interest. Refer to Note 1, "Nature of Operations and Summary of Significant Accounting Policies - S. Noncontrolling Interest," for information on our accounting policy for the VIEs.

NIPSCO owns and operates two wind facilities, Rosewater and Indiana Crossroads Wind, which have 102 MW and 302 MW of nameplate capacity, respectively. NIPSCO also owns two solar facilities, Indiana Crossroads Solar and Dunns Bridge I, which went into service in June 2023, with a combined 465 MW of nameplate capacity. During August 2023, NIPSCO and the tax equity partners made final cash contributions in accordance with the equity capital contribution agreement. In August 2023, Indiana Crossroads Solar and Dunns Bridge I reached substantial completion, resulting in NIPSCO making a combined $ 307.2 million in developer payments. We control decisions that are significant to these entities' ongoing operations and economic results. Therefore, we have concluded that NIPSCO is the primary beneficiary and have consolidated all four entities.

Members of each respective JV include NIPSCO (who is the managing member) and a tax equity partner. Earnings, tax attributes and cash flows are allocated to both NIPSCO and the tax equity partner in varying percentages by category and over the life of the partnership. Since 2021, NIPSCO and the tax equity partner have contributed $ 401.5 million and $ 507.2 million, respectively. For the two wind facilities, NIPSCO assumed an obligation to the developers of each facility, representing the remaining economic interest. NIPSCO resolved this obligation by acquiring the developers' economic interests in June 2023 for $ 389.2 million which includes the December 31, 2022 obligation of $ 347.2 million and interest of $ 42.0 million. Once the tax equity partner has earned their negotiated rate of return and have reached a stated contractual date, NIPSCO has the

option to purchase the remaining interest in the respective JV, at fair market value from the tax equity partner. NIPSCO has an obligation to purchase 100 % of the electricity generated by our in service JVs.

We did not provide any financial or other support during the year that was not previously contractually required, nor do we expect to provide such support in the future.

Our Consolidated Balance Sheets included the following assets and liabilities associated with VIEs.

(in millions)	**December 31, 2023**	December 31, 2022
Net Property, Plant and Equipment	**$ 1,369.8**	$ 978.5
Current assets	**63.6**	25.7
Total assets [1]	**1,433.4**	1,004.2
Current liabilities	**68.3**	128.2
Asset retirement obligations	**55.7**	30.6
Total liabilities	**$ 124.0**	$ 158.8

[1] The assets of each VIE represent assets of a consolidated VIE that can be used only to settle obligations of the respective consolidated VIE. The creditors of the liabilities of the VIEs do not have recourse to the general credit of the primary beneficiary.

Voting Interest Entities. On June 17, 2023, NiSource and its wholly-owned subsidiary, NIPSCO Holdings II, entered into the BIP Purchase Agreement. NIPSCO Holdings II is the 100 % owner of all issued and outstanding membership interests of NIPSCO. Under the terms of the BIP Purchase Agreement, we agreed to issue a 19.9 % equity interest in NIPSCO Holdings II to BIP, an affiliate of Blackstone, in exchange for a cash contribution of $ 2.15 billion at closing, subject to adjustment based on the timing of closing and the amount of NiSource capital contributions made prior to closing.

The closing of the NIPSCO Minority Equity Interest Transaction was subject to the satisfaction of certain customary closing conditions described in the Blackstone Purchase Agreement, including receipt of authorization by FERC. FERC approval was received on October 19, 2023.
On December 31, 2023, we consummated the issuance of a 19.9 % indirect equity interest in NIPSCO to BIP in exchange for a capital contribution of $ 2.16 billion in cash. The difference between the $ 2.16 billion consideration received and the $ 1.36 billion carrying value of the noncontrolling interest claim on net assets was recorded to additional paid-in capital, net of $ 54.7 million in transaction costs and a $ 63.5 million income tax benefit. Approximately $ 47.6 million of the transaction costs remain unpaid at December 31, 2023. No gain or loss was recognized by the parties in connection with the contributions of property in exchange for membership interests in NIPSCO Holdings II. Upon consummation of the minority interest transaction, NiSource owns an 80.1 % controlling indirect equity interest in NIPSCO while BIP, owns the remaining 19.9 % indirect equity interest. See Note 19, "Other Commitments and Contingencies - E. Other Matters," for a detailed discussion of the NIPSCO Holdings II LLC Agreement and governance structure.

5. Earnings Per Share

The calculations of basic and diluted EPS are based on the weighted average number of shares of common stock and potential common stock outstanding during the period. For the purposes of determining diluted EPS, the shares underlying the purchase contracts included within the Equity Units were included in the calculation of potential common stock outstanding for the years ended December 31, 2023, 2022 and 2021 using the if-converted method under US GAAP. This method assumes conversion at the beginning of the reporting period, or at time of issuance, if later. The purchase contracts were settled on December 1, 2023. For the purchase contracts, the number of shares of our common stock that would have been issuable at the end of each reporting period prior to the settlement date were reflected in the denominator of our diluted EPS calculation. A numerator adjustment was reflected in the calculation of diluted EPS for interest expense incurred in 2023, 2022 and 2021, net of tax, related to the purchase contracts.

We adopted ASU 2020-06 on January 1, 2022, which required us to assume share settlement of the remaining purchase contract payment balance from our Equity Units based on the average share price during the period.

The shares underlying the Series C Mandatory Convertible Preferred Stock included within the Equity Units were contingently convertible as the conversion was contingent on a successful remarketing as described in Note 6, "Equity." Contingently convertible shares where conversion was not tied to a market price trigger were excluded from the calculation of diluted EPS until such time as the contingency had been resolved under the if-converted method. As described in Note 6, "Equity.", the unsuccessful remarketing resolved the contingency and no shares were reflected in the denominator for the years ended December 31, 2023, 2022 and 2021, for the calculation of diluted EPS.

Diluted EPS also includes the incremental effects of our various long-term incentive compensation plans and open ATM forward agreements during the period under the treasury stock method when the impact would be dilutive.

We began using the two-class method of computing earnings per share in 2023 because we have participating securities in the form of non-vested restricted stock units with a non-forfeitable right to dividend equivalents, for which vesting is predicated solely on the passage of time. The calculation of earnings per share using the two-class method excludes income attributable to these participating securities from the numerator and excludes the dilutive impact of those shares from the denominator.

During 2022, we had no outstanding securities other than common and preferred stock, which required holders' participation in dividends and earnings; therefore, we were not required to calculate EPS under the two-class method. Basic net income per share is computed by dividing net income available to common shareholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net income per share is computed by giving effect to all potential shares of common stock, to the extent they are dilutive.

The following table presents the calculation of our basic and diluted EPS:

Year Ended December 31, *(in millions, except per share amounts)*	**2023**	2022	2021
Numerator:			
Net Income Available to Common Shareholders	**$ 661.7**	$ 749.0	$ 529.8
Less: Income allocated to participating securities	**0.6**	—	—
Net Income Available to Common Shareholders - Basic	**$ 661.1**	$ 749.0	$ 529.8
Add: Dilutive effect of Equity Units	**1.4**	2.0	1.6
Net Income Available to Common Shareholders - Diluted	**$ 662.5**	**$ 751.0**	**$ 531.4**
Denominator:			
Average common shares outstanding - Basic	**416.1**	407.1	393.6
Dilutive potential common shares:			
Equity Units purchase contracts	**29.8**	30.2	22.0
Equity Units purchase contract payment balance	**0.9**	3.2	—
Shares contingently issuable under employee stock plans	**0.7**	0.9	0.8
Shares restricted under employee stock plans	**0.4**	0.5	0.3
ATM Forward agreements	**—**	0.8	0.6
Average Common Shares - Diluted	**447.9**	442.7	417.3
Earnings per common share:			
Basic	**$ 1.59**	$ 1.84	$ 1.35
Diluted	**$ 1.48**	$ 1.70	$ 1.27

6. Equity

Holders of shares of our common stock are entitled to receive dividends when, as, and if declared by the Board out of funds legally available. The policy of the Board has been to declare cash dividends on a quarterly basis payable on or about the 20th day of February, May, August and November. We have certain debt covenants that could potentially limit the amount of dividends we could pay in order to maintain compliance with these covenants. Refer to Note 8, "Long-Term Debt," for more information. As of December 31, 2023, these covenants did not restrict the amount of dividends that were available to be paid.

Dividends paid to preferred shareholders vary based on the series of preferred stock owned. Holders of our shares of common stock are subject to the prior dividend rights of holders of our preferred stock or the depositary shares representing such preferred stock outstanding, and if full dividends have not been declared and paid on all outstanding shares of preferred stock in any dividend period, no dividend may be declared or paid or set aside for payment on our common stock.

Common and preferred stock activity for 2023, 2022 and 2021 is described further below.

ATM Program. On February 22, 2021, we entered into six separate equity distribution agreements pursuant to which we were able to sell up to an aggregate of $ 750.0 million of our common stock. On December 31, 2023 the ATM program and the associated equity distribution agreements expired.

The following table summarizes our activity under the ATM program.

Year Ending December 31,	**2023**	2022
Number of shares issued	**—**	5,941,598
Average price per share	**$ —**	$ 25.25
Proceeds, net of fees (*in millions)*	**$ —**	$ 141.9

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Preferred Stock. The following table summarizes preferred stock by outstanding series of shares:

			Year ended December 31,			December 31,	December 31,
			2023	2022	2021	2023	2022
(in millions except shares and per share amounts)	Liquidation Preference Per Share	Shares	Dividends Declared Per Share [2]			Outstanding	
5.650% Series A	$ 1,000.00	—	$ 28.25	$ 56.50	$ 56.50	$ —	$ 393.9
6.500% Series B	25,000.00	20,000	1,625.00	1,625.00	1,625.00	486.1	486.1
Series C [1]	$ 1,000.00	—	—	—	—	$ —	$ 666.5

[1] The Series C Mandatory Convertible Preferred Stock did not bear any dividends. We recorded the initial present value of the purchase contract payments as a liability with a corresponding reduction to preferred stock.
[2] Dividends declared per share for the twelve months ended December 31, 2023 reflects the dividend declared on the Series A Preferred Stock on March 14, 2023. The dividend was paid on June 15, 2023.

Series A Preferred Stock. On June 11, 2018, we completed the sale of 400,000 shares of 5.650 % Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock (the "Series A Preferred Stock") at a price of $ 1,000 per share. The transaction resulted in $ 400.0 million of gross proceeds or $ 393.9 million of net proceeds, after deducting commissions and sale expenses. Dividends on the Series A Preferred Stock accrued and were cumulative from the date the shares of Series A Preferred Stock were originally issued to, but not including, June 15, 2023 at a rate of 5.650 % per annum of the $ 1,000 liquidation preference per share. As of December 31, 2022, Series A Preferred Stock had $ 1.0 million of cumulative preferred dividends in arrears, or $ 2.51 per share.

On June 15, 2023, we redeemed all 400,000 outstanding shares of Series A Preferred Stock for a redemption price of $ 1,000 per share or $ 400.0 million in total. Following the redemption, dividends ceased to accrue on such shares of Series A Preferred Stock, and the shares of Series A Preferred Stock are no longer deemed outstanding and all rights of the holders of the shares of Series A Preferred Stock were terminated. In conjunction with the redemption, we recorded a 9.8 million preferred stock redemption premium, calculated as the difference between the carrying value on the redemption date of the Series A Preferred Stock and the total amount of consideration paid to redeem, which was recorded as a reduction to retained earnings during 2023. The preferred stock redemption premium included the recognition of an excise tax liability under the IRA of $ 3.6 million. This liability is net of the fair value of common shares issued during 2023.

In June 2023, we filed a certificate of elimination to our Amended and Restated Certificate of Incorporation with the Secretary of State of Delaware to eliminate from the Amended and Restated Certificate of Incorporation all matters set forth in the Certificate of Designations with respect to the Series A Preferred Stock. As a result, the 400,000 shares that were previously designated as Series A Preferred Stock were returned to the status of authorized but unissued shares of preferred stock, par value $ 0.01 per share, without designation as to series. The certificate of elimination does not change the total number of authorized shares of capital stock of NiSource or the total number of authorized shares of preferred stock.

Series B Preferred Stock. On December 5, 2018, we completed the sale of 20,000,000 depositary shares with an aggregate liquidation preference of $ 500,000,000 under the Company’s registration statement on Form S-3. Each depositary share represents 1/1,000th ownership interest in a share of our 6.500 % Series B Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, liquidation preference $ 25,000 per share (equivalent to $ 25 per depositary share) (the “Series B Preferred Stock"). The transaction resulted in $ 500.0 million of gross proceeds or $ 486.1 million of net proceeds, after deducting commissions and sale expenses.

Dividends on the Series B Preferred Stock accrue and are cumulative from the date the shares of Series B Preferred Stock were originally issued to, but not including, March 15, 2024 at a rate of 6.500 % per annum of the $ 25,000 liquidation preference per share. On and after March 15, 2024, dividends on the Series B Preferred Stock will accumulate for each five year period at a percentage of the $ 25,000 liquidation preference equal to the five-year U.S. Treasury Rate plus (i) in respect of each five year period commencing on or after March 15, 2024 but before March 15, 2044, a spread of 3.632 % (the “Initial Margin”), and (ii) in respect of each five year period commencing on or after March 15, 2044, the Initial Margin plus 1.000 %. The Series B Preferred Stock may be redeemed by us at our option on March 15, 2024, or on each date falling on the fifth anniversary thereafter, or in connection with a ratings event (as defined in the Certificate of Designation of the Series B Preferred Stock).

As of December 31, 2023 and 2022, Series B Preferred Stock had $ 1.4 million of cumulative preferred dividends in arrears, or $ 72.23 per share.

In addition, 20,000 shares of Series B–1 Preferred Stock, par value $ 0.01 per share, were outstanding as of December 31, 2023. Holders of Series B–1 Preferred Stock are not entitled to receive dividend payments and have no conversion rights. The Series B–1 Preferred Stock is paired with the Series B Preferred Stock and may not be transferred, redeemed or repurchased except in connection with the simultaneous transfer, redemption or repurchase of the underlying Series B Preferred Stock.

Holders of Series B Preferred Stock generally have no voting rights, except for limited voting rights with respect to (i) potential amendments to our certificate of incorporation that would have a material adverse effect on the existing preferences, rights, powers or duties of the Series B Preferred Stock, (ii) the creation or issuance of any security ranking on a parity with the Series B Preferred Stock if the cumulative dividends payable on then outstanding Series B Preferred Stock are in arrears, or (iii) the creation or issuance of any security ranking senior to the Series B Preferred Stock. In addition, if and whenever dividends on any shares of Series B Preferred Stock shall not have been declared and paid for at least six dividend periods, whether or not consecutive, the number of directors then constituting our Board of Directors shall automatically be increased by two until all accumulated and unpaid dividends on the Series B Preferred Stock shall have been paid in full, and the holders of Series B-1 Preferred Stock, voting as a class together with the holders of any outstanding securities ranking on a parity with the Series B-1 Preferred Stock and having like voting rights that are exercisable at the time and entitled to vote thereon, shall be entitled to elect the two additional directors. The Series B Preferred Stock does not have a stated maturity and is not subject to mandatory redemption or any sinking fund. The Series B Preferred Stock will remain outstanding indefinitely unless repurchased or redeemed by us. Any such redemption would be effected only out of funds legally available for such purposes and will be subject to compliance with the provisions of our outstanding indebtedness.

On February 9, 2024, we announced that we will redeem all outstanding shares of our Series B Preferred Stock and Series B-1 Preferred Stock and the corresponding depositary shares representing interests in the outstanding shares of the Series B Preferred and Series B-1 Preferred Stock on March 15, 2024 for a redemption price of $ 25.00 per depositary share. On and after the redemption date, dividends on the redeemed Series B Preferred Stock and the corresponding depositary shares will cease to accumulate.

Equity Units. On April 19, 2021, we completed the sale of 8.625 million Equity Units, initially consisting of Corporate Units, each with a stated amount of $ 100 . The offering generated net proceeds of $ 835.5 million, after underwriting and issuance expenses. Each Corporate Unit consisted of a forward contract to purchase shares of our common stock in the future and a 1/10th, or 10 %, undivided beneficial ownership interest in one share of Series C Mandatory Convertible Preferred Stock, par value $ 0.01 per share, with a liquidation preference of $ 1,000 per share. The Series C Mandatory Convertible Preferred Stock was pledged upon issuance as collateral to secure the purchase of common stock under the related purchase contracts. The Series C Mandatory Convertible Preferred Stock did not bear any dividends and the liquidation preference did not accrete.

Selected information about the Equity Units is presented below:

(in millions except contract rate)	Issuance Date	Units Issued	Total Net Proceeds [1]	Purchase Contract Annual Rate	Purchase Contract Liability
Equity Units	April 19, 2021	8.625	$ 835.5	7.75 %	$ 168.8

[1] Issuance costs of $ 27.0 million were recorded on a relative fair value basis as a reduction to preferred stock of $ 22.5 million and a reduction to the purchase contract liability of $ 4.5 million.

Pursuant to the Purchase Contract and Pledge Agreement, we were required to attempt a remarketing of the Series C Mandatory Convertible Preferred Stock prior to December 1, 2023. On November 17, 2023, we announced the unsuccessful final remarketing of our Series C Mandatory Convertible Preferred Stock. On December 1, 2023, we issued 33,898,837 shares of our common stock under the purchase contract component of the Corporate Units based upon the per-share daily volume weighted average of our common stock over a consecutive 40-day trading period ending on November 29, 2023. As of December 1, 2023, each holder of Corporate Units was deemed to have automatically delivered to us the related Series C Mandatory Convertible Preferred Stock that were components of the Corporate Units in full satisfaction of such holder’s obligations under the related purchase contract, and all shares of Series C Mandatory Convertible Preferred Stock were returned to the status of authorized but unissued preferred stock, par value of $ 0.01 per share, without designation as to series. We voluntarily delisted the Corporate Units from the New York Stock Exchange.

We paid quarterly contract adjustment payments at the rate of 7.75 % per year on the stated amount of $ 100 per Equity Unit. As of December 31, 2023 and December 31, 2022 the purchase contract liability was zero and $ 65.0 million, respectively. Purchase contract payments were recorded against this liability. Accretion of the purchase contract liability was recorded as interest expense. Cash payments of $ 66.8 million were made during the years ended December 31, 2023 and 2022.

We accounted for the Corporate Units as a single unit of account and recorded the initial present value of the purchase contract payments as a liability with a corresponding reduction to preferred stock. As of December 31, 2023, the balance of the Series C Mandatory Convertible Preferred Stock was $ 0.0 million and during the fourth quarter of 2023 we recorded the settlement of the forward purchase contract as an increase to common stock and additional paid-in capital.

Refer to Note 5, "Earnings Per Share," for additional information regarding our treatment of the Equity Units for diluted EPS.

Noncontrolling Interest in Consolidated Subsidiaries. As of December 31, 2023 and 2022, NIPSCO and tax equity partners have completed their cash contributions into Indiana Crossroads Wind, Rosewater, Indiana Crossroads Solar and Dunns Bridge I JVs. Earnings, tax attributes and cash flows are allocated to both NIPSCO and the respective tax equity partners in varying percentages by category and over the life of the partnership. The tax equity partner's contributions, net of these allocations, is represented as a noncontrolling interest within total equity on the Consolidated Balance Sheets. Refer to Note 4, "Noncontrolling Interest," for more information.

On December 31, 2023, we consummated the closing of the NIPSCO Minority Interest Transaction and issued a 19.9 % equity interest in NIPSCO Holdings II LLC to BIP in exchange for a capital contribution of $ 2.16 billion in cash. Transaction costs and deferred tax impacts of $ 54.7 million and $ 63.5 million were recorded during the period ending December 31, 2023. Refer to Note 15, "Income Taxes," and Note 19, "Other Commitments and Contingencies - E. Other Matters," in the Notes to the Consolidated Financial Statements for more information on this transaction.

7. Short-Term Borrowings

We generate short-term borrowings from our revolving credit facility, commercial paper program, accounts receivable transfer programs, and term credit agreements. Each of these borrowing sources is described further below.

Revolving Credit Facility. We maintain a revolving credit facility to fund ongoing working capital requirements, including the provision of liquidity support for our commercial paper program, provide for issuance of letters of credit, and also for general corporate purposes. Our revolving credit facility has a program limit of $ 1.85 billion and is comprised of a syndicate of banks. At December 31, 2023 and 2022, we had no outstanding borrowings under this facility.

Commercial Paper Program. At December 31, 2023, our commercial paper program had a program limit of up to $ 1.5 billion. On February 9, 2024, we increased the program limit to $ 1.85 billion. We had $ 1,061.0 million and $ 415.0 million of commercial paper outstanding with weighted-average interest rates of 5.65 % and 4.60 % as of December 31, 2023 and 2022, respectively.

Accounts Receivable Transfer Programs. Columbia of Ohio, NIPSCO, and Columbia of Pennsylvania each maintain a receivables agreement whereby they transfer their customer accounts receivables to third party financial institutions through consolidated special purpose entities. The three agreements expire between May 2024 and October 2024 and may be further extended if mutually agreed to by the parties thereto.

All receivables transferred to third parties are valued at face value, which approximates fair value due to their short-term nature. The amount of the undivided percentage ownership interest in the accounts receivables transferred is determined in part by required loss reserves under the agreements.

Transfers of accounts receivable are accounted for as secured borrowings resulting in the recognition of short-term borrowings on the Consolidated Balance Sheets. As of December 31, 2023, the maximum amount of debt that could be recognized related to our accounts receivable programs is $ 383.9 million.

We had $ 337.6 million and $ 347.2 million short-term borrowings related to the securitization transactions as of December 31, 2023 and 2022, respectively.

For the year ended December 31, 2023, $ 9.6 million was recorded as cash flows used for financing activities related to the change in short-term borrowings due to securitization transactions. For the year ended December 31, 2022, $ 347.2 million was recorded as cash flows from financing activities related to the change in short-term borrowings due to securitization

transactions. For the accounts receivable transfer programs, we pay used facility fees for amounts borrowed, unused commitment fees for amounts not borrowed, and upfront renewal fees. Fees associated with the securitization transactions were $ 2.7 million, $ 2.5 million, and $ 1.4 million for the years ended December 31, 2023, 2022 and 2021, respectively. Columbia of Ohio, NIPSCO and Columbia of Pennsylvania remain responsible for collecting on the receivables securitized, and the receivables cannot be transferred to another party. Refer to Note 23, "Interest Expense, Net," for additional information on securitization transaction fees.

Term Credit Agreements. On December 20, 2022, we entered into a $ 1.0 billion term credit agreement with a syndicate of banks. On October 5, 2023, we entered into an amendment with the syndicate of banks to, among other things, extend the maturity date of the agreement from December 19, 2023 to March 15, 2024. With the amendment, we triggered extinguishment accounting and recorded an immaterial loss on extinguishment of debt in the fourth quarter of 2023. Interest charged on the borrowings depended on the variable rate structure elected at the time of each borrowing. The available variable rate structures from which we could choose were defined in the agreement. Under the agreement, we borrowed $ 1.0 billion on December 20, 2022 with an interest rate of SOFR plus 105 basis points. We had $ 1.0 billion outstanding under this agreement with interest rates of 6.41 % and 5.37 % as of December 31, 2023 and 2022, respectively.

On November 9, 2023, we entered into a $ 250.0 million term credit agreement with a bank. The agreement had a maturity date of November 7, 2024 and interest charged on the borrowings depended on the variable rate structure elected at the time of each borrowing. The available variable rate structures from which we could choose were defined in the agreement. On December 6, 2023, we entered into an augmenting lender supplement to the agreement with a syndicate of banks for an additional $ 400.0 million. Under the agreement, we borrowed $ 250.0 million on November 9, 2023 and $ 400.0 million on December 6, 2023 with an interest rate of SOFR plus 115 basis points. We had $ 650.0 million outstanding under this agreement with an interest rate of 6.50 % as of December 31, 2023.

On January 3, 2024, we terminated and repaid in full our $ 1.0 billion term credit agreement and our $ 650.0 million term credit agreement.

Items listed above, excluding the term credit agreements, are presented net in the Statements of Consolidated Cash Flows as their maturities are less than 90 days.

8. Long-Term Debt

Our long-term debt as of December 31, 2023 and 2022 is as follows:

Long-term debt type	Maturity as of December 31, 2023	Weighted average interest rate (%)	Outstanding balance as of December 31, *(in millions)* **2023**	2022
Senior notes:				
NiSource	August 2025	0.95 %	**$ 1,250.0**	$ 1,250.0
NiSource	May 2027	3.49 %	**1,000.0**	1,000.0
NiSource	December 2027	6.78 %	**3.0**	3.0
NiSource	March 2028	5.25 %	**1,050.0**	—
NiSource	September 2029	2.95 %	**750.0**	750.0
NiSource	May 2030	3.60 %	**1,000.0**	1,000.0
NiSource	February 2031	1.70 %	**750.0**	750.0
NiSource	June 2033	5.40 %	**450.0**	—
NiSource	December 2040	6.25 %	**152.6**	152.6
NiSource	June 2041	5.95 %	**347.4**	347.4
NiSource	February 2042	5.80 %	**250.0**	250.0
NiSource	February 2043	5.25 %	**500.0**	500.0
NiSource	February 2044	4.80 %	**750.0**	750.0
NiSource	February 2045	5.65 %	**500.0**	500.0
NiSource	May 2047	4.38 %	**1,000.0**	1,000.0
NiSource	March 2048	3.95 %	**750.0**	750.0
NiSource	June 2052	5.00 %	**350.0**	350.0
Total senior notes			**$ 10,853.0**	$ 9,353.0
Medium term notes:				
NiSource	May 2027	7.99 %	**$ 29.0**	$ 29.0
NIPSCO	June 2027 to August 2027	7.64 %	**58.0**	58.0
Columbia of Massachusetts	December 2025 to February 2028	6.37 %	**15.0**	15.0
Total medium term notes			**$ 102.0**	$ 102.0
Finance leases:				
NiSource Corporate Services	February 2024 to September 2027	2.89 %	**$ 30.5**	$ 48.6
NIPSCO	December 2027 to November 2035	4.77 %	**61.2**	16.5
Columbia of Ohio	December 2025 to March 2044	6.16 %	**90.3**	83.5
Columbia of Virginia	July 2029 to November 2039	6.23 %	**16.1**	17.0
Columbia of Kentucky	May 2027	3.79 %	**0.2**	0.2
Columbia of Pennsylvania	July 2027 to May 2035	4.49 %	**7.1**	8.9
Total finance leases			**$ 205.4**	$ 174.7
Unamortized issuance costs and discounts			**$ (81.1)**	$ (76.1)
Total Long-Term Debt			**$ 11,079.3**	$ 9,553.6

Details of our 2023 long-term debt related activity are summarized below:

- On March 24, 2023, we completed the issuance sale of $ 750.0 million of 5.25 % senior unsecured notes maturing in 2028, which resulted in approximately $ 742.2 million of net proceeds after discount and debt issuance costs.
- On June 8, 2023, we completed the issuance and sale of $ 300.0 million of 5.25 % senior unsecured notes maturing in 2028 (the "2028 Notes"). The terms of the 2028 Notes, other than the issue date and the price to the public, are identical to the terms of, and constitute as a reopening of, our 5.25 % senior unsecured notes due 2028 issued on

March 24, 2023. With the incremental issuance, we now have $ 1.05 billion of 5.25 % senior unsecured notes maturing in 2028. On June 8, 2023, we also completed the issuance and sale of $ 450.0 million of 5.40 % senior unsecured notes maturing in 2033. These issuances resulted in approximately $ 742.5 million of total net proceeds after discount and debt issuance costs.

Details of our 2022 long-term debt related activity are summarized below:

- On April, 2022, we repaid $ 20.0 million of 7.99 % medium term notes at maturity.
- On June 10, 2022, we completed the issuance and sale of $ 350.0 million of 5.00 % senior unsecured notes maturing in 2052, which resulted in approximately $ 344.6 million of net proceeds after discount and debt issuance costs.
- On August 30, 2022, NIPSCO repaid $ 10.0 million of 7.40 % medium term notes at maturity.

See Note 19, "Other Commitments and Contingencies - A. Contractual Obligations," for the outstanding long-term debt maturities at December 31, 2023.

Unamortized debt expense, premium and discount on long-term debt applicable to outstanding bonds are being amortized over the life of such bonds.

We are subject to a financial covenant under our revolving credit facility which requires us to maintain a debt to capitalization ratio that does not exceed 70 %. As of December 31, 2023, the ratio was 58.2 %.

We are also subject to certain other non-financial covenants under the revolving credit facility. Such covenants include a limitation on the creation or existence of new liens on our assets, generally exempting liens on utility assets, purchase money security interests, preexisting security interests and an additional subset of assets equal to $ 200 million. An asset sale covenant generally restricts the sale, conveyance, lease, transfer or other disposition of our assets to those dispositions that are for a price not materially less than fair market of such assets, that would not materially impair our ability to perform obligations under the revolving credit facility, and that together with all other such dispositions, would not have a material adverse effect. The covenant also restricts dispositions to no more than 15 % of our consolidated total assets on December 31, 2022. Additionally, the revolving credit facility requires us to own directly or indirectly at least 70 % of NIPSCO. The revolving credit facility also includes a cross-default provision, which triggers an event of default under the credit facility in the event of an uncured payment default relating to any indebtedness of us or any of our subsidiaries in a principal amount of $ 75.0 million or more.

Our indentures generally do not contain any financial maintenance covenants. However, our indentures are generally subject to cross-default provisions ranging from uncured payment defaults of $ 5 million to $ 50 million, and limitations on the incurrence of liens on our assets, generally exempting liens on utility assets, purchase money security interests, preexisting security interests and an additional subset of assets capped at 10 % of our consolidated net tangible assets.

9. Property, Plant and Equipment

Our property, plant and equipment on the Consolidated Balance Sheets are classified as follows:

At December 31, *(in millions)*	2023	2022
Property, Plant and Equipment		
Gas Distribution Utility	**$ 18,154.5**	$ 16,576.4
Electric Utility	**7,907.9**	7,162.4
Corporate	**274.2**	271.7
Construction Work in Process	**1,261.1**	1,398.2
Renewable Generation Assets [1]	**1,434.4**	702.2
Non-Utility and Other	**1,450.0**	1,440.4
Total Property, Plant and Equipment	**$ 30,482.1**	$ 27,551.3
Accumulated Depreciation and Amortization		
Gas Distribution Utility	**$ (3,924.4)**	$ (3,678.1)
Electric Utility	**(2,709.5)**	(2,557.4)
Corporate	**(174.2)**	(160.0)
Renewable Generation Assets [1]	**(64.5)**	(29.7)
Non-Utility and Other	**(1,334.6)**	(1,283.5)
Total Accumulated Depreciation and Amortization	**$ (8,207.2)**	$ (7,708.7)
Net Property, Plant and Equipment	**$ 22,274.9**	$ 19,842.6

[1] Our renewable generation assets are part of our electric segment and represent Non-Utility Property, owned and operated by JVs between NIPSCO and unrelated tax equity partners, and depreciated straight-line over 30 years. Refer to Note 4, "Noncontrolling Interest," for additional information.

The weighted average depreciation provisions for utility plant, as a percentage of the original cost, for the periods ended December 31, 2023, 2022 and 2021 were as follows:

	2023	2022	2021
Electric Operations	**3.5 %**	3.1 %	3.4 %
Gas Distribution Operations	**2.4 %**	2.3 %	2.2 %

We recognized depreciation expense of $ 756.9 million, $ 685.0 million and $ 672.1 million for the years ended 2023, 2022 and 2021, respectively. The 2023, 2022 and 2021, depreciation expense includes $ 12.5 million, $ 11.0 million, and $ 5.3 million related to the regulatory deferral of income associated with our JVs, which is not included in current rates. See Note 1, "Nature of Operations and Summary of Significant Accounting Policies - S. Noncontrolling Interest," for additional details.

Amortization of on-premise Software Costs. We amortized $ 77.5 million, $ 53.1 million and $ 49.4 million in 2023, 2022 and 2021, respectively, related to software recorded as intangible assets. Our unamortized software balance was $ 205.6 million and $ 190.1 million at December 31, 2023 and 2022, respectively.

Amortization of Cloud Computing Costs. We amortized $ 12.6 million, $ 11.1 million and $ 10.0 million in 2023, 2022 and 2021, respectively, related to cloud computing costs to "Operation and maintenance" expense. Our unamortized cloud computing balance was $ 32.2 million and $ 45.7 million at December 31, 2023 and 2022, respectively.

10. Goodwill

Substantially all of our goodwill relates to the excess of cost over the fair value of the net assets acquired in the Columbia acquisition on November 1, 2000. Our goodwill balance was $ 1,485.9 million as of December 31, 2023 and 2022. All of our goodwill has been allocated to the Gas Distribution Operations segment.

For our annual goodwill impairment analysis performed as of May 1, 2023, we completed a qualitative "step 0" assessment and determined that it was more likely than not that the estimated fair value of the reporting unit substantially exceeded the related carrying value of our reporting unit. For this test, we assessed various assumptions, events and circumstances that would have affected the estimated fair value of the reporting units as compared to the baseline "step 1" fair value measurement performed May 1, 2020.

11. Asset Retirement Obligations

We have recognized asset retirement obligations associated with various legal obligations including costs to remove and dispose of certain construction materials located within many of our facilities (including our JV facilities), certain costs to retire pipeline, removal costs for certain underground storage tanks, removal of certain pipelines known to contain PCB contamination, closure costs for certain sites including ash ponds, solid waste management units and a landfill, as well as some other nominal asset retirement obligations. We also have an obligation associated with the decommissioning of our two hydro facilities located in Indiana. These hydro facilities have an indeterminate life, and as such, no asset retirement obligation has been recorded.

Changes in our liability for asset retirement obligations for the years 2023 and 2022 are presented in the table below:

(in millions)	**2023**	2022
Beginning Balance	**$ 513.5**	$ 512.4
Accretion recorded as a regulatory asset/liability	**20.0**	17.1
Additions	**23.5**	9.5
Settlements	**(41.6)**	(22.3)
Change in estimated cash flows	**37.6**	(3.2)
Ending Balance	**$ 553.0**	$ 513.5

Certain non-legal costs of removal that have been, and continue to be, included in depreciation rates and collected in the customer rates of the rate-regulated subsidiaries are classified as "Regulatory liabilities" on the Consolidated Balance Sheets.

12 . Regulatory Matters

Regulatory Assets and Liabilities

We follow the accounting and reporting requirements of ASC Topic 980, which provides that regulated entities account for and report assets and liabilities consistent with the economic effect of regulatory rate-making procedures when the rates established are designed to recover the costs of providing the regulated service and it is probable that such rates will be charged and collected from customers. Certain expenses and credits subject to utility regulation or rate determination normally reflected in income or expense are deferred on the balance sheet and are recognized in the income statement as the related amounts are included in customer rates and recovered from or refunded to customers. We assess the probability of collection for all of our regulatory assets each period.

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Regulatory assets were comprised of the following items:

At December 31, *(in millions)*		**2023**		2022
Regulatory Assets				
Unrecognized pension and other postretirement benefit costs (see Note 16)	**$**	**561.6**	$	607.5
Deferred pension and other postretirement benefit costs (see Note 16)		**59.7**		72.2
Environmental costs (see Note 19-D.)		**40.6**		41.4
Regulatory effects of accounting for income taxes (see Note 1-N. and Note 15)		**163.5**		158.0
Under-recovered gas and fuel costs (see Note 1-J.)		**12.7**		85.5
Depreciation		**201.9**		191.3
Post-in-service carrying charges		**269.9**		251.5
Safety activity costs		**206.6**		200.7
DSM programs		**25.0**		37.5
Retired coal generating stations		**682.0**		744.0
Losses on commodity price risk programs (See Note 13)		**24.4**		10.0
Deferred property taxes		**72.3**		68.5
Renewable energy investments (See Note 1-S. and Note 4)		**60.8**		37.7
Other		**79.2**		75.0
Total Regulatory Assets	**$**	**2,460.2**	$	2,580.8
Less: Current Portion		**214.3**		233.2
Total Noncurrent Regulatory Assets	**$**	**2,245.9**	$	2,347.6

Regulatory liabilities were comprised of the following items:

At December 31, *(in millions)*		**2023**		2022
Regulatory Liabilities				
Over-recovered gas and fuel costs (see Note 1-J.)	**$**	**144.5**	$	20.6
Cost of removal (see Note 11)		**597.2**		675.9
Regulatory effects of accounting for income taxes (see Note 1-N. and Note 15)		**849.9**		996.3
Deferred pension and other postretirement benefit costs (see Note 16)		**54.0**		66.8
Gains on commodity price risk programs (See Note 13)		**23.3**		90.0
Customer Assistance Programs		**19.8**		32.9
Off-Systems sales sharing		**19.0**		12.3
HLBV Adjustments under ASC 980		**18.1**		5.4
Rate Refunds		**16.1**		51.4
Other		**47.4**		61.0
Total Regulatory Liabilities	**$**	**1,789.3**	$	2,012.6
Less: Current Portion		**278.6**		236.8
Total Noncurrent Regulatory Liabilities	**$**	**1,510.7**	$	1,775.8

Regulatory assets, including under-recovered gas and fuel costs and depreciation, of approximately $ 716.4 million and $ 1,324.7 million as of December 31, 2023 and 2022, respectively, are not earning a return on investment. These costs are recovered over a remaining life, the longest of which is 69 years.

Assets:

Unrecognized pension and other postretirement benefit costs. Represents the deferred other comprehensive income or loss of the actuarial gains or losses and the prior service costs or credits that arise during the period but that are not immediately

recognized as components of net periodic benefit costs by certain subsidiaries that will ultimately be recovered through base rates.

Deferred pension and other postretirement benefit costs. Primarily relates to the difference between defined benefit plan expense recorded by certain subsidiaries due to regulatory orders and the corresponding expense that would otherwise be recorded in accordance with GAAP. The majority of these amounts are driven by Columbia of Ohio. On January 26, 2023, the PUCO approved the joint stipulation in Columbia of Ohio's rate case in which, Columbia agreed to forego the continuation of its pension and OPEB deferral prospectively as of March 31, 2021.

Environmental costs. Includes certain recoverable costs related to gas plant sites, disposal sites or other sites onto which material may have migrated, the recovery of which is to be addressed in future base rates, billing riders or tracking mechanisms of certain of our subsidiaries.

Regulatory effects of accounting for income taxes. Represents the deferral and under collection of deferred taxes in the rate making process.

Under-recovered gas and fuel costs. Represents the difference between the costs of gas and fuel, as well as energy acquired through power purchase agreements, including NIPSCO's own renewable projects, and the recovery of such costs in revenue and is used to adjust future billings for such deferrals on a basis consistent with applicable state-approved tariff provisions. Recovery of these costs is achieved through tracking mechanisms.

Depreciation. Represents differences between depreciation expense incurred on a GAAP basis and that prescribed through regulatory order. The majority of this balance is driven by Columbia of Ohio's IRP and CEP deferrals.

Post-in-service carrying charges. Represents deferred debt-based carrying charges incurred on certain assets placed into service but not yet included in customer rates. The majority of this balance is driven by Columbia of Ohio's IRP and CEP deferrals.

Safety activity costs. Represents the difference between costs incurred by certain of our subsidiaries in eligible safety programs in compliance with PHMSA regulations in excess of those being recovered in rates. The majority of this balance is driven by Columbia of Ohio, which began recovery in March 2023 through base rates.

DSM programs. Represents costs associated with Gas Distribution Operations and Electric Operations energy efficiency and conservation programs. Costs are recovered through tracking mechanisms.

Retired coal generating stations. Represents the net book value of Units 7 and 8 of Bailly Generating Station that was retired during 2018 and the net book value of Units 14 and 15 of R.M. Schahfer Generating Station retired in 2021. These amounts are currently being amortized at a rate consistent with their inclusion in customer rates. The December 2023 NIPSCO electric rate case order allows for the recovery of, and on, the net book value of the stations by the end of 2034 and implements a revenue credit for the retired units. The credit is based on the difference between the net book value of Units 14 and 15 upon retirement and the last base rate case proceeding. The credit will be reset when new base rates are determined. See Note 9, "Property, Plant and Equipment," for further details.

Losses on commodity price risk programs . Represents the unrealized losses related to certain of our subsidiary's commodity price risk programs. These programs help to protect against the volatility of commodity prices and these amounts are collected from customers through their inclusion in customer rates.

Deferred property taxes . Represents the deferral and under collection of property taxes in the rate making process for Columbia of Ohio and is driven by the IRP and CEP deferrals.

Renewable energy investments. Represents the regulatory deferral of certain amounts representing the timing difference between the profit earned from the JVs and the amount included in regulated rates to recover our approved investments in consolidated JVs. These amounts will be collected through base rates over the life of the renewable generating assets to which they relate. The offset to the regulatory liability or asset associated with our renewable investments is recorded in "Depreciation expense" on the Statements of Consolidated Comprehensive Income. Renewable energy formation and developer costs are also included in this regulatory asset. Refer to Note 1, "Nature of Operations and Summary of Significant Accounting Policies - S. Noncontrolling Interest," Note 4, "Noncontrolling Interest," and Note 9, "Property, Plant and Equipment," for additional

information.

Liabilities:

Over-recovered gas and fuel costs. Represents the difference between the cost of gas and fuel, as well as energy acquired through power purchase agreements, including NIPSCO's own renewable projects and, the recovery of such costs in revenues and is the basis to adjust future billings for such refunds on a basis consistent with applicable state-approved tariff provisions. Refunding of these revenues is achieved through tracking mechanisms.

Cost of removal. Represents anticipated costs of removal for utility assets that have been collected through depreciation rates for future costs to be incurred.

Regulatory effects of accounting for income taxes. Represents amounts owed to customers for deferred taxes collected at a higher rate than the current statutory rates and liabilities associated with accelerated tax deductions owed to customers. Balance includes excess deferred taxes recorded upon implementation of the TCJA in December 2017, net of amounts amortized through 2023. For discussion of the regulatory impact of the NIPSCO Minority Interest Transaction on deferred taxes, see Note 15, "Income Taxes," for additional details.

Deferred pension and other postretirement benefit costs. Primarily represents cash contributions in excess of postretirement benefit expense that is deferred by certain subsidiaries.

Gains on commodity price risk programs . Represents the unrealized gains related to certain of our subsidiary's commodity price risk programs. These programs help to protect against the volatility of commodity prices, and these amounts are passed back to customers through their inclusion in customer rates.

Customer Assistance Programs . Represents the difference between the eligible customer assistance program costs and collections, which will be refunded to customers.

Rate Refunds . Represents supplier refunds received by the company that are owed to customers and will be remitted.

Off System Sales Sharing . Represents amounts to be passed back to the customers as a result of Off System sales that is shared between the company and the customer.

NIPSCO regulatory update

As part of the NIPSCO Gas Settlement and Stipulation Agreement filed on March 2, 2022, NIPSCO Gas agreed to change the depreciation methodology for its calculation of depreciation rates, which reduces depreciation expense and subsequent revenues and cash flows. An order was received on July 27, 2022 approving the settlement and rates were effective as of September 1, 2022. As part of the NIPSCO Electric base rate case and the Stipulation and Settlement Agreement filed on March 10, 2023, NIPSCO Electric agreed to change the depreciation methodology for its calculation of depreciation rates, which will reduce depreciation expense and subsequent revenues and cash flows. An order was received on August 2, 2023 approving the settlement, and rates were effective as of August 4, 2023. On October 11, 2023, the IURC issued an order clarifying how the rate increase should have been implemented, holding that the new rates should have only applied to electric usage on or after August 4, 2023, and not for electric usage prior to that date for bills yet to be rendered. NIPSCO was ordered to make a filing reflecting the calculation of the refund to customers by November 10, 2023 . The refund was passed back to customers through bills in November and December 2023.

Columbia of Ohio regulatory filing update

On February 28, 2023, Columbia of Ohio filed an application with the PUCO requesting authority to establish a new rider, the PHMSA Infrastructure Replacement Program (“PHMSA IRP”) Rider. The Rider was proposed to recover the capital and O&M costs associated with compliance of the PHMSA Mega Rule. On July 7, 2023, the PUCO Staff filed a Staff Report recommending approval of the PHMSA IRP Rider, with several modifications. A Joint Stipulation and Recommendation was filed on September 8, 2023, recommending approval of the PHMSA IRP Rider, as modified by the Staff Report and as further modified by the terms of the Joint Stipulation and Recommendation. The PUCO approved the PHMSA IRP Rider by Opinion and Order dated November 1, 2023. Columbia of Ohio filed its notice of intent to utilize the PHMSA IRP Rider to seek cost recovery for its 2023 investments in Q4 2023.

FAC Adjustment

As ordered by the IURC on June 15, 2022, NIPSCO was required to refund to customers $ 8.0 million of over-collected fuel costs. The refund was recorded as a regulatory liability on the Consolidated Balance Sheets and was fully refunded in 2023, which eliminated the liability.

13. Risk Management Activities

We are exposed to certain risks related to our ongoing business operations; namely commodity price risk and interest rate risk. We recognize that the prudent and selective use of derivatives may help to limit volatility in the price of natural gas, and manage interest rate exposure.

Risk management assets and liabilities on our derivatives are presented on the Consolidated Balance Sheets as shown below:

	December 31, 2023		December 31, 2022	
(in millions)	**Assets**	**Liabilities**	**Assets**	**Liabilities**
Current [1]				
Derivatives not designated as hedging instruments	**$ 1.1**	**$ 7.5**	$ 18.8	$ 1.1
Total	**$ 1.1**	**$ 7.5**	$ 18.8	$ 1.1
Noncurrent [2]				
Derivatives not designated as hedging instruments	**$ 22.2**	**$ 1.9**	$ 66.0	$ 1.9
Total	**$ 22.2**	**$ 1.9**	$ 66.0	$ 1.9

[1] Current assets and liabilities are presented in "Prepayments and other" and "Other accruals", respectively, on the Consolidated Balance Sheets.
[2] Noncurrent assets and liabilities are presented in "Deferred charges and other" and "Other noncurrent liabilities and deferred credits", respectively, on the Consolidated Balance Sheets.

Our derivative instruments are subject to enforceable master netting arrangements or similar agreements. No collateral was either received or posted related to our outstanding derivative positions at December 31, 2023. If the above gross asset and liability positions were presented net of amounts owed or receivable from counterparties, we would report a net asset position of $ 13.9 million and $ 81.8 million at December 31, 2023 and 2022, respectively.

Derivatives Not Designated as Hedging Instruments

C ***ommodity price risk management.*** We, along with our utility customers, are exposed to variability in cash flows associated with natural gas purchases and volatility in natural gas prices. We purchase natural gas for sale and delivery to our retail, commercial and industrial customers, and for most customers the variability in the market price of gas is passed through in their rates. Some of our utility subsidiaries offer programs whereby variability in the market price of gas is assumed by the respective utility. The objective of our commodity price risk programs is to mitigate the gas cost variability, for us or on behalf of our customers, associated with natural gas purchases or sales by economically hedging the various gas cost components using a combination of futures, options, forwards or other derivative contracts. As of December 31, 2023 and 2022, we had 76.1 MMDth and 99.0 MMDth, respectively, of net energy derivative volumes outstanding related to our natural gas hedges.

NIPSCO has received IURC approval to lock in a fixed price for its natural gas customers using long-term forward purchase instruments and is limited to 20 % of NIPSCO's average annual GCA purchase volume. As of December 31, 2023, the remaining terms of these instruments range from one to four years . Likewise, Columbia of Pennsylvania has received approval for a 24-month rolling hedge program. The hedging program was executed in December 2023, with an effective date of April 1, 2024 and will continue in perpetuity. The program is designed to financially hedge approximately 20 % of the customer's annual demand. All gains and losses on these derivative contracts are deferred as regulatory liabilities or assets and are remitted to or collected from customers through the relevant cost recovery mechanism.

Derivatives Designated as Hedging Instruments

Interest rate risk management. As of December 31, 2023 and 2022, we had no forward-starting interest rate swaps outstanding.

The overall net gain related to our multiple settled interest rate swaps is recorded to AOCI. We amortize the net gain over the life of the debt associated with these swaps as we recognize interest expense. These amounts are immaterial in 2023, 2022 and 2021 and are recorded in "Interest expense, net" on the Statements of Consolidated Income.

Cash flows for derivative financial instruments are generally classified as operating activities.

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14. Fair Value

A. Fair Value Measurements

Recurring Fair Value Measurements

The following tables present financial assets and liabilities measured and recorded at fair value on our Consolidated Balance Sheets on a recurring basis and their level within the fair value hierarchy as of December 31, 2023 and December 31, 2022:

Recurring Fair Value Measurements December 31, 2023 (*in millions*)	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance as of December 31, 2023
Assets				
Risk management assets	$ —	$ 23.3	$ —	$ 23.3
Available-for-sale debt securities	—	159.1	—	159.1
Total	**$ —**	**$ 182.4**	**$ —**	**$ 182.4**
Liabilities				
Risk management liabilities	$ —	$ 9.4	$ —	$ 9.4
Total	**$ —**	**$ 9.4**	**$ —**	**$ 9.4**

Recurring Fair Value Measurements December 31, 2022 (*in millions*)	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance as of December 31, 2022
Assets				
Risk management assets	$ —	$ 84.8	$ —	$ 84.8
Available-for-sale debt securities	—	151.6	—	151.6
Total	**$ —**	**$ 236.4**	**$ —**	**$ 236.4**
Liabilities				
Risk management liabilities	$ —	$ 3.0	$ —	$ 3.0
Total	**$ —**	**$ 3.0**	**$ —**	**$ 3.0**

Risk Management Assets and Liabilities. Risk management assets and liabilities include interest rate swaps, exchange-traded NYMEX futures and NYMEX options and non-exchange-based forward purchase contracts.

Level 1- When utilized, exchange-traded derivative contracts are based on unadjusted quoted prices in active markets and are classified within Level 1. These financial assets and liabilities are secured with cash on deposit with the exchange; therefore, nonperformance risk has not been incorporated into these valuations. These financial assets and liabilities are deemed to be cleared and settled daily by NYMEX as the related cash collateral is posted with the exchange. As a result of this exchange rule, NYMEX derivatives are considered to have no fair value at the balance sheet date for financial reporting purposes, and are presented in Level 1 net of posted cash; however, the derivatives remain outstanding and are subject to future commodity price fluctuations until they are settled in accordance with their contractual terms.

Level 2- Certain non-exchange-traded derivatives are valued using broker or over-the-counter, on-line exchanges. In such cases, these non-exchange-traded derivatives are classified within Level 2. Non-exchange-based derivative instruments include swaps, forwards, and options. In certain instances, these instruments may utilize models to measure fair value. We use a similar model to value similar instruments. Valuation models utilize various inputs that include quoted prices for similar assets or liabilities in

active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, other observable inputs

for the asset or liability and market-corroborated inputs, (i.e., inputs derived principally from or corroborated by observable market data by correlation or other means). Where observable inputs are available for substantially the full term of the asset or liability, the instrument is categorized within Level 2.

Level 3- Certain derivatives trade in less active markets with a lower availability of pricing information and models may be utilized in the valuation. When such inputs have a significant impact on the measurement of fair value, the instrument is categorized within Level 3.

Credit risk is considered in the fair value calculation of derivative instruments that are not exchange-traded. Credit exposures are adjusted to reflect collateral agreements that reduce exposures. As of December 31, 2023 and 2022, there were no material transfers between fair value hierarchies. Additionally, there were no changes in the method or significant assumptions used to estimate the fair value of our financial instruments.

NIPSCO and Columbia of Pennsylvania have entered into long-term forward natural gas purchase instruments to lock in a fixed price for their natural gas customers. We value these contracts using a pricing model that incorporates market-based information when available, as these instruments trade less frequently and are classified within Level 2 of the fair value hierarchy. For additional information, see Note 13, “Risk Management Activities.”

Available-for-Sale Debt Securities. Available-for-sale debt securities are investments pledged as collateral for trust accounts related to our wholly-owned insurance company. We value U.S. Treasury, corporate debt and mortgage-backed securities using a matrix pricing model that incorporates market-based information. These securities trade less frequently and are classified within Level 2.

Our available-for-sale debt securities impairments are recognized periodically using an allowance approach. At each reporting date, we utilize a quantitative and qualitative review process to assess the impairment of available-for-sale debt securities at the individual security level. For securities in a loss position, we evaluate our intent to sell or whether it is more-likely-than-not that we will be required to sell the security prior to the recovery of its amortized cost. If either criteria is met, the loss is recognized in earnings immediately, with the offsetting entry to the carrying value of the security. If both criteria are not met, we perform an analysis to determine whether the unrealized loss is related to credit factors. The analysis focuses on a variety of factors that include, but are not limited to, downgrade on ratings of the security, defaults in the current reporting period or projected defaults in the future, the security's yield spread over treasuries, and other relevant market data. If the unrealized loss is not related to credit factors, it is included in other comprehensive income. If the unrealized loss is related to credit factors, the loss is recognized as credit loss expense in earnings during the period, with an offsetting entry to the allowance for credit losses. The amount of the credit loss recorded to the allowance account is limited by the amount at which the security's fair value is less than its amortized cost basis. If certain amounts recorded in the allowance for credit losses are deemed uncollectible, the allowance on the uncollectible portion will be charged off, with an offsetting entry to the carrying value of the security. Subsequent improvements to the estimated credit losses of available-for-sale debt securities will be recognized immediately in earnings. As of December 31, 2023 and December 31, 2022, we recorded $ 0.6 million and $ 0.9 million, respectively, as an allowance for credit losses on available-for-sale debt securities as a result of the analysis described above. Continuous credit monitoring and portfolio credit balancing mitigates our risk of credit losses on our available-for-sale debt securities.

The amortized cost, gross unrealized gains and losses, allowance for credit losses, and fair value of available-for-sale securities at December 31, 2023 and 2022 were:

December 31, 2023 *(in millions)*	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses [1]	Allowance for Credit Losses	Fair Value
Available-for-sale debt securities					
U.S. Treasury debt securities	$ 63.8	$ —	$ (3.2)	$ —	$ 60.6
Corporate/Other debt securities	105.2	0.8	(6.9)	(0.6)	98.5
Total	**$ 169.0**	**$ 0.8**	**$ (10.1)**	**$ (0.6)**	**$ 159.1**

December 31, 2022 *(in millions)*	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses [2]	Allowance for Credit Losses	Fair Value
Available-for-sale debt securities					
U.S. Treasury debt securities	$ 67.7	$ —	$ (4.5)	$ —	$ 63.2
Corporate/Other debt securities	99.0	—	(9.7)	(0.9)	88.4
Total	**$ 166.7**	**$ —**	**$ (14.2)**	**$ (0.9)**	**$ 151.6**

[1] Fair value of U.S. Treasury debt securities and Corporate/Other debt securities in an unrealized loss position without an allowance for credit losses is $ 58.7 and $ 74.8 million, respectively, at December 31, 2023.
[2] Fair value of U.S. Treasury debt securities and Corporate/Other debt securities in an unrealized loss position without an allowance for credit losses is $ 61.0 million and $ 85.5 million, respectively, at December 31, 2022.

Realized gains and losses on available-for-sale securities was $ 1.0 million for the year ended December 31, 2023 and immaterial for 2022.

The cost of maturities sold is based upon specific identification. At December 31, 2023, approximately $ 16.8 million of U.S. Treasury debt securities and approximately $ 4.9 million of Corporate/Other debt securities have maturities of less than a year.

There are no material items in the fair value reconciliation of Level 3 assets and liabilities measured at fair value on a recurring basis for the years ended December 31, 2023 and 2022.

Non-recurring Fair Value Measurements

We measure the fair value of certain assets, including goodwill, on a non-recurring basis, typically when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable.

Purchase Contract Liability. The purchase contract liability underlying the Equity units was valued at its April 19, 2021 value and categorized as a Level 2 instrument at December 31, 2022. The purchase contract liability was fully settled as of December 31, 2023. Refer to Note 6, "Equity," for additional information.

B. Other Fair Value Disclosures for Financial Instruments . The carrying amount of cash and cash equivalents, restricted cash, notes receivable, customer deposits and short-term borrowings is a reasonable estimate of fair value due to their liquid or short-term nature. Our long-term borrowings are recorded at historical amounts.

The following method and assumptions were used to estimate the fair value of each class of financial instruments.

Long-term debt . The fair value of outstanding long-term debt is estimated based on the quoted market prices for the same or similar securities. Certain premium costs associated with the early settlement of long-term debt are not taken into consideration in determining fair value. These fair value measurements are classified within Level 2 of the fair value hierarchy. For the years ended December 31, 2023 and 2022, there was no change in the method or significant assumptions used to estimate the fair value of long-term debt.

The carrying amount and estimated fair values of these financial instruments were as follows:

At December 31, *(in millions)*	**Carrying Amount 2023**	**Estimated Fair Value 2023**	Carrying Amount 2022	Estimated Fair Value 2022
Long-term debt (including current portion)	**$ 11,079.3**	**$ 10,370.9**	$ 9,553.6	$ 8,479.4

15. Income Taxes

Judgment and the use of estimates are required in developing the provision for income taxes and reporting of tax-related assets and liabilities. The interpretation of tax laws and associated regulations involves uncertainty as taxing authorities may interpret the laws differently.

NIPSCO's historical business activities through the closing of the NIPSCO Minority Interest Transaction were included in the consolidated U.S. federal and certain state income tax returns of NiSource Inc. Historically, NIPSCO has been treated as a taxable division of its corporate parent, NiSource Inc., and then as a division of NIPSCO Holdings I effective April 13, 2023. In connection with the NIPSCO Minority Interest Transaction, NIPSCO Holdings I retained NIPSCO's income tax balances and 80.1 % of the excess deferred income tax regulatory balances as described below. NIPSCO Holdings I's income tax balances are based on the difference between the financial statement amount and the tax basis of its investment in NIPSCO Holdings II.

Income Tax Expense. The components of income tax expense (benefit) were as follows:

Year Ended December 31, *(in millions)*	**2023**	2022	2021
Income Taxes			
Current			
Federal	**$ —**	$ 0.4	$ (0.1)
State	**5.3**	7.3	6.0
Total Current	**5.3**	7.7	5.9
Deferred			
Federal			
Taxes before operating loss carryforwards and investment credits	**49.7**	87.9	35.7
Tax utilization expense of operating loss carryforwards	**65.1**	93.1	63.5
Investment tax credits	**(2.1)**	—	—
State	**22.5**	(23.0)	13.8
Total Deferred	**135.2**	158.0	113.0
Deferred Investment Credits	**(1.0)**	(1.1)	(1.1)
Income Taxes	**$ 139.5**	$ 164.6	$ 117.8

In connection with the NIPSCO Minority Interest Transaction, NiSource recognized a $ 63.5 million income tax benefit in additional paid in capital related to 19.9 % of NIPSCO's excess deferred income taxes attributable to Blackstone's noncontrolling interest. This benefit does not impact NIPSCO's regulatory books or the excess deferred taxes that will benefit customers through lower future rates in accordance with applicable regulatory orders. See Note 4, "Noncontrolling Interest," for further discussion of the NIPSCO Minority Interest Transaction.

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Statutory Rate Reconciliation. The following table represents a reconciliation of income tax expense at the statutory federal income tax rate to the actual income tax expense from continuing operations:

Year Ended December 31, *(in millions)*	**2023**		2022		2021	
Book income before income taxes	**$ 813.9**		$ 956.4		$ 706.6	
Tax expense at statutory federal income tax rate	**170.8**	**21.0 %**	200.8	21.0 %	148.3	21.0 %
Increases (reductions) in taxes resulting from:						
State income taxes, net of federal income tax benefit	**13.7**	**1.7**	4.5	0.5	14.1	2.0
Amortization of regulatory liabilities	**(38.2)**	**(4.7)**	(38.5)	(4.0)	(39.1)	(5.5)
Fines and penalties	**—**	**—**	0.3	—	—	—
Employee stock ownership plan dividends and other compensation	**(1.3)**	**(0.2)**	(1.2)	(0.1)	(1.2)	(0.2)
Tax accrual adjustments	**—**	**—**	0.2	—	(0.1)	—
Federal tax credits	**(4.9)**	**(0.6)**	(2.3)	(0.2)	(2.1)	(0.3)
Other adjustments	**(0.6)**	**(0.1)**	0.8	—	(2.1)	(0.3)
Income Taxes	**$ 139.5**	**17.1 %**	$ 164.6	17.2 %	$ 117.8	16.7 %

The difference in tax expense of $ 25.1 million in 2023 versus 2022 was primarily due to lower pre-tax income.

The increase in tax expense of $ 46.8 million in 2022 versus 2021 was primarily due to increased pre-tax income, offset by the flow-through of the reduction of the Pennsylvania corporate income tax rate and the state jurisdictional mix tax effected at statutory rates.

Net Deferred Income Tax Liability Components. Deferred income taxes result from temporary differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities. The principal components of our net deferred tax liabilities were as follows:

At December 31, *(in millions)*	**2023**	2022
Deferred tax liabilities		
Accelerated depreciation and other property differences	**$ 1,384.8**	$ 2,473.6
Partnership basis differences	**1,241.9**	54.3
Other regulatory assets	**212.1**	348.4
Total Deferred Tax Liabilities	**2,838.8**	2,876.3
Deferred tax assets		
Other regulatory liabilities and deferred investment tax credits (including TCJA)	**182.2**	294.3
Pension and other postretirement/postemployment benefits	**58.6**	124.7
Loss and credit carryforwards	**422.9**	491.0
Environmental liabilities	**10.1**	20.7
Other accrued liabilities	**40.3**	55.9
Other, net	**50.7**	43.0
Total Deferred Tax Assets	**764.8**	1,029.6
Valuation Allowance	**(6.4)**	(7.8)
Net Deferred Tax Assets	**758.4**	1,021.8
Net Deferred Tax Liabilities	**$ 2,080.4**	$ 1,854.5

In connection with closing the NIPSCO Minority Interest Transaction, NIPSCO's deferred taxes were removed from its GAAP books and were reconstituted as deferred taxes on the outside basis difference of NiSource's investment in NIPSCO Holdings II. These deferred taxes are reflected as partnership basis differences above.

NiSource has the following deductible loss and credit carryforwards:

At December 31, 2023 *(in millions)*	Deductible Amount	Deferred Tax Asset	Valuation Allowance	Expiration Period
Federal losses	$ 1,642.4	$ 344.9	$ —	2037
Federal investment tax credits	—	2.1	—	2043
Federal production tax credits	—	0.8	—	2040-2043
Federal other credit	—	15.7	—	2029-2043
State losses, net of federal benefit	2,371.7	95.1	(6.4)	2031-2037
Total		$ 458.6	$ (6.4)	

We believe it is not more likely than not that a portion of the benefit from certain state net operating loss carryforwards will be realized. We have recorded a valuation allowance of $ 6.4 million (net of federal benefit) on the deferred tax assets related to sale of Massachusetts Business assets reflected in the state net operating loss carryforward presented above.

Unrecognized Tax Benefits. A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

At December 31, 2023, *(in millions)*	**2023**	2022	2021
Opening Balance	**$ 21.7**	$ 21.7	$ 21.7
Gross decreases - tax positions in prior period	**—**	—	—
Gross increases - current period tax positions	**—**	—	—
Ending Balance	**$ 21.7**	$ 21.7	$ 21.7
Offset for net operating loss carryforwards	**(21.7)**	(21.7)	(21.7)
Balance, Less Net Operating Loss Carryforwards	**$ —**	$ —	$ —

We are subject to income taxation in the United States and various state jurisdictions, primarily Indiana, Pennsylvania, Kentucky, Massachusetts, Maryland and Virginia.

We participate in the IRS CAP, which provides the opportunity to resolve tax matters with the IRS before filing each year's consolidated federal income tax return. As of December 31, 2023, tax years through 2021 have been audited and are closed to further assessment. The Company has transitioned to the Bridge Phase of the IRS CAP for the year ended December 31, 2022 and participated in the Bridge Plus pilot program. Although NiSource has not received a final acceptance letter from the IRS for its 2022 return, no adjustments are expected, and the year is effectively closed to further assessment.

The statute of limitations in each of the state jurisdictions in which we operate remains open between 3-4 years from the date the state income tax returns are filed. As of December 31, 2023, there were no state income tax audits in progress that would have a material impact on the consolidated financial statements.

NiSource is obligated to report adjustments resulting from IRS audits or settlements to state taxing authorities. In addition, if NiSource utilizes net operating losses or tax credits generated in years for which the statute of limitations has expired, such amounts are generally subject to examination.

On April 14, 2023, the IRS issued Revenue Procedure 2023-15 which provides a safe harbor method of accounting that taxpayers may use to determine whether expenses to repair, maintain, replace, or improve linear property and non-linear natural gas transmission and distribution property must be capitalized as improvements or are allowable as deductions. The Company is planning to elect this change in tax accounting method with its 2023 consolidated tax return filing in the upcoming year and continues to analyze and quantify the provisions of the safe harbor method of accounting.

16. Pension and Other Postemployment Benefits

We provide defined contribution plans and noncontributory defined benefit retirement plans that cover certain of our employees. Benefits under the defined benefit retirement plans reflect the employees' compensation, years of service and age at retirement. Additionally, we provide health care and life insurance benefits for certain retired employees. The majority of employees may become eligible for these benefits if they reach retirement age while working for us. The expected cost of such benefits is accrued during the employees' years of service. Current rates of rate-regulated companies include postretirement benefit costs, including amortization of the regulatory assets that arose prior to inclusion of these costs in rates. For most plans, cash contributions are remitted to grantor trusts.

Our Pension and Other Postretirement Benefit Plans' Asset Management . The Board has delegated oversight of the pension and other postretirement benefit plans' assets to the NiSource Benefits Committee ("the Committee"). The Committee has adopted investment policy statements for the pension and other postretirement benefit plans' assets. For the pension plans, we employ a liability-driven investing strategy. A total return approach is utilized for the other postretirement benefit plans' assets. A mix of diversified investments are used to maximize the long-term return of plan assets and hedge the liabilities at a prudent level of risk. The investment portfolio includes U.S. and non-U.S. equities, real estate, long-term and intermediate-term fixed income and alternative investments. Risk tolerance is established through careful consideration of plan liabilities, funded status, and asset class volatility. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements, and periodic asset/liability studies.

In determining the expected long-term rate of return on plan assets, historical markets are studied, relationships between equities and fixed income are analyzed and current market factors, such as inflation and interest rates are evaluated with consideration of diversification and rebalancing. Our expected long-term rate of return on assets is based on assumptions regarding target asset allocations and corresponding long-term capital market assumptions for each asset class. The pension plans' investment policy calls for a gradual reduction in the allocation of return-seeking assets (equities, real estate and private equity) and a corresponding increase in the allocation of liability-hedging assets (fixed income) as the funded status of the plans' increase.

As of December 31, 2023 and December 31, 2022, the acceptable minimum and maximum ranges established by the policy for the pension and other postretirement benefit plans are as follows:

December 31, 2023	Defined Benefit Pension Plan		Postretirement Benefit Plan	
Asset Category	Minimum	Maximum	Minimum	Maximum
Domestic Equities	10 %	30 %	0 %	55 %
International Equities	5 %	15 %	0 %	25 %
Fixed Income	65 %	75 %	20 %	100 %
Real Estate	0 %	0 %	0 %	0 %
Private Equity	0 %	3 %	0 %	0 %
Short-Term Investments	0 %	10 %	0 %	10 %

December 31, 2022	Defined Benefit Pension Plan		Postretirement Benefit Plan	
Asset Category	Minimum	Maximum	Minimum	Maximum
Domestic Equities	7 %	27 %	0 %	55 %
International Equities	3 %	13 %	0 %	25 %
Fixed Income	69 %	81 %	20 %	100 %
Real Estate	0 %	3 %	0 %	0 %
Private Equity	0 %	3 %	0 %	0 %
Short-Term Investments	0 %	10 %	0 %	10 %

The actual Pension Plan and Postretirement Plan Asset Mix at December 31, 2023 and December 31, 2022 are as follows:

	Defined Benefit Pension Assets [1]	December 31, 2023	Postretirement Benefit Plan Assets	December 31, 2023
Asset Class *(in millions)*	Asset Value	% of Total Assets	Asset Value	% of Total Assets
Domestic Equities	$ 261.7	18.3 %	$ 93.7	39.6 %
International Equities	141.9	9.9 %	40.7	17.2 %
Fixed Income	939.9	65.9 %	97.0	41.0 %
Real Estate	4.0	0.3 %	—	—
Cash/Other	79.3	5.6 %	5.1	2.2 %
Total	$ 1,426.8	100.0 %	$ 236.5	100.0 %

	Defined Benefit Pension Assets [1]	December 31, 2022	Postretirement Benefit Plan Assets	December 31, 2022
Asset Class *(in millions)*	Asset Value	% of Total Assets	Asset Value	% of Total Assets
Domestic Equities	$ 231.1	16.2 %	$ 86.9	38.6 %
International Equities	119.0	8.4 %	36.6	16.3 %
Fixed Income	1,004.3	70.6 %	94.7	42.1 %
Real Estate	5.0	0.3 %	—	—
Cash/Other	63.4	4.5 %	6.7	3.0 %
Total	$ 1,422.8	100.0 %	$ 224.9	100.0 %

[1] Total includes accrued dividends and pending trades with brokers.

The categorization of investments into the asset classes in the tables above are based on definitions established by the Committee.

Fair Value Measurements. The following table sets forth, by level within the fair value hierarchy, the pension and other postretirement benefits investment assets at fair value as of December 31, 2023 and 2022. Assets are classified in their entirety based on the observability of inputs used in determining the fair value measurement. There were no investment assets in the pension and other postretirement benefits trusts classified within Level 3 for the years ended December 31, 2023 and 2022.

We use the following valuation techniques to determine fair value. For the year ended December 31, 2023, there were no significant changes to valuation techniques to determine the fair value of our pension and other postretirement benefits' assets.

Level 1 Measurements
Most common and preferred stocks are traded in active markets on national and international securities exchanges and are valued at closing prices on the last business day of each period presented. Cash is stated at cost, which approximates fair value, with the exception of cash held in foreign currencies which fluctuates with changes in the exchange rates. Short-term bills and notes are priced based on quoted market values.

Level 2 Measurements
Most U.S. Government Agency obligations, mortgage/asset-backed securities, and corporate fixed income securities are generally valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. To the extent that quoted prices are not available, fair value is determined based on a valuation model that includes inputs such as interest rate yield curves and credit spreads. Securities traded in markets that are not considered active are valued based on quoted market prices, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Other fixed income includes futures and options which are priced on bid valuation or settlement pricing.

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Level 3 Measurements
Investments with unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities are classified as level 3 investments.

Not Classified
Commingled funds, private equity limited partnerships and real estate partnerships are not classified within the fair value hierarchy. Instead, these assets are measured at estimated fair value using the net asset value per share of the investments. Commingled funds' underlying assets are principally marketable equity and fixed income securities. Units held in commingled funds are valued at the unit value as reported by the investment managers. Private equity funds invest capital in non-public companies and real estate funds invest in commercial and distressed real estate directly or through related debt instruments. The fair value of these investments is determined by reference to the funds’ underlying assets.

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Fair Value Measurements at December 31, 2023:

(in millions)	December 31, 2023	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Pension plan assets:				
Cash	$ 2.2	$ 2.0	$ 0.2	$ —
Equity securities				
International equities	1.1	1.1	—	—
Fixed income securities				
Government	213.1	—	213.1	—
Corporate	482.2	—	482.2	—
Mortgages/ Asset Backed Securities	2.4	—	2.4	—
Mutual Funds				
U.S. multi-strategy	113.1	113.1	—	—
International equities	38.5	38.5	—	—
Private equity limited partnerships [1]				
U.S. multi-strategy [2]	4.8	—	—	—
International multi-strategy [3]	1.2	—	—	—
Distressed opportunities	0.1	—	—	—
Real estate [1]	4.0	—	—	—
Commingled funds [1]				
Short-term money markets	65.3	—	—	—
U.S. equities	148.5	—	—	—
International equities	102.3	—	—	—
Fixed income	242.2	—	—	—
Pension plan assets subtotal	$ 1,421.0	$ 154.7	$ 697.9	$ —
Other postretirement benefit plan assets:				
Mutual funds				
U.S. multi-strategy	82.4	82.4	—	—
International equities	18.0	18.0	—	—
Fixed income	97.0	97.0	—	—
Commingled funds [1]				
Short-term money markets	5.2	—	—	—
U.S. equities	11.4	—	—	—
International equities	22.8	—	—	—
Other postretirement benefit plan assets subtotal	$ 236.8	$ 197.4	$ —	$ —
Due to brokers, net [4]	(2.7)	—	(2.7)	—
Accrued income/dividends	8.5	8.5		—
Total pension and other postretirement benefit plan assets	$ 1,663.6	$ 360.6	$ 695.2	$ —

[1] This class of investments is measured at fair value using the net asset value per share and has not been classified in the fair value hierarchy.
[2] This class includes limited partnerships that invest in a diverse portfolio of private equity strategies, including buy-outs, growth capital, special situations and secondary markets, primarily inside the United States.
[3] This class includes limited partnerships that invest in a diverse portfolio of private equity strategies, including buy-outs, growth capital, special situations and secondary markets, primarily outside the United States.
[4] This class represents pending trades with brokers.

The table below sets forth a summary of unfunded commitments, redemption frequency and redemption notice periods for certain investments that are measured at fair value using the net asset value per share for the year ended December 31, 2023:

(in millions)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled Funds				
Short-term money markets	$ 70.5	$ —	Daily	1 day
U.S. equities	159.9	—	Daily	1 day - 5 days
International equities	125.1	—	Monthly	10 days- 30 days
Fixed income	242.2	—	Daily	3 days
Private Equity and Real Estate Limited Partnerships [(1)]	10.1	11.6	N/A	N/A
Total	$ 607.8	$ 11.6		

[(1)] Private equity and real estate limited partnerships typically call capital over a 3-5 year period and pay out distributions as the underlying investments are liquidated. The typical expected life of these limited partnerships is 0-15 years, and these investments typically cannot be redeemed prior to liquidation.

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Fair Value Measurements at December 31, 2022:

(in millions)	December 31, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Pension plan assets:				
Cash	$ 2.5	$ 2.0	$ 0.5	$ —
Equity securities				
International equities	0.5	0.5	—	—
Fixed income securities				
Government	316.3	—	316.3	—
Corporate	407.8	—	407.8	—
Mortgages/Asset backed securities	2.3	—	2.3	—
Other fixed income	1.9	1.9	—	—
Mutual Funds				
U.S. multi-strategy	97.4	97.4	—	—
International equities	29.0	29.0	—	—
Fixed income	0.2	0.2	—	—
Private equity limited partnerships [1]				
U.S. multi-strategy [2]	6.3	—	—	—
International multi-strategy [3]	2.3	—	—	—
Distressed opportunities	0.1	—	—	—
Real estate [1]	5.0	—	—	—
Commingled funds [1]				
Short-term money markets	46.2	—	—	—
U.S. equities	133.7	—	—	—
International equities	89.6	—	—	—
Fixed income	275.9	—	—	—
Pension plan assets subtotal	$ 1,417.0	$ 131.0	$ 726.9	$ —
Other postretirement benefit plan assets:				
Mutual funds				
U.S. multi-strategy	76.2	76.2	—	—
International equities	16.3	16.3	—	—
Fixed income	94.7	94.7	—	—
Commingled funds [1]				
Short-term money markets	17.4	—	—	—
U.S. equities	10.7	—	—	—
International equities	20.3	—	—	—
Other postretirement benefit plan assets subtotal	$ 235.6	$ 187.2	$ —	$ —
Due to brokers, net [4]	(2.0)	—	(2.0)	—
Receivables/payables	(10.7)	—	(10.7)	—
Accrued income/dividends	7.8	7.8	—	—
Total pension and other postretirement benefit plan assets	$ 1,647.7	$ 326.0	$ 714.2	$ —

[1] This class of investments is measured at fair value using the net asset value per share and has not been classified in the fair value hierarchy.
[2] This class includes limited partnerships/fund of funds that invest in a diverse portfolio of private equity strategies, including buy-outs, growth capital, special situations and secondary markets, primarily inside the United States.

(3) This class includes limited partnerships/fund of funds that invest in diverse portfolio of private equity strategies, including buy-outs, growth capital, special situations and secondary markets, primarily outside the United States.
(4) This class represents pending trades with brokers.

The table below sets forth a summary of unfunded commitments, redemption frequency and redemption notice periods for certain investments that are measured at fair value using the net asset value per share for the year ended December 31, 2022:

(in millions)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled Funds				
Short-term money markets	$ 63.6	$ —	Daily	1 day
U.S. equities	144.4	—	Daily	1 day - 5 days
International equities	109.9	—	Monthly	10 days - 30 days
Fixed income	275.9	—	Daily	3 days
Private Equity and Real Estate Limited Partnerships (1)	13.7	11.6	N/A	N/A
Total	$ 607.5	$ 11.6		

(1) Private equity and real estate limited partnerships typically call capital over a 3-5 year period and pay out distributions as the underlying investments are liquidated. The typical expected life of these limited partnerships is 0-15 years, and these investments typically cannot be redeemed prior to liquidation.

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Our Pension and Other Postretirement Benefit Plans' Funded Status and Related Disclosure . The following table provides a reconciliation of the plans' funded status and amounts reflected in our Consolidated Balance Sheets at December 31 based on a December 31 measurement date:

	Pension Benefits		Other Postretirement Benefits	
(in millions)	**2023**	2022	**2023**	2022
Change in projected benefit obligation [1]				
Benefit obligation at beginning of year	**$ 1,427.4**	$ 1,852.4	**$ 449.0**	$ 556.2
Service cost	**20.5**	27.8	**5.1**	6.5
Interest cost	**68.4**	40.5	**21.8**	12.0
Plan participants' contributions	**—**	—	**4.2**	4.1
Plan amendments	**—**	0.2	**3.4**	2.1
Actuarial loss (gain) [2]	**27.4**	(318.7)	**29.1**	(89.9)
Benefits paid	**(141.9)**	(174.8)	**(44.3)**	(42.3)
Estimated benefits paid by incurred subsidy	**—**	—	**0.5**	0.3
Projected benefit obligation at end of year	**$ 1,401.8**	$ 1,427.4	**$ 468.8**	$ 449.0
Change in plan assets				
Fair value of plan assets at beginning of year	**$ 1,422.8**	$ 1,981.7	**$ 224.9**	$ 293.7
Actual return on plan assets	**142.8**	(386.8)	**28.2**	(51.9)
Employer contributions	**3.1**	2.7	**23.4**	21.3
Plan participants' contributions	**—**	—	**4.3**	4.1
Benefits paid	**(141.9)**	(174.8)	**(44.3)**	(42.3)
Fair value of plan assets at end of year	**$ 1,426.8**	$ 1,422.8	**$ 236.5**	$ 224.9
Funded Status at end of year	**$ 25.0**	$ (4.6)	**$ (232.3)**	$ (224.1)
Amounts recognized in the statement of financial position consist of:				
Noncurrent assets	**44.1**	18.3	**—**	—
Current liabilities	**(2.2)**	(2.6)	**(1.0)**	(1.0)
Noncurrent liabilities	**(16.9)**	(20.3)	**(231.3)**	(223.1)
Net amount recognized at end of year [3]	**$ 25.0**	$ (4.6)	**$ (232.3)**	$ (224.1)
Amounts recognized in accumulated other comprehensive income or regulatory asset/liability [4]				
Unrecognized prior service credit	**$ 0.3**	$ 0.4	**$ 2.1**	$ (3.4)
Unrecognized actuarial loss	**500.4**	564.2	**76.6**	64.0
Net amount recognized at end of year	**$ 500.7**	$ 564.6	**$ 78.7**	$ 60.6

[1] The change in benefit obligation for Pension Benefits represents the change in Projected Benefit Obligation while the change in benefit obligation for Other Postretirement Benefits represents the change in accumulated postretirement benefit obligation.
[2] The pension actuarial loss (gain) was primarily driven by the decrease in discount rates, interest rate movements. The postretirement benefit actuarial loss (gain) was also primarily driven by a decrease in discount rates and claims experience changes in trend rates.
[3] We recognize our Consolidated Balance Sheets underfunded and overfunded status of our various defined benefit postretirement plans, measured as the difference between the fair value of the plan assets and the benefit obligation.
[4] We determined that for certain rate-regulated subsidiaries the future recovery of pension and other postretirement benefits costs is probable. These rate-regulated subsidiaries recorded regulatory assets and liabilities of $ 561.6 million and zero , respectively, as of December 31, 2023, and $ 607.5 million and zero , respectively, as of December 31, 2022 that would otherwise have been recorded to accumulated other comprehensive loss.

Our accumulated benefit obligation for our pension plans was $ 1,390.9 million and $ 1,416.8 million as of December 31, 2023 and 2022, respectively. The accumulated benefit obligation at each date is the actuarial present value of benefits attributed by the pension benefit formula to employee service rendered prior to that date and based on current and past compensation levels. The accumulated benefit obligation differs from the projected benefit obligation disclosed in the table above in that it includes no assumptions about future compensation levels.

We are required to reflect the funded status of our pension and postretirement benefit plans on the Consolidated Balance Sheet. The funded status of the plans is measured as the difference between the plan assets' fair value and the projected benefit obligation. We present the noncurrent aggregate of all underfunded plans within "Accrued liability for postretirement and

postemployment benefits." The portion of the amount by which the actuarial present value of benefits included in the projected

benefit obligation exceeds the fair value of plan assets, payable in the next 12 months, is reflected in "Accrued compensation and other benefits." We present the aggregate of all overfunded plans within "Deferred charges and other."

As of December 31, 2023 and 2022, only our nonqualified plans were underfunded. These plans have no assets as they are not funded until benefits are paid. The following table sets forth the year end accumulated benefit obligation and projected benefit obligation for pension plans with a projected benefit obligation in excess of plan assets:

	December 31,	
	2023	2022
Accumulated Benefit Obligation	**$ 19.1**	$ 22.9
Funded Status		
Fair Value of Plan Assets	**$ —**	$ —
Projected Benefit Obligation	**19.1**	22.9
Funded Status of Underfunded Pension Plans at End of Year	**$ (19.1)**	$ (22.9)

The following table sets forth the year end accumulated benefit obligation, projected benefit obligation and fair value of plan assets for pension plans with plan assets in excess of the projected benefit obligation:

	December 31,	
	2023	2022
Accumulated Benefit Obligation	**$ 1,371.8**	$ 1,393.8
Funded Status		
Fair Value of Plan Assets	**$ 1,426.8**	$ 1,422.8
Projected Benefit Obligation	**1,382.7**	1,404.5
Funded Status of Overfunded Pension Plans at End of Year	**$ 44.1**	$ 18.3

Our pension plans were overfunded, in aggregate, by $ 25.0 million at December 31, 2023 compared to being underfunded by $ 4.6 million at December 31, 2022. The improvement in the funded status was primarily due to favorable asset returns offset by a decrease in discount rates. We contributed $ 3.1 million and $ 2.7 million to our pension plans in 2023 and 2022, respectively.

Our other postretirement benefit plans were underfunded, in aggregate by $ 232.3 million and $ 224.1 million at December 31, 2023 and 2022, respectively. The decline in funded status was primarily due to increased health care trend rates and discount rates, which was partially offset by actual return on plan assets exceeding expected return. We contributed $ 23.4 million and $ 21.3 million to our other postretirement benefit plans in 2023 and 2022, respectively.

In 2023 and 2022, our NiSource Pension Restoration and Columbia Energy Group pension plans paid lump sum payouts in excess of the respective plan's service cost plus interest cost, thereby meeting the requirement for settlement accounting. We recorded settlement charges of $ 9.2 million and $ 12.4 million in 2023 and 2022, respectively. Net periodic pension benefit cost increased by $ 5.7 million in December 31, 2022 as the result of the remeasurement. In 2023, no remeasurement occurred related to lump sum payouts.

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The following table provides the key assumptions that were used to calculate the pension and other postretirement benefits obligations for our various plans as of December 31:

	Pension Benefits		Other Postretirement Benefits	
	2023	2022	**2023**	2022
Weighted-average assumptions to Determine Benefit Obligation				
Discount Rate	**4.95 %**	5.14 %	**4.98 %**	5.17 %
Rate of Compensation Increases	**4.00 %**	4.00 %	**N/A**	N/A
Interest Crediting Rates	**4.00 %**	4.00 %	**N/A**	N/A
Health Care Trend Rates				
Trend for Next Year	**N/A**	N/A	**8.84 %**	6.69 %
Ultimate Trend	**N/A**	N/A	**4.75 %**	4.75 %
Year Ultimate Trend Reached	**N/A**	N/A	**2032**	2032

We expect to make contributions of approximately $ 2.2 million to our pension plans and approximately $ 23.1 million to our postretirement medical and life plans in 2024.

The following table provides benefits expected to be paid in each of the next five fiscal years, and in the aggregate for the five fiscal years thereafter. The expected benefits are estimated based on the same assumptions used to measure our benefit obligation at the end of the year and include benefits attributable to the estimated future service of employees:

(in millions)	**Pension Benefits**	**Other Postretirement Benefits**	**Federal Subsidy Receipts**
Year(s)			
2024	$ 144.8	$ 38.1	$ 0.2
2025	141.8	38.1	0.2
2026	135.0	37.5	0.2
2027	129.4	37.4	0.2
2028	125.1	37.0	0.2
2028-2032	548.0	176.0	0.9

The following table provides the components of the plans' actuarially determined net periodic benefits cost for each of the three years ended December 31, 2023, 2022 and 2021:

	Pension Benefits			Other Postretirement Benefits		
(in millions)	**2023**	2022	2021	**2023**	2022	2021
Components of Net Periodic Benefit (Income) Cost [1]						
Service cost	**$ 20.5**	$ 27.8	$ 30.2	**$ 5.1**	$ 6.5	$ 6.2
Interest cost	**68.4**	40.5	31.4	**21.8**	12.0	9.9
Expected return on assets	**(94.5)**	(90.8)	(101.6)	**(15.1)**	(16.2)	(15.3)
Amortization of prior service cost (credit)	**0.1**	0.1	0.1	**(2.1)**	(2.2)	(2.2)
Recognized actuarial loss	**33.7**	20.3	21.7	**3.3**	2.6	4.6
Settlement loss	**9.2**	12.4	11.4	**—**	—	—
Total Net Periodic Benefits (Income) Cost	**$ 37.4**	$ 10.3	$ (6.8)	**$ 13.0**	$ 2.7	$ 3.2

[1] Service cost is presented in "Operation and maintenance" on the Statements of Consolidated Income. Non-service cost components are presented within "Other, net."

The following table provides the key assumptions that were used to calculate the net periodic benefits cost for our various plans:

	Pension Benefits			Other Postretirement Benefits		
	2023	2022	2021	**2023**	2022	2021
Weighted-average Assumptions to Determine Net Periodic Benefit Cost						
Discount rate - service cost	**5.25 %**	3.08 %	2.81 %	**5.30 %**	3.21 %	3.00 %
Discount rate - interest cost	**5.06 %**	2.11 %	1.57 %	**5.07 %**	2.24 %	1.73 %
Expected Long-Term Rate of Return on Plan Assets	**7.00 %**	4.80 %	5.20 %	**6.96 %**	5.72 %	5.50 %
Rate of Compensation Increases	**4.00 %**	4.00 %	4.00 %	**N/A**	N/A	N/A
Interest Crediting Rates	**4.00 %**	4.00 %	4.00 %	**N/A**	N/A	N/A

We assumed a 7.00 % and 6.96 % rate of return on pension and other postretirement plan assets, respectively, for our calculation of 2023 pension benefits and other postretirement benefits costs. These rates were primarily based on asset mix and historical rates of return and were adjusted in 2023 due to changes in asset allocation and projected market returns.

The following table provides other changes in plan assets and projected benefit obligations recognized in other comprehensive income or regulatory asset or liability:

	Pension Benefits		Other Postretirement Benefits	
(in millions)	**2023**	2022	**2023**	2022
Other Changes in Plan Assets and Projected Benefit Obligations Recognized in Other Comprehensive Income or Regulatory Asset or Liability				
Net prior service cost	**$ —**	$ 0.2	**$ 3.3**	$ 2.1
Net actuarial (gain) loss	**(20.9)**	158.9	**16.0**	(21.8)
Settlements/curtailments	**(9.2)**	(12.4)	**—**	—
Less: amortization of prior service cost	**(0.1)**	(0.1)	**2.1**	2.2
Less: amortization of net actuarial loss	**(33.7)**	(20.3)	**(3.3)**	(2.6)
Total Recognized in Other Comprehensive Income or Regulatory Asset or Liability	**$ (63.9)**	$ 126.3	**$ 18.1**	$ (20.1)
Amount Recognized in Net Periodic Benefits Cost and Other Comprehensive Income or Regulatory Asset or Liability	**$ (26.5)**	$ 136.6	**$ 31.1**	$ (17.4)

17. Share-Based Compensation

Prior to May 19, 2020, we issued share-based compensation to employees and non-employee directors under the NiSource Inc. 2010 Omnibus Plan ("2010 Omnibus Plan"), which was most recently approved by stockholders at the Annual Meeting of Stockholders held on May 12, 2015. The 2010 Omnibus Plan provided for awards to employees and non-employee directors of incentive and nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, cash-based awards and other stock-based awards and superseded the Director Stock Incentive Plan (“Director Plan”) with respect to grants made after the effective date of the 2010 Omnibus Plan.

The stockholders approved and adopted the NiSource Inc. 2020 Omnibus Incentive Plan ("2020 Omnibus Plan") at the Annual Meeting of Stockholders held on May 19, 2020. The 2020 Omnibus Plan provides for awards to employees and non-employee directors of incentive and nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, cash-based awards and other stock-based awards and supersedes the 2010 Omnibus Plan with respect to grants made after the effective date of the 2020 Omnibus Plan.

The 2020 Omnibus Plan provides that the number of shares of common stock of NiSource available for awards is 10,000,000

plus the number of shares subject to outstanding awards that expire or terminate for any reason that were granted under the

2020 Omnibus Plan, the 2010 Omnibus Plan or any other equity plan under which awards were outstanding as of May 19, 2020. At December 31, 2023, there were 8,023,671 shares available for future awards under the 2020 Omnibus Plan.

We recognized stock-based employee compensation expense of $ 23.9 million, $ 19.0 million and $ 16.7 million, during 2023, 2022 and 2021, respectively, as well as related tax benefits of $ 7.7 million, $ 3.6 million and $ 4.0 million, respectively. We recognized related excess tax benefit from the distribution of vested share-based employee compensation of $ 2.9 million in 2023 and $ 0.4 million respectively, in 2022 and 2021.

As of December 31, 2023, the total remaining unrecognized compensation cost related to non-vested awards amounted to $ 20.8 million, which will be amortized over the weighted-average remaining requisite service period of 1.6 years.

Restricted Stock Units and Restricted Stock . We granted 500,968 , 477,292 , and 285,755 restricted stock units and shares of restricted stock to employees, subject to service conditions in 2023, 2022, and 2021, respectively. The total grant date fair value of the restricted stock units and shares of restricted stock during 2023, 2022, and 2021, respectively, was $ 13.7 million, $ 12.5 million, and $ 5.7 million. The grant date fair value for the 2023 awards is based on the average market price of our common stock at the date of each grant. For the years ended 2022 and 2021, the grant date fair value is based on the average market price of our common stock at the date of each grant less the present value of any dividends not received during the vesting period. The awards are expensed over the vesting period which is generally three years . As of December 31, 2023, 464,725 , 385,062 , and 158,797 non-vested restricted stock units and shares of restricted stock granted in 2023, 2022, and 2021, respectively, were outstanding. Our non-vested restricted stock units have a non-forfeitable right to dividend equivalents, with immaterial amounts paid in the periods ending December 31, 2023 and 2022. See Note 5, "Earnings Per Share," for further discussion.

If an employee terminates employment before the service conditions lapse under the 2021, 2022 or 2023 awards due to (1) retirement or disability (as defined in the award agreement), or (2) death, the service conditions will lapse on the date of such termination with respect to a pro rata portion of the restricted stock units and shares of restricted stock based upon the percentage of the service period satisfied between the grant date and the date of the termination of employment. In the event of a change in control (as defined in the award agreement), all unvested shares of restricted stock and restricted stock units awarded will immediately vest upon termination of employment occurring in connection with a change in control. Termination due to any other reason will result in all unvested shares of restricted stock and restricted stock units awarded being forfeited effective on the employee’s date of termination.

A summary of our restricted stock unit award transactions for the year ended December 31, 2023 is as follows:

(shares)	Restricted Stock Units	Weighted Average Award Date Fair Value Per Unit ($)
Non-vested at December 31, 2022	798,515	24.48
Granted	500,968	27.38
Forfeited	(54,171)	25.32
Vested	(178,396)	24.87
Non-vested at December 31, 2023	**1,066,916**	**25.71**

Employee Performance Shares . We granted 649,088 performance shares subject to service, performance and/or market-based vesting conditions in 2023. The performance conditions for these shares are based on the achievement of one non-GAAP financial measure, achievement of relative total shareholder return, and other operational metrics, which make up 50%, 25%, and 25% of the issued awards respectively.

The financial measure is cumulative net operating earnings per share ("NOEPS"), which we define as income from continuing operations adjusted for certain items. Relative total shareholder return, a market-based vesting condition, which we define as the annualized growth in dividends and share price of a share of our common stock (calculated using a 20 trading day average of our closing price over the performance period, approximately) compared to the total shareholder return of a predetermined peer group of companies. A relative shareholder return result within the first quartile will result in an increase in the NOEPS shares

of 25 %, while a relative shareholder return result within the fourth quartile will result in a decrease of 25 %. A Monte Carlo analysis was used to value the portion of these awards dependent on the market-based vesting condition. The grant date fair value of the NOEPS shares is based on the closing stock price of our common stock at the date of each grant, which will be

expensed over the requisite service period of three years . The conditions for the remaining performance-based awards are based on operational goals of economic inclusion (5%), OPEX Index (10%), Employee Engagement Index Score (5%), and Environmental GHG Reduction (5%). The OPEX Index is further defined by goals related to risk mitigation and modernization of our infrastructure. See table below for further details on these awards.

In 2022, we granted 566,086 performance shares subject to service, performance and/or market-based vesting conditions. The performance conditions for these shares are based on the achievement of one non-GAAP financial measure, and/or achievement of relative total shareholder return, outlined above. The number of shares that are eligible to vest based on these performance conditions are adjusted based on performance of the magnifier framework for 2022 awards, outlined above. The operational magnifier framework for 2022 performance shares consists of three areas of focus, including safety, environment, and DE&I, representing 20%, 10% and 10%, respectively.

We granted 973,885 performance shares subject to service, performance and/or market-based vesting conditions in 2021. With respect to 390,041 performance shares granted, the performance conditions are based on the achievement of relative total shareholder return. The number of shares that are eligible to vest based on the Company's relative total shareholder return performance will be adjusted based on a performance magnifier related to safety. A Monte Carlo analysis was used to value the portion of these awards dependent on the market-based vesting condition. The grant date fair value of the NOEPS shares is based on the closing stock price of our common stock at the date of each grant, which will be expensed over the requisite service period of three years. See table below for further details on these awards.

With respect to the remaining 582,944 performance shares granted in 2021, the performance conditions are based on the achievement of one non-GAAP financial measure, and/or achievement of relative total shareholder return. The number of shares that are eligible to vest based on these performance conditions will be adjusted based on performance of the magnifier framework for 2021 awards. The operational magnifier framework for 2021 performance shares consists of three areas of focus including safety, environment, and DE&I, representing 20%, 10% and 10%, respectively.

The following table presents details of the performance awards described above.

Award Year	Service Conditions Lapse date	Performance Period	Award Conditions	Shares outstanding at 12/31/2023 *(shares)*	Grant Date Fair Value *(in millions)*
2023	2/28/2026	01/01/2023-12/31/2025	Non-GAAP Financial and Operational Measures	488,515	$ 13.3
			Relative Total Shareholder Return	162,815	$ 5.4
2022	2/28/2025	01/01/2022-12/31/2024	Non-GAAP Financial Measure	235,120	$ 7.4
			Relative Total Shareholder Return	235,120	$ 10.6
2021	2/28/2024	01/01/2021-12/31/2023	Non-GAAP Financial Measure	186,427	$ 6.5
			Relative Total Shareholder Return	186,427	$ 6.7
	2/28/2024	01/01/2021-12/31/2023	Relative Total Shareholder Return	87,268	$ 3.2

A summary of our performance award transactions for the year ended December 31, 2023 is as follows:

(shares)	Performance Awards	Weighted Average Grant Date Fair Value Per Unit ($)
Non-vested at December 31, 2022	1,505,740	26.10
Granted	649,088	28.87
Forfeited	(53,786)	28.29
Vested	(542,533)	22.21
Non-vested at December 31, 2023	**1,558,509**	**28.01**

Non-employee Director Awards . As of May 19, 2020, awards to non-employee directors may be made only under the 2020 Omnibus Plan. Currently, restricted stock units are granted annually to non-employee directors, subject to a non-employee director's election to defer receipt of such restricted stock unit award. The non-employee director's annual award of restricted stock units vest on the first anniversary of the grant date subject to special pro-rata vesting rules in the event of retirement or disability (as defined in the award agreement), or death. The vested restricted stock units are payable as soon as practicable following vesting except as otherwise provided pursuant to the non-employee director's deferral election. Certain restricted stock units remain outstanding from the 2010 Omnibus Plan and the Director Plan. All such awards are fully vested and shall be distributed to the directors upon their separation from the Board.

As of December 31, 2023, 272,609 restricted stock units are outstanding to non-employee directors under either the 2020 Omnibus Plan, the 2010 Omnibus Plan or the Director Plan. Of this amount, 67,611 restricted stock units are unvested and expected to vest.

401(k) Match, Profit Sharing and Company Contribution. Eligible salaried employees hired after January 1, 2010 and hourly and union employees hired after January 1, 2013 receive a non-elective company contribution of 4.5 % of eligible pay payable in cash or shares of NiSource common stock. We also have a voluntary 401(k) savings plan covering eligible union and nonunion employees that allows for periodic discretionary matches as a percentage of each participant's contributions payable in cash or shares. Further, we have a retirement savings plan that provides for discretionary profit sharing contributions to eligible employees. For the years ended December 31, 2023, 2022 and 2021, we recognized 401(k) match, profit sharing and non-elective contribution expense of $ 50.7 million, $ 39.1 million and $ 39.1 million, respectively.

18. Leases

Lease Descriptions. We are the lessee for substantially all of our leasing activity, which includes operating and finance leases for corporate and field offices, railcars, land, and fleet vehicles. Our corporate and field office leases and certain land leases have remaining terms between 1 and 38 years with options to renew the leases for up to 35 years. We lease railcars to transport coal to and from our electric generation facilities in Indiana. Our railcars are specifically identified in the lease agreements which have remaining lease terms between 1 and 4 years with options to renew for 1 year. Our fleet vehicles include trucks, trailers and equipment that have been customized specifically for use in the utility industry. We lease fleet vehicles for 1 year terms, after which we have the option to extend on a month-to-month basis or terminate with written notice. We elected the short-term lease practical expedient, allowing us to not recognize ROU assets or lease liabilities for all leases with a term of 12 months or less. ROU assets and liabilities on our Consolidated Balance Sheets do not include obligations for possible fleet vehicle lease renewals beyond the initial lease term. While we have the ability to renew these leases beyond the initial term, we are not reasonably certain to do so.

We have not provided material residual value guarantees for our leases, nor do our leases contain material restrictions or covenants. Lease contracts containing renewal and termination options are mostly exercisable at our sole discretion. Certain of our real estate and railcar leases include renewal periods in the measurement of the lease obligation if we have deemed the renewals reasonably certain to be exercised.

With respect to service contracts involving the use of assets, if we have the right to direct the use of the asset and obtain substantially all economic benefits from the use of an asset, we account for the service contract as a lease. Unless specifically provided to us by the lessor, we utilize NiSource's collateralized incremental borrowing rate commensurate to the lease term as

the discount rate for all of our leases. ASC 842 permits a lessee, by class of underlying asset, not to separate nonlease

components from lease components. Our policy is to apply this expedient for our leases of fleet vehicles, IT assets and railcars when calculating their respective lease liabilities.

Lease costs for the years ended December 31, 2023 and December 31, 2022 are presented in the table below. These costs include both amounts recognized in expense and amounts capitalized as part of the cost of another asset. Income statement presentation for these costs (when ultimately recognized on the income statement) is also included:

Year Ended December 31, *(in millions)*	Income Statement Classification	**2023**	2022
Finance lease cost			
Amortization of right-of-use assets	Depreciation and amortization	**$ 32.0**	$ 31.9
Interest on lease liabilities	Interest expense, net	**8.6**	8.5
Total finance lease cost		**40.6**	40.4
Operating lease cost	Operation and maintenance	**11.3**	10.4
Total lease cost		**$ 51.9**	$ 50.8

Our right-of-use assets and liabilities are presented in the following lines on the Consolidated Balance Sheets:

At December 31, *(in millions)*	Balance Sheet Classification	**2023**	2022
Assets			
Finance leases	Net Property, Plant and Equipment	**$ 184.3**	$ 153.4
Operating leases	Deferred charges and other	**32.9**	35.7
Total leased assets		**$ 217.2**	189.1
Liabilities			
Current			
Finance leases	Current portion of long-term debt	**$ 23.8**	30.0
Operating leases	Other accruals	**8.3**	4.8
Noncurrent			
Finance leases	Long-term debt, excluding amounts due within one year	**181.6**	144.7
Operating leases	Other noncurrent liabilities	**25.8**	31.9
Total lease liabilities		**$ 239.5**	$ 211.4

Other pertinent information related to leases was as follows:

Year Ended December 31, *(in millions)*	**2023**	2022
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows used for finance leases	**$ 9.3**	$ 8.6
Operating cash flows used for operating leases	**11.1**	10.3
Financing cash flows used for finance leases	**33.1**	30.3
Right-of-use assets obtained in exchange for lease obligations		
Finance leases	**64.5**	19.3
Operating leases	**$ 5.6**	$ 8.8

	December 31, 2023	December 31, 2022
Weighted-average remaining lease term (years)		
Finance leases	**16.4**	9.9
Operating leases	**6.7**	7.7
Weighted-average discount rate		
Finance leases	**5.5 %**	5.1 %
Operating leases	**4.3 %**	4.0 %

Maturities of our lease liabilities as of December 31, 2023 were as follows:

As of December 31, 2023, *(in millions)*	Total	Finance Leases	Operating Leases
2024	$ 44.4	$ 34.8	$ 9.6
2025	36.6	30.7	5.9
2026	31.1	25.7	5.4
2027	25.2	20.6	4.6
2028	22.5	19.3	3.2
Thereafter	201.7	190.7	11.0
Total lease payments	361.5	321.8	39.7
Less: Imputed interest	(122.0)	(116.4)	(5.6)
Total	$ 239.5	$ 205.4	$ 34.1
Reported as of December 31, 2023			
Short-term lease liabilities	32.1	23.8	8.3
Long-term lease liabilities	207.4	181.6	25.8
Total lease liabilities	$ 239.5	$ 205.4	$ 34.1

19. Other Commitments and Contingencies

A. Contractual Obligations . We have certain contractual obligations requiring payments at specified periods. The obligations include long-term debt, lease obligations, energy commodity contracts and obligations for various services including pipeline capacity and outsourcing of IT services. The total contractual obligations in existence at December 31, 2023 and their maturities were:

(in millions)	Total	2024	2025	2026	2027	2028	After
Long-term debt [1]	$ 10,955.0	$ —	$ 1,260.0	$ —	$ 1,090.0	$ 1,055.0	$ 7,550.0
Interest payments on long-term debt	6,017.8	431.1	431.1	418.5	399.1	349.0	3,989.0
Finance leases [2]	321.8	34.8	30.7	25.7	20.6	19.3	190.7
Operating leases [3]	39.7	9.6	5.9	5.4	4.6	3.2	11.0
Energy commodity contracts	153.9	114.7	39.2	—	—	—	—
Service obligations:							
Pipeline service obligations	2,196.6	652.0	485.7	406.3	388.7	162.3	101.6
IT service obligations	161.8	83.6	57.2	16.7	4.3	—	—
Other liabilities [4]	98.3	62.8	5.8	5.2	5.2	5.2	14.1
Total contractual obligations	$ 19,944.9	$ 1,388.6	$ 2,315.6	$ 877.8	$ 1,912.5	$ 1,594.0	$ 11,856.4

[1] Long-term debt balance excludes unamortized issuance costs and discounts of $ 81.1 million.
[2] Finance lease payments shown above are inclusive of interest totaling $ 116.4 million.
[3] Operating lease payments shown above are inclusive of interest totaling $ 5.6 million. Operating lease balances do not include obligations for possible fleet vehicle lease renewals beyond the initial lease term. While we have the ability to renew these leases beyond the initial term, we are not reasonably certain to do so as they are renewed month-to-month after the first year.
[4] Other liabilities shown above are primarily related to the Indiana Crossroads Solar and Dunns Bridge I Developer payments due in 2024 and ongoing maintenance service agreements for our renewable joint ventures.

Purchase and Service Obligations. We have entered into various purchase and service agreements whereby we are contractually obligated to make certain minimum payments in future periods. Our purchase obligations are for the purchase of physical quantities of natural gas, electricity and coal. Our service agreements encompass a broad range of business support and maintenance functions which are generally described below.

Our subsidiaries have entered into various energy commodity contracts to purchase physical quantities of natural gas, electricity and coal. These amounts represent the minimum quantity of these commodities we are obligated to purchase at both fixed and variable prices. To the extent contractual purchase prices are variable, obligations disclosed in the table above are valued at market prices as of December 31, 2023.

NIPSCO has power purchase arrangements representing a total of 700 MW of wind power, with contracts expiring between 2024 and 2040. No minimum quantities are specified within these agreements due to the variability of electricity generation from wind, so no amounts related to these contracts are included in the table above. Upon early termination of one of these agreements by NIPSCO for any reason (other than material breach by the counterparties), NIPSCO may be required to pay a termination charge that could be material depending on the events giving rise to termination and the timing of the termination.

We have pipeline service agreements that provide for pipeline capacity, transportation and storage services. These agreements, which have expiration dates ranging from 2024 to 2038 , require us to pay fixed monthly charges.

NIPSCO has contracts with three major rail operators providing coal transportation services for which there are certain minimum payments. These service contracts extend for various periods through 2025 .

We have executed agreements with multiple IT service providers. The agreements extend for various periods through 2028 .

B. Guarantees and Indemnities . We and certain of our subsidiaries enter into various agreements providing financial or performance assurance to third parties on behalf of certain subsidiaries as part of normal business. Such agreements include guarantees and stand-by letters of credit. These agreements are entered into primarily to support or enhance the creditworthiness otherwise attributed to a subsidiary on a stand-alone basis, thereby facilitating the extension of sufficient credit to accomplish the subsidiaries' intended commercial purposes. At December 31, 2023 and 2022, we issued stand-by letters of credit of $ 9.9 million and $ 10.2 million, respectively, for the benefit of third parties.

We provide guarantees related to our future performance under BTAs for our renewable generation projects. At December 31, 2023 and 2022, our guarantees for multiple BTAs totaled $ 646.1 million and $ 841.6 million, respectively. The amount of each guaranty will decrease upon the substantial completion of the construction of the facilities. See "- E. Other Matters - Generation Transition," below for more information.

C. Legal Proceedings . From time to time, various legal and regulatory claims and proceedings are pending or threatened against the Company and its subsidiaries. While the amounts claimed may be substantial, the Company is unable to predict with certainty the ultimate outcome of such claims and proceedings. The Company establishes reserves whenever it believes it to be appropriate for pending litigation matters. However, the actual results of resolving the pending litigation matters may be substantially higher than the amounts reserved. If one or more other matters were decided against us, the effects could be material to our results of operations in the period in which we would be required to record or adjust the related liability and could also be material to our cash flows in the periods that we would be required to pay such liability. Due to the inherent uncertainty of litigation, there can be no assurance that the resolution of any particular claim, proceeding or investigation would not have a material adverse effect on our results of operations, financial position or liquidity.

FERC Investigation. In April 2022, NIPSCO was notified that the FERC Office of Enforcement ("OE") was conducting an investigation of an industrial customer for allegedly manipulating the MISO Demand Response ("DR") market. On January 4, 2024, FERC issued an Order approving a Stipulation and Consent Agreement (the "FERC Stipulation and Consent Agreement") which resolved the FERC OE investigation. Under the FERC Stipulation and Consent Agreement, neither NIPSCO nor the industrial customer admitted or denied any wrongdoing. Further, under the FERC Stipulation and Consent Agreement, the industrial customer is to disgorge $ 48.5 million and NIPSCO is to disgorge $ 7.7 million. The full amount of disgorgements will be returned to customers. NIPSCO has recovered more than 50% of its costs.

Other Claims and Proceedings. We are also party to certain other claims, regulatory and legal proceedings arising in the ordinary course of business in each state in which we have operations, and based upon an investigation of these matters and discussion with legal counsel, we believe the ultimate outcome of such other legal proceedings to be individually, or in aggregate, not material at this time.

D. Environmental Matters . Our operations are subject to environmental statutes and regulations related to air quality, water quality, hazardous waste and solid waste. We believe that we are in substantial compliance with the environmental regulations currently applicable to our operations.

It is management's continued intent to address environmental issues in cooperation with regulatory authorities in such a manner as to achieve mutually acceptable compliance plans. However, there can be no assurance that fines and penalties will not be incurred. Management expects the majority of environmental assessment and remediation costs and asset retirement costs, further described below, to be recoverable through rates. See Note 12, "Regulatory Matters," for additional detail.

As of December 31, 2023 and 2022, we had recorded a liability of $ 80.0 million and $ 86.5 million, respectively, to cover environmental remediation at various sites. This liability is included in "Other accruals" and "Other noncurrent liabilities" in the Consolidated Balance Sheets. We recognize costs associated with environmental remediation obligations when the incurrence of such costs is probable and the amounts can be reasonably estimated. The original estimates for remediation activities may differ materially from the amount ultimately expended. The actual future expenditures depend on many factors, including laws and regulations, the nature and extent of impact and the method of remediation. These expenditures are not currently estimable at some sites. We periodically adjust our liability as information is collected and estimates become more refined. See Note 11, "Asset Retirement Obligations," for a discussion of all obligations, including those discussed below.

CERCLA. Our subsidiaries are potentially responsible parties at waste disposal sites under the CERCLA and similar state laws. Under CERCLA, each potentially responsible party can be held jointly, severally and strictly liable for the remediation costs as the EPA, or state, can allow the parties to pay for remedial action or perform remedial action themselves and request

reimbursement from the potentially responsible parties. Our affiliates have retained CERCLA environmental liabilities, including remediation liabilities, associated with certain current and former operations. At this time, we cannot estimate the full cost of remediating properties that have not yet been investigated, but it is possible that the future costs could be material to the Consolidated Financial Statements.

MGP. We maintain a program to identify and investigate former MGP sites where Gas Distribution Operations subsidiaries or predecessors may have liability. The program has identified 53 such sites where liability is probable. Remedial actions at many of these sites are being overseen by state or federal environmental agencies through consent agreements or voluntary remediation agreements.

We utilize a probabilistic model to estimate our future remediation costs related to MGP sites. The model was prepared with the assistance of a third party and incorporates our experience and general industry experience with remediating MGP sites. We complete an annual refresh of the model in the second quarter of each fiscal year. No material changes to the estimated future remediation costs were noted as a result of the refresh completed as of June 30, 2023. Our total estimated liability related to the facilities subject to remediation was $ 73.7 million and $ 81.0 million at December 31, 2023 and 2022, respectively. The liability represents our best estimate of the probable cost to remediate the MGP sites. We believe that it is reasonably possible that remediation costs could vary by as much as $ 15.1 million in addition to the costs noted above. Remediation costs are estimated based on the best available information, applicable remediation standards at the balance sheet date, and experience with similar facilities.

CCRs. NIPSCO continues to meet the compliance requirements established by the EPA for the regulation of CCRs. The CCR rule requirements currently in effect required revisions to previously recorded legal obligations associated with the retirement of certain NIPSCO facilities. The actual asset retirement costs related to the CCR rule may vary substantially from the estimates used to record the increased asset retirement obligation due to the uncertainty about the requirements that will be established by environmental authorities, compliance strategies that will be used and the preliminary nature of available data used to estimate costs. As allowed by the rule, NIPSCO will continue to collect data over time to determine the specific compliance solutions and associated costs and, as a result, the actual costs may vary.

E. Other Matters

Generation Transition. NIPSCO has executed several BTAs with developers to construct renewable generation facilities. NIPSCO has received IURC approval for all of its BTAs and PPAs. In addition to IURC approval, NIPSCO's purchase obligation under certain BTAs is dependent on timely completion of construction and either payment of the required purchase price or successful execution by NIPSCO of an agreement with a tax equity partner. NIPSCO and the tax equity partner, for each respective BTA, are obligated to make cash contributions to the JV that acquires the project at the date construction is substantially complete. Certain agreements require NIPSCO to make partial payments upon the developer's completion of significant construction milestones. Once the tax equity partner has earned its negotiated rate of return and we have reached the agreed upon contractual date, NIPSCO has the option to purchase at fair market value the remaining interest in the JV from the tax equity partner. On January 17, 2024, the IURC approved the full ownership of Cavalry and Dunns Bridge II which will allow those BTAs to be executed through direct ownership. On November 22, 2023, Gibson transitioned from a PPA to a BTA.

NIPSCO Minority Interest Transaction . On December 31, 2023, pursuant to the terms of the BIP Purchase Agreement and simultaneously with the closing of the NIPSCO Minority Interest Transaction, Blackstone, NIPSCO Holdings I NIPSCO Holdings II and NiSource entered into an Amended and Restated Limited Liability Company Agreement (the "LLC Agreement") of NIPSCO Holdings II. Specifically, under the terms of the LLC Agreement, Blackstone will provide up to $ 250 million in additional capital contributions over a three-year period after the closing, which the obligation is backed by an Equity Commitment Letter from an affiliate of Blackstone. Under the LLC Agreement, Blackstone is entitled to appoint two directors to the board of directors of NIPSCO Holdings II (the “Board”) so long as Blackstone (together with any approved affiliate) holds at least a 17.5 % percentage interest (as defined in the LLC Agreement). In connection with the closing, Blackstone appointed two directors to the Board, such that the Board is now comprised of seven directors, two appointed by Blackstone and five appointed by NiSource. The LLC Agreement also contains certain investor protections, including, among other things, requiring Blackstone approval for Holdings II to take certain major actions. In addition, the LLC Agreement contains certain terms regarding transfer rights and other obligations applicable to both Blackstone and NiSource. The LLC Agreement establishes, among other things, governance rights, exit rights, requirements for additional capital contributions,

mechanics for distributions, and other arrangements for Holdings II from and following the closing.

On January 31, 2024, BIP transferred a 4.5 % equity interest in NIPSCO Holdings II to BIP Blue Buyer VCOC L.L.C., a Delaware limited liability company and also an affiliate of Blackstone. Effective upon the closing of this transfer, the members of NIPSCO Holdings II entered into a Second Amended and Restated Limited Liability Company Operating Agreement of NIPSCO Holdings II (the "Amended LLC Agreement"). The two affiliates of Blackstone must vote their equity holdings under the Amended LLC Agreement as one investor.

Refer to Note 4, "Noncontrolling Interest," for detailed discussion of accounting for the NIPSCO Minority Interest Transaction.

20. Accumulated Other Comprehensive Loss

The following table displays the activity of Accumulated Other Comprehensive Loss, net of tax:

(in millions)	Gains and Losses on Securities [1]	Gains and Losses on Cash Flow Hedges [1]	Pension and OPEB Items [1]	Accumulated Other Comprehensive Loss [1]
Balance as of January 1, 2021	**$ 6.0**	**$ (147.9)**	**$ (14.8)**	**$ (156.7)**
Other comprehensive (loss) income before reclassifications	(3.5)	25.3	6.6	28.4
Amounts reclassified from accumulated other comprehensive loss	(0.4)	0.1	1.8	1.5
Net current-period other comprehensive (loss) income	(3.9)	25.4	8.4	29.9
Balance as of December 31, 2021	**$ 2.1**	**$ (122.5)**	**$ (6.4)**	**$ (126.8)**
Other comprehensive (loss) income before reclassifications	(13.7)	109.7	(8.9)	87.1
Amounts reclassified from accumulated other comprehensive loss	0.4	0.2	2.0	2.6
Net current-period other comprehensive (loss) income	(13.3)	109.9	(6.9)	89.7
Balance as of December 31, 2022	**$ (11.2)**	**$ (12.6)**	**$ (13.3)**	**$ (37.1)**
Other comprehensive income (loss) before reclassifications	3.1	(0.5)	(1.4)	1.2
Amounts reclassified from accumulated other comprehensive loss	0.8	0.3	1.2	2.3
Net current-period other comprehensive income (loss)	3.9	(0.2)	(0.2)	3.5
Balance as of December 31, 2023	**$ (7.3)**	**$ (12.8)**	**$ (13.5)**	**$ (33.6)**

[1] All amounts are net of tax. Amounts in parentheses indicate debits.

21. Business Segment Information

At December 31, 2023, our operations are divided into two primary reportable segments, the Gas Distribution Operations and the Electric Operations segments. The remainder of our operations, which are not significant enough on a stand-alone basis to warrant treatment as an operating segment, are presented as "Corporate and Other" and primarily are comprised of interest expense on holding company debt and unallocated corporate costs and activities. Refer to Note 3, "Revenue Recognition," for additional information on our segments and their sources of revenues. The following table provides information about our reportable segments. We use operating income as our primary measurement for each of the reported segments and make decisions on finance, dividends and taxes at the corporate level on a consolidated basis. Segment revenues include intersegment sales to affiliated subsidiaries, which are eliminated in consolidation. Affiliated sales are recognized on the basis of prevailing market, regulated prices or at levels provided for under contractual agreements. Operating income is derived from revenues and expenses directly associated with each segment.

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Year Ended December 31, *(in millions)*	2023	2022	2021
Operating Revenues			
Gas Distribution Operations			
Unaffiliated	**$ 3,720.4**	$ 4,007.2	$ 3,171.2
Intersegment	**12.3**	12.6	12.3
Total	**3,732.7**	4,019.8	3,183.5
Electric Operations			
Unaffiliated	**1,784.2**	1,830.9	1,696.3
Intersegment	**0.8**	0.8	0.8
Total	**1,785.0**	1,831.7	1,697.1
Corporate and Other			
Unaffiliated	**0.8**	12.5	32.1
Intersegment	**503.8**	465.0	460.3
Total	**504.6**	477.5	492.4
Eliminations	**(516.9)**	(478.4)	(473.4)
Consolidated Operating Revenues	**$ 5,505.4**	$ 5,850.6	$ 4,899.6

Year Ended December 31, *(in millions)*	2023	2022	2021
Operating Income (Loss)			
Gas Distribution Operations	**$ 901.9**	$ 915.8	$ 617.5
Electric Operations	**378.7**	362.4	387.8
Corporate and Other	**14.9**	(12.4)	1.6
Consolidated Operating Income	**$ 1,295.5**	$ 1,265.8	$ 1,006.9
Depreciation and Amortization			
Gas Distribution Operations	**$ 464.6**	$ 415.9	$ 383.0
Electric Operations	**400.9**	362.9	329.4
Corporate and Other	**42.7**	42.0	36.0
Consolidated Depreciation and Amortization	**$ 908.2**	$ 820.8	$ 748.4
Assets			
Gas Distribution Operations	**$ 18,122.8**	$ 16,986.5	$ 15,153.7
Electric Operations	**9,250.5**	7,992.6	7,178.9
Corporate and Other	**3,703.9**	1,757.5	1,824.3
Consolidated Assets	**$ 31,077.2**	$ 26,736.6	$ 24,156.9
Capital Expenditures [(1)]			
Gas Distribution Operations	**$ 1,715.2**	$ 1,682.3	$ 1,406.4
Electric Operations	**739.2**	574.5	517.4
Corporate and Other	**236.3**	41.2	16.6
Consolidated Capital Expenditures	**$ 2,690.7**	$ 2,298.0	$ 1,940.4

[(1)] Amounts differ from those presented on the Statements of Consolidated Cash Flows primarily due to the inclusion of capital expenditures in current liabilities, the capitalized portion of the Corporate Incentive Plan payout, and AFUDC Equity.

22. Other, Net

The following table displays the components of Other, Net included on the Statements of Consolidated Income:

Year Ended December 31, *(in millions)*	**2023**	2022	2021
Interest income	**$ 9.0**	$ 4.3	$ 4.0
AFUDC equity	**25.2**	15.1	13.1
Charitable contributions	**(1.8)**	(4.4)	(11.5)
Pension and other postretirement non-service cost [1]	**(24.0)**	27.6	35.5
Interest rate swap settlement gain	**—**	10.0	—
Miscellaneous	**(0.4)**	(0.4)	(0.3)
Total Other, net	**$ 8.0**	$ 52.2	$ 40.8

[1] See Note 16, "Pension and Other Postemployment Benefits," for additional information.

23. Interest Expense, Net

The following table displays the components of Interest Expense, Net included on the Statements of Consolidated Income:

Year Ended December 31, *(in millions)*	**2023**	2022	2021
Interest on long-term debt	**$ 404.1**	$ 344.5	$ 336.4
Interest on short-term borrowings	**108.9**	22.7	0.6
Debt discount/cost amortization	**13.5**	11.7	11.0
Accounts receivable securitization fees	**2.7**	2.5	1.4
Allowance for borrowed funds used and interest capitalized during construction	**(25.3)**	(6.7)	(4.6)
Debt-based post-in-service carrying charges	**(30.7)**	(21.1)	(14.7)
Other	**16.4**	8.0	11.0
Total Interest Expense, net	**$ 489.6**	$ 361.6	$ 341.1

24. Supplemental Cash Flow Information

The following table provides additional information regarding our Consolidated Statements of Cash Flows for the years ended December 31, 2023, 2022 and 2021:

Year Ended December 31, *(in millions)*	**2023**	2022	2021
Supplemental Disclosures of Cash Flow Information			
Non-cash transactions:			
Capital expenditures included in current liabilities	**$ 315.0**	$ 275.1	$ 245.7
Assets acquired under a finance lease	**64.5**	19.3	22.4
Assets acquired under an operating lease	**5.6**	8.8	6.0
Reclassification of other property to regulatory assets [(1)]	**—**	—	607.6
Assets recorded for asset retirement obligations [(2)]	**61.1**	6.3	12.0
Obligation to developer at formation of JV [(3)]	**—**	—	277.5
Purchase contract liability, net of fees and payments [(4)]	**—**	65.0	129.4
Schedule of interest and income taxes paid:			
Cash paid for interest on debt, net of interest capitalized amounts	**$ 433.9**	$ 343.8	$ 322.4
Cash paid for interest on finance leases	**8.6**	8.5	9.4
Cash paid for income taxes, net of refunds	**9.4**	7.2	5.4

[(1)] See Note 12, "Regulatory Matters," for additional information.
[(2)] See Note 11, "Asset Retirement Obligations," for additional information.
[(3)] Represents investing non-cash activity. See Note 4, "Noncontrolling Interest," for additional information.
[(4)] Refer to Note 6, "Equity," for additional information.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA (continued)

NISOURCE INC.

SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS

Twelve months ended December 31, 2023

($ in millions)	Balance Jan. 1, 2023	Additions: Charged to Costs and Expenses	Additions: Charged to Other Account[1]	Deductions for Purposes for which Reserves were Created	Balance Dec. 31, 2023
Reserves Deducted in Consolidated Balance Sheet from Assets to Which They Apply:					
Reserve for accounts receivable	$ 23.9	$ 23.4	$ 36.6	$ 61.0	$ 22.9
Reserve for deferred charges and other	1.0	—	0.3	—	1.3

Twelve months ended December 31, 2022

($ in millions)	Balance Jan. 1, 2022	Additions: Charged to Costs and Expenses	Additions: Charged to Other Account[1]	Deductions for Purposes for which Reserves were Created	Balance Dec. 31, 2022
Reserves Deducted in Consolidated Balance Sheet from Assets to Which They Apply:					
Reserve for accounts receivable	$ 23.5	$ 20.6	$ 36.4	$ 56.6	$ 23.9
Reserve for deferred charges and other	2.3	—	(1.3)	—	1.0

Twelve months ended December 31, 2021

($ in millions)	Balance Jan. 1, 2021	Additions: Charged to Costs and Expenses	Additions: Charged to Other Account[1]	Deductions for Purposes for which Reserves were Created	Balance Dec. 31, 2021
Reserves Deducted in Consolidated Balance Sheet from Assets to Which They Apply:					
Reserve for accounts receivable	$ 52.3	$ 18.3	$ 6.4	$ 53.5	$ 23.5
Reserve for deferred charges and other	—	—	2.3	—	2.3

[1] Charged to Other Accounts reflects the deferral of bad debt expense to a regulatory asset or the movement of the reserve between short term and long term.

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NISOURCE INC.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our chief executive officer and chief financial officer are responsible for evaluating the effectiveness of disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)). Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed by the Company in reports that are filed or submitted under the Exchange Act are accumulated and communicated to management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. Based upon that evaluation, our chief executive officer and chief financial officer concluded that, as of the end of the period covered by this report, disclosure controls and procedures were effective to provide reasonable assurance that financial information was processed, recorded and reported accurately.

Management's Annual Report on Internal Control over Financial Reporting

Our management, including our chief executive officer and chief financial officer, are responsible for establishing and maintaining internal control over financial reporting, as such term is defined under Rule 13a-15(f) or Rule 15d-15(f) promulgated under the Exchange Act. However, management would note that a control system can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Our management has adopted the 2013 framework set forth in the Committee of Sponsoring Organizations of the Treadway Commission report, Internal Control - Integrated Framework, the most commonly used and understood framework for evaluating internal control over financial reporting, as its framework for evaluating the reliability and effectiveness of internal control over financial reporting. During 2023, we conducted an evaluation of our internal control over financial reporting. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of the end of the period covered by this Annual Report on Form 10-K.

Deloitte & Touche LLP, our independent registered public accounting firm, issued an attestation report on our internal controls over financial reporting which is included herein.

Changes in Internal Controls

There have been no changes in our internal control over financial reporting during the most recently completed quarter covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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ITEM 9A. CONTROLS AND PROCEDURES

NISOURCE INC.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of NiSource Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of NiSource Inc. and subsidiaries (the "Company") as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2023, of the Company and our report dated February 21, 2024, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP
Columbus, Ohio
February 21, 2024

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ITEM 9B. OTHER INFORMATION

NISOURCE INC.

Director and Officer Trading Arrangements

During the year ended December 31, 2023, no director or Section 16 officer of the Company adopted, terminated or modified a 'Rule 10b5-1 trading arrangement' or 'non-Rule 10b5-1 trading arrangement,' as each term is defined in Item 408(a) of Regulation S-K.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

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PART III

NISOURCE INC.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Except for the information required by this item with respect to our executive officers included at the end of Part I of this report on Form 10-K, the information required by this Item 10 is incorporated herein by reference to the discussion in "Proposal 1 Election of Directors," "Corporate Governance - Board Committee Composition," "Corporate Governance - Code of Business Conduct," and "Delinquent Section 16(a) Reports" of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 13, 2024.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 is incorporated herein by reference to the discussion in "Compensation and Human Capital Committee Interlocks and Insider Participation," "2023 Director Compensation," "2023 Executive Compensation," "Compensation Discussion and Analysis (CD&A)," "Assessment of Risk," "2023 Pay Versus Performance," and "Compensation and Human Capital Committee Report" of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 13, 2024.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 is incorporated herein by reference to the discussion in "Security Ownership of Certain Beneficial Owners and Management," and "Equity Compensation Plan Information" of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 13, 2024.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item 13 is incorporated herein by reference to the discussion in "Corporate Governance - Policies and Procedures with Respect to Transactions with Related Persons" and "Corporate Governance - Director Independence" of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 13, 2024.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item 14 is incorporated herein by reference to the discussion in "Independent Registered Public Accounting Firm Fees" of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 13, 2024.

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PART IV

NISOURCE INC.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Financial Statements and Financial Statement Schedules

The following financial statements and financial statement schedules filed as a part of the Annual Report on Form 10-K are included in Item 8, "Financial Statements and Supplementary Data."

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Report of Independent Registered Public Accounting Firm (PCAOB ID: 34)	57
Statements of Consolidated Income	60
Statements of Consolidated Comprehensive Income	61
Consolidated Balance Sheets	62
Statements of Consolidated Cash Flows	64
Statements of Consolidated Stockholders' Equity	65
Notes to Consolidated Financial Statements	67
Schedule II	119

Exhibits

The exhibits filed herewith as a part of this report on Form 10-K are listed on the Exhibit Index below. Each management contract or compensatory plan or arrangement of ours, listed on the Exhibit Index, is separately identified by an asterisk.

Pursuant to Item 601(b), paragraph (4)(iii)(A) of Regulation S-K, certain instruments representing long-term debt of our subsidiaries have not been included as Exhibits because such debt does not exceed 10% of the total assets of ours and our subsidiaries on a consolidated basis. We agree to furnish a copy of any such instrument to the SEC upon request.

EXHIBIT NUMBER	DESCRIPTION OF ITEM
(1.1)	Form of Equity Distribution Agreement (incorporated by reference to Exhibit 1.1 of the NiSource Inc. Form 8-K filed on February 22, 2021).
(1.2)	Form of Master Forward Sale Confirmation (incorporated by reference to Exhibit 1.2 of the NiSource Inc. Form 8-K filed on February 22, 2021).
(2.1)	Separation and Distribution Agreement, dated as of June 30, 2015, by and between NiSource Inc. and Columbia Pipeline Group, Inc. (incorporated by reference to Exhibit 2.1 to the NiSource Inc. Form 8-K filed on July 2, 2015).
(3.1)	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Form 10-Q , filed with the Commission on August 3, 2015).
(3.2)	Certificate of Amendment of Amended and Restated Certificate of Incorporation of NiSource dated May 7, 2019 (incorporated by reference to Exhibit 3.1 of the NiSource Inc. Form 8-K filed on May 8, 2019).
(3.3)	Certificate of Amendment of Amended and Restated Certificate of Incorporation of NiSource dated May 23, 2023 (incorporated by reference to Exhibit 3.1 of the NiSource Inc. Form 8-K filed on May 24, 2023).
(3.4)	Bylaws of NiSource Inc., as amended and restated through August 9, 2022 (incorporated by reference to Exhibit 3.1 to the NiSource Inc. Form 8-K filed on August 10, 2022).
(3.5)	Certificate of Designations of 6.50% Series B Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock (incorporated by reference to Exhibit 3.1 of the NiSource Inc. Form 8-K filed on December 6, 2018).
(3.6)	Certificate of Designations of Series B-1 Preferred Stock (incorporated by reference to Exhibit 3.1 to the NiSource Inc. Form 8-K filed on December 27, 2018).
(4.1)	Indenture, dated as of March 1, 1988, by and between Northern Indiana Public Service Company ("NIPSCO") and Manufacturers Hanover Trust Company, as Trustee (incorporated by reference to Exhibit 4 to the NIPSCO Registration Statement (Registration No. 33-44193)).
(4.2)	First Supplemental Indenture, dated as of December 1, 1991, by and between Northern Indiana Public Service Company and Manufacturers Hanover Trust Company, as Trustee (incorporated by reference to Exhibit 4.1 to the NIPSCO Registration Statement (Registration No. 33-63870)).
(4.3)	Indenture Agreement, dated as of February 14, 1997, by and between NIPSCO Industries, Inc., NIPSCO Capital Markets, Inc. and Chase Manhattan Bank as trustee (incorporated by reference to Exhibit 4.1 to the NIPSCO Industries, Inc. Registration Statement (Registration No. 333-22347)).

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(4.4) Second Supplemental Indenture, dated as of November 1, 2000, by and among NiSource Capital Markets, Inc., NiSource Inc., New NiSource Inc., and The Chase Manhattan Bank, as trustee (incorporated by reference to Exhibit 4.45 to the NiSource Inc. Form 10-K for the period ended December 31, 2000).

(4.5) Indenture, dated November 14, 2000, among NiSource Finance Corp., NiSource Inc., as guarantor, and The Chase Manhattan Bank, as Trustee (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form S-3, dated November 17, 2000 (Registration No. 333-49330)).

(4.6) Form of 3.490% Notes due 2027 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on May 17, 2017).

(4.7) Form of 4.375% Notes due 2047 (incorporated by reference to Exhibit 4.2 to the NiSource Inc. Form 8-K filed on May 17, 2017).

(4.8) Form of 3.950% Notes due 2048 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on September 8, 2017).

(4.9) Second Supplemental Indenture, dated as of November 30, 2017, between NiSource Inc. and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.4 to Post-Effective Amendment No. 1 to Form S-3 filed November 30, 2017 (Registration No. 333-214360)).

(4.10) Third Supplemental Indenture, dated as of November 30, 2017, between NiSource Inc. and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.2 to the NiSource Inc. Form 8-K filed on December 1, 2017).

(4.11) Second Supplemental Indenture, dated as of February 12, 2018, between Northern Indiana Public Service Company and The Bank of New York Mellon, solely as successor trustee under the Indenture dated as of March 1, 1988 between the Company and Manufacturers Hanover Trust Company, as original trustee. (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 10-Q filed on May 2, 2018).

(4.12) Fourth Supplemental Indenture, dated as of December 18, 2023, between NiSource, Inc. and The Bank of New York Mellon, as trustee, relating to the 7.99% Medium-Term Notes due 2027 and the 6.78% Senior Notes due 2027 (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed on December 18, 2023).

(4.13) Deposit Agreement, dated as of December 5, 2018, among NiSource, Inc., Computershare Inc. and Computershare Trust Company, N.A., acting jointly as depositary, and the holders from time to time of the depositary receipts described therein (incorporated by reference to Exhibit 4.1 of the NiSource Inc. Form 8-K filed on December 6, 2018).

(4.14) Form of Depositary Receipt (incorporated by reference to Exhibit 4.1 of the NiSource Inc. Form 8-K filed on December 6, 2018).

(4.15) Amended and Restated Deposit Agreement, dated as of December 27, 2018, among NiSource, Inc., Computershare Inc. and Computershare Trust Company, N.A., acting jointly as depositary, and the holders from time to time of the depositary receipts described therein (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on December 27, 2018).

(4.16) Form of Depositary Receipt (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on December 27, 2018).

(4.17) Form of 2.950% Notes due 2029 (incorporated by reference to Exhibit 4.1 to NiSource Inc. Form 8-K filed on August 12, 2019).

(4.18) Amended and Restated NiSource Inc. Employee Stock Purchase Plan (incorporated by reference to Exhibit C to the Registrant's Definitive Proxy Statement on Schedule 14A, filed with the Commission on April 1, 2019).

(4.19) Form of 3.600% Notes due 2030 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on April 8, 2020).

(4.20) Form of 0.950% Notes due 2025 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on August 18, 2020).

(4.21) Form of 1.700% Notes due 2031(incorporated by reference to Exhibit 4.2 to the NiSource Inc. Form 8-K filed on August 18, 2020).

(4.22) Form of 5.000% Notes due 2052 (incorporated by reference to Exhibit 4.1 of the NiSource Inc. Form 8-K filed on June 10, 2022).

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(4.23) Form of 5.250% Notes due 2028 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on March 24, 2023).

(4.24) Form of 5.400% Notes due 2033 (incorporated by reference to Exhibit 4.2 to the NiSource Inc. Form 8-K filed on June 9, 2023).

(4.25) Description of NiSource Inc.'s Securities Registered Under Section 12 of the Exchange Act. **

(4.26) Form of 6.25% Notes due 2040 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on December 6, 2010).

(4.27) Form of 5.95% Notes due 2041 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on June 10, 2011).

(4.28) Form of 5.80% Notes due 2042 (incorporated by reference to Exhibit 4.2 to the NiSource Inc. Form 8-K filed on November 17, 2011).

(4.29) Form of 5.25% Notes due 2043 (incorporated by reference to Exhibit 4.2 to the NiSource Inc. Form 8-K filed on June 14, 2012).

(4.30) Form of 4.80% Notes due 2044 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on April 12, 2013).

(4.31) Form of 5.65% Notes due 2045 (incorporated by reference to Exhibit 4.1 to the NiSource Inc. Form 8-K filed on October 7, 2013).

(10.1) 2010 Omnibus Incentive Plan (incorporated by reference to Exhibit B to the NiSource Inc. Definitive Proxy Statement to Stockholders for the Annual Meeting held on May 11, 2010, filed on April 2, 2010).*

(10.2) First Amendment to the 2010 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.2 to the NiSource Inc. Form 10-K filed on February 18, 2014.)*

(10.3) 2010 Omnibus Incentive Plan (incorporated by reference to Exhibit C to the NiSource Inc. Definitive Proxy Statement to Stockholders for the Annual Meeting held on May 12, 2015, filed on April 7, 2015).*

(10.4) Second Amendment to the NiSource Inc. 2010 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed October 23, 2015.)*

(10.5) Form of Amendment to Restricted Stock Unit Award Agreement related to Vested but Unpaid NiSource Restricted Stock Unit Awards for Nonemployee Directors of NiSource entered into as of July 13, 2015 (incorporated by reference to Exhibit 10.3 to the NiSource Inc. Form 10-Q filed on November 3, 2015).*

(10.6) Supplemental Life Insurance Plan effective January 1, 1991, as amended, (incorporated by reference to Exhibit 2 to the NIPSCO Industries, Inc. Form 8-K filed on March 25, 1992).*

(10.7) Form of Restricted Stock Unit Award Agreement for Nonemployee Directors under the 2010 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 to NiSource Inc. Form 10-Q filed on August 2, 2011).*

(10.8) Form of Restricted Stock Unit Award Agreement for Nonemployee Directors under the 2010 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.18 to the NiSource Inc. Form 10-K filed on February 22, 2017). *

(10.9) Amended and Restated NiSource Inc. Executive Deferred Compensation Plan effective November 1, 2012 (incorporated by reference to Exhibit 10.21 to the NiSource Inc. Form 10-K filed on February 19, 2013).*

(10.10) Note Purchase Agreement, dated as of August 23, 2005, by and among NiSource Finance Corp., as issuer, NiSource Inc., as guarantor, and the purchasers named therein (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Current Report on Form 8-K filed on August 26, 2005).

(10.11) Amendment No. 1, dated as of November 10, 2008, to the Note Purchase Agreement by and among NiSource Finance Corp., as issuer, NiSource Inc., as guarantor, and the purchasers whose names appear on the signature page thereto (incorporated by reference to Exhibit 10.30 to the NiSource Inc. Form 10-K filed on February 27, 2009).

(10.12) Form of Change in Control and Termination Agreement (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 10-Q filed on August 2, 2017).*

(10.13) Registration Rights Agreement, dated as of May 2, 2018, by and among NiSource Inc. and the purchasers named therein (incorporated by reference to Exhibit 10.2 of the NiSource Inc. Form 8-K filed on May 2, 2018).

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(10.14)	Form of 2019 Performance Share Award Agreement under the 2010 Omnibus Incentive Plan. (incorporated by reference to Exhibit 10.45 of the NiSource Inc. Form 10-K filed on February 20, 2019).*
(10.15)	Amended and Restated NiSource Inc. Employee Stock Purchase Plan adopted as of February 1, 2019 (incorporated by reference to Exhibit C to the NiSource Inc. Definitive Proxy Statement to Stockholders for the Annual Meeting to be held on May 7, 2019, filed on April 1, 2019).
(10.16)	Form of Performance Share Award Agreement (incorporated by reference to Exhibit 10.39 of the NiSource Form 10-K filed on February 28, 2020). *
(10.17)	Form of Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.40 of the NiSource Form 10-K filed on February 28, 2020). *
(10.18)	Form of Cash-Based Award Agreement (incorporated by reference to Exhibit 10.41 of the NiSource Form 10-K filed on February 28, 2020). *
(10.19)	2020 Omnibus Incentive Plan (incorporated by reference to Exhibit A to the NiSource Inc. Definitive Proxy Statement to Stockholders for the Annual Meeting held on May 19, 2020 , filed on April 13, 2020).*
(10.20)	Form of Restricted Stock Unit Award Agreement for Nonemployee Directors under the 2020 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.2 of the NiSource Inc. Form 10-Q filed on August 5, 2020).*
(10.21)	NiSource Inc. Supplemental Executive Retirement Plan, as amended and restated effective November 1, 2020 (incorporated by reference to Exhibit 10.4 to the NiSource Inc. Form 10-Q filed on November 2, 2020).*
(10.22)	Pension Restoration Plan for NiSource Inc. and Affiliates, as amended and restated effective November 1, 2020 (incorporated by reference to Exhibit 10.5 to the NiSource Inc. Form 10-Q filed on November 2, 2020).
(10.23)	Savings Restoration Plan for NiSource Inc. and Affiliates, as amended and restated effective November 1, 2020 (incorporated by reference to Exhibit 10.6 to the NiSource Inc. Form 10-Q filed on November 2, 2020).*
(10.24)	First Amendment to the Savings Restoration Plan for NiSource Inc. and Affiliates dated October 12, 2023 and effective November 1, 2020. * **
(10.25)	NiSource Inc. Executive Severance Policy, as amended and restated effective October 19, 2020 (incorporated by reference to Exhibit 10.7 to the NiSource Inc. Form 10-Q filed on November 2, 2020).*
(10.26)	NiSource Next Voluntary Separation Program, effective as of August 5, 2020 (incorporated by reference to Exhibit 10.8 to the NiSource Inc. Form 10-Q filed on November 2, 2020).*
(10.27)	Form of Restricted Stock Unit Award Agreement. (incorporated by reference to Exhibit 10.53 to the NiSource Inc. Form 10-K filed on February 17, 2021).*
(10.28)	Form of Performance Share Unit Award Agreement. (incorporated by reference to Exhibit 10.54 to the NiSource Inc. Form 10-K filed on February 17, 2021).*
(10.29)	Form of Special Performance Share Unit Award Agreement. (incorporated by reference to Exhibit 10.55 to the NiSource Inc. Form 10-K filed on February 17, 2021).*
(10.30)	Sixth Amended and Restated Revolving Credit Agreement, dated as of February 18, 2022, among NiSource Inc., as Borrower, the Lenders party thereto, Barclays Bank PLC, as Administrative Agent, JPMorgan Chase Bank, N.A. and MUFG Bank, Ltd., as Co-Syndication Agents, Credit Suisse AG, New York Branch, Wells Fargo Bank, National Association, and Bank of America, National Association, as Co-Documentation Agents, Barclays Bank PLC and MUFG Bank, Ltd., as Co-Sustainability Structuring Agents, and Barclays Bank PLC, JPMorgan Chase Bank, N.A. MUFG Bank, Ltd., Credit Suisse Loan Funding LLC, Wells Fargo Securities, LLC, and BofA Securities, Inc., as Joint Lead Arrangers and Joint Bookrunners (incorporated by reference to Exhibit 10.1 of the NiSource Inc. Form 8-K filed on February 18, 2022).
(10.31)	Amendment No. 1 to the Sixth Amended and Restated Revolving Credit Agreement dated February 18, 2022, made as of August 23, 2023 by and among NiSource Inc., the financial institutions listed on the signature pages and Barclays Bank PLC, as administrative agent (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed on August 23, 2023).
(10.32)	First Amendment to the NiSource Inc. 2020 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 of the NiSource Inc. Form 10-Q filed on May 4, 2022).

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(10.33) Credit Agreement, dated as of December 20, 2022, among NiSource Inc., as Borrower, the lenders party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, PNC Capital Markets LLC, as Syndication Agent, Bank of America, N.A. and Wells Fargo Bank, N.A., as Co-Documentation Agents and JPMorgan Chase Bank, N.A., PNC Capital Markets LLC, Bank of America, N.A. and Wells Fargo Securities, LLC, as Joint Lead Arrangers and Joint Bookrunners (incorporated by reference to Exhibit 10.1 of the NiSource Inc. Form 8-K filed on December 20, 2022).

(10.34) Amendment No. 1 to the Credit Agreement dated December 20, 2022, made as of October 5, 2023 by and among NiSource Inc., the financial institutions listed on the signature pages and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed on October 5, 2023).

(10.35) Credit Agreement, dated as of November 9, 2023, among NiSource Inc., as Borrower, the lenders party there to, and U.S. Bank National Association, as Administrative Agent, as Sole Lead Arranger and Bookrunner (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed on November 9, 2023).

(10.36) Augmenting Lender Supplement, dated December 6, 2023, by and among NiSource Inc., Mizuho Bank, LTD, Bank of Montreal. and U.S. Bank National Association (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed on December 6, 2023).

(10.37) Form of Restricted Stock Unit Award Agreement.(incorporated by reference to Exhibit 10.57 to the NiSource Inc. Form 10-K filed on February 22, 2023).*

(10.38) Form of Performance Share Unit Award Agreement (incorporated by reference to Exhibit 10.5 8 to the NiSource Inc. Form 10-K filed on February 22, 2023).*

(10.39) Form of Restricted Stock Unit Award Agreement. (incorporated by reference to Exhibit 10.5 9 to the NiSource Inc. Form 10-K filed on February 22, 2023).*

(10.40) Form of Performance Share Unit Award Agreement. (incorporated by reference to Exhibit 10. 60 to the NiSource Inc. Form 10-K filed on February 22, 2023).*

(10.41) Purchase and Sale Agreement, dated as of June 17, 2023, among NiSource Inc., as the Parent, NIPSCO Holdings II LLC, as the Company, and BIP BLUE BUYER L.L.C., as the Investor (incorporated by reference to Exhibit 10.1 to the NiSource Inc. Form 8-K filed on June 20, 2023).

(10.42) Amendment No. 1 to the Purchase and Sale Agreement, dated as of July 6, 2023, among NiSource Inc., as the Parent, NIPSCO Holdings II LLC, as the Company, and BIP BLUE BUYER L.L.C., as the Investor (incorporated by reference to Exhibit 10.2 of the NiSource Inc. Form 10-Q filed on August 2, 2023).****

(10.43) Amended and Restated Limited Liability Company Agreement of NIPSCO Holdings II LLC, dated December 31, 2023 (incorporated by reference to Exhibit 10.1 of the NiSource Inc. Form 8-K filed on January 2, 2024).****

(10.44) Second Amended and Restated Limited Liability Company Agreement of NIPSCO Holdings II LLC, dated January 30, 2024. ** ****

(10.45) Form of 2024 CEO RSU Award Agreement (incorporated by reference to Exhibit 10.1 of the NiSource Inc. Form 8-K filed on January 26, 2024).*

(10.46) Form of 2024 CEO PSU Award Agreement (incorporated by reference to Exhibit 10.2 of the NiSource Inc. Form 8-K filed on January 26, 2024).*

(10.47) Form of RSU Award Agreement (for awards on or after 2024) (incorporated by reference to Exhibit 10.3 of the NiSource Inc. Form 8-K filed on January 26, 2024).*

(10.48) Form of PSU Award Agreement (for award s on or after 2024). * **

(21) List of Subsidiaries. **

(23) Consent of Deloitte & Touche LLP. **

(31.1) Certification of Chief Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. **

(31.2) Certification of Chief Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. **

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(32.2)	Certification of Chief Financial Officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith). **
(97.1)	NiSource Inc. Compensation Recoupment Policy. **
(101.INS)	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document. **
(101.SCH)	Inline XBRL Schema Document.**
(101.CAL)	Inline XBRL Calculation Linkbase Document.**
(101.LAB)	Inline XBRL Labels Linkbase Document.**
(101.PRE)	Inline XBRL Presentation Linkbase Document.**
(101.DEF)	Inline XBRL Definition Linkbase Document.**
(104)	Cover page Interactive Data File (formatted as inline XBRL, and contained in Exhibit 101.)

* Management contract or compensatory plan or arrangement of NiSource Inc.

** Exhibit filed herewith.

*** Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. NiSource agrees to furnish supplementally a copy of any omitted schedules or exhibits to the SEC upon request.

**** Schedules and similar attachments to this Exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company agrees to furnish supplementally a copy of any omitted schedule or exhibit to the U.S. Securities and Exchange Commission (the “SEC”) upon request.

References made to NIPSCO filings can be found at Commission File Number 001-04125. References made to NiSource Inc. filings made prior to November 1, 2000 can be found at Commission File Number 001-09779.

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ITEM 16. FORM 10-K SUMMARY

None.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

NiSource Inc.
(Registrant)

Date: February 21, 2024

By: /s/ LLOYD M. YATES
Lloyd M. Yates
President, Chief Executive Officer and Director
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

/s/ LLOYD M. YATES Lloyd M. Yates	President, Chief Executive Officer and Director (Principal Executive Officer)	Date: February 21, 2024
/s/ SHAWN ANDERSON Shawn Anderson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	Date: February 21, 2024
/s/ GUNNAR J. GODE Gunnar J. Gode	Vice President and Chief Accounting Officer (Principal Accounting Officer)	Date: February 21, 2024
/s/ KEVIN T. KABAT Kevin T. Kabat	Chairman of the Board	Date: February 21, 2024
/s/ PETER A. ALTABEF Peter A. Altabef	Director	Date: February 21, 2024
/s/ SONDRA L. BARBOUR Sondra L. Barbour	Director	Date: February 21, 2024
/s/ THEODORE H. BUNTING, JR. Theodore H. Bunting, Jr.	Director	Date: February 21, 2024
/s/ ERIC L. BUTLER Eric L. Butler	Director	Date: February 21, 2024
/s/ ARISTIDES S. CANDRIS Aristides S. Candris	Director	Date: February 21, 2024
/s/ DEBORAH A. HENRETTA Deborah A. Henretta	Director	Date: February 21, 2024
/s/ DEBORAH A.P. HERSMAN Deborah A. P. Hersman	Director	Date: February 21, 2024
/s/ WILLIAM D. JOHNSON William D. Johnson	Director	Date: February 21, 2024
/s/ MICHAEL E. JESANIS Michael E. Jesanis	Director	Date: February 21, 2024
/s/ CASSANDRA S. LEE Cassandra S. Lee	Director	Date: February 21, 2024

Exhibit 4.25

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

NiSource Inc. ("NiSource") has two classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"):

(i) common stock, par value $0.01 per share (the "common stock"); and
(ii) depositary shares, each representing a 1/1,000 th ownership interest in a share of 6.50% Series B Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock ("Series B Preferred Stock"), par value $0.01 per share, liquidation preference $25,000 per share and a 1 / 1,000' h ownership interest in a share of Series B-1 Preferred Stock ("Series B-1 Preferred Stock"), par value $0.01 per share, liquidation preference $0.01 per share (the "Depositary Shares").

The following is a summary description of the material terms of such securities. It may not contain all the information that is important to you. For additional information, you should refer to the provisions of our Amended and Restated Certificate of Incorporation, as amended (the "certificate of incorporation") and our bylaws, as amended and restated (the "bylaws"), each of which is an exhibit to the Annual Report on Form 10-K to which this description is an exhibit and are incorporated herein by reference.

GENERAL

Authorized Capital Stock

The authorized capital stock of NiSource consists of 770,000,000 shares, of which 750,000,000 are common stock, par value $0.01, and 20,000,000 are preferred stock, par value $0.01. The board of directors of NiSource has designated (i) 20,000 shares of the preferred stock as Series B Preferred Stock and (ii) 20,000 shares of the preferred stock as Series B-1 Preferred Stock. The shares of Series B Preferred Stock and Series B-1 Preferred Stock are represented by 20,000,000 Depositary Shares, each representing 1/1000th ownership interest in a share of each of the Series B Preferred Stock and the Series B-1 Preferred Stock.

Anti-Takeover Provisions

NiSource's certificate of incorporation includes provisions that may have the effect of deterring hostile takeovers or delaying or preventing changes in control of management of NiSource. More specifically, the certificate of incorporation provides that stockholders may not cumulate their votes and stockholder action may be taken only at a duly called meeting and not by written consent. In addition, NiSource 's bylaws contain requirements for advance notice of stockholder proposals and director nominations. These and other provisions of the certificate of incorporation and bylaws and Delaware law could discourage potential acquisition proposals and could delay or prevent a change in control of management of NiSource.

Under Delaware law, the approval of the holders of a majority of the outstanding shares of a class of NiSource's capital stock would be necessary to authorize any amendment to the certificate of incorporation that would adversely alter or change the powers, preferences or special right of such class of capital stock. Additionally, an amendment to the certificate of incorporation to increase or decrease the aggregate number of authorized shares of a class of capital stock requires the votes cast for the amendment by the holders of such class to exceed the votes cast against the amendment by the holders of such class. Further, pursuant to the certificates of designations for the Series B Preferred Stock and Series B-1 Preferred Stock, the holders of two-thirds of any series of such preferred stock must approve certain amendments to the certificate of incorporation

that would have a material adverse effect on the existing preferences, rights , powers, duties or obligations of such series of preferred stock. The effect of these provision may permit the holders of NiSource's outstanding shares of capital stock to block a proposed amendment to the certificate of incorporation in connection with a potential acquisition of NiSource if such amendment would adversely affect the powers, preferences or special rights of such capital stock.

NiSource is subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. Section 203 prevents certain Delaware corporations, including those whose securities are listed on a national securities exchange, such as the New York Stock Exchange, from engaging, under certain circumstances, in a "business combination" (as defined therein), which includes, among other things, a merger or sale of more than 10% of the corporation's assets, with any interested stockholder for three years following the date that the stockholder became an interested stockholder. An interested stockholder is a stockholder who acquired 15% or more of the corporation's outstanding voting stock or an affiliate or associate of such person.

DESCRIPTION OF COMMON STOCK

Liquidation Rights

In the event of any liquidation, dissolution or winding up of NiSource, whether voluntary or involuntary, after payment or provision for payment of the debts and other liabilities of NiSource and the distribution in full of all preferential amounts (including any accumulated and unpaid dividends) to which the holders of the Series B Preferred Stock, Series B-1 Preferred Stock and any other series of preferred stock of NiSource hereafter created are entitled, the holders of common stock will share ratably in the remaining assets in proportion to the number of shares of common stock held by them respectively. A consolidation or merger of NiSource with or into any other corporation, or any purchase or redemption of shares of any class of NiSource's capital stock, will not be deemed to be a liquidation, dissolution or winding up of NiSource's affairs.

Voting Rights

Except as otherwise required by Delaware law or as otherwise provided in the certificate of designations for the Series B Preferred Stock, Series B-1 Preferred Stock or any other series of preferred stock of NiSource hereafter created, holders of NiSource's common stock exclusively possess voting power for the election of NiSource's directors and all other matters requiring stockholder action. Each holder of common stock, if entitled to vote on a matter, is entitled to one vote per share. Holders of common stock are not entitled to cumulative voting rights. Holders of common stock will be notified of any stockholders' meeting according to applicable law.

Dividend Rights

Holders of common stock will be entitled to receive dividends, when, as and if declared by NiSource's board of directors out of legally available funds for such purpose in accordance with Delaware law, subject to the powers, preferences and rights afforded to the holders of the Series B Preferred Stock and any other series of preferred stock of NiSource hereafter created. Dividends may be paid in cash, capital stock or other property of NiSource.

NiSource is prohibited by the terms of its Series B Preferred Stock from declaring or paying dividends on any shares of NiSource's common stock (other than dividends payable solely in shares of its common stock) or redeeming, repurchasing or acquiring shares of its common stock unless full cumulative dividends have been paid with respect to the Series B Preferred Stock through the most recently completed respective dividend periods.

NiSource is an energy holding company that derives substantially all of its revenues and earnings from the operating results of the rate-regulated businesses of its subsidiaries. Accordingly, NiSource's ability to pay dividends on its capital stock is dependent primarily upon the earnings and cash flows of its subsidiaries and the distribution or other payment of such earnings to NiSource.
NiSource's subsidiaries are separate and distinct legal entities and have no obligation, contingent or otherwise, to pay any amounts on the capital stock of NiSource or to make any funds available therefor, whether by dividends, loans or other payments.

No Preemptive Rights

Holders of NiSource's common stock are not entitled to, as holders of common stock, any preemptive rights with respect to any shares of NiSource's capital stock or any of its securities convertible into or exercisable for its capital stock.

SERIES B PREFERRED STOCK

Ranking

The Series B Preferred Stock ranks, with respect to dividends and distributions upon liquidation: (i) senior to NiSource's common stock and any other class or series of capital stock that does not expressly provide that it ranks on a parity with or senior to the Series B Preferred Stock with respect to dividends and such distributions (the "Series B Junior Securities"); (ii) on a parity with the Series B-1 Preferred Stock (except with respect to dividends) and any other class or series of capital stock that does not expressly provide that it ranks junior or senior to the Series B Preferred Stock with respect to dividends and such distributions (the "Series B Parity Securities"); and (iii) junior to any class or series of capital stock that expressly provides that it ranks senior to the Series B Preferred Stock with respect to dividends and such distributions (the "Series B Senior Securities").

Liquidation Rights

In the event of any liquidation, the holders of the Series B Preferred Stock are entitled to receive out of NiSource's assets available for distribution to stockholders (subject to the rights of holders of Series B Senior Securities and Series B Parity Securities in respect of distributions upon the liquidation) before any distribution of assets is made to holders of Series B Junior Securities, a liquidation preference of $25,000 per share. Any accumulated and unpaid dividends on the Series B Preferred Stock and Series B Parity Securities will be paid prior to any distributions in liquidation. A consolidation or merger of NiSource with or into any other entity will not be deemed to be a liquidation.

Voting Rights

The Series B Preferred Stock has no voting, consent or approval rights except as set forth below or as otherwise provided by Delaware law. On any matter described below in which the holders of the Series B Preferred Stock are entitled to vote as a class (whether separately or together with the holders of any Series B Parity Securities), such holders will be entitled to twenty-five votes per share. The Series B Preferred Stock is paired with the Series B-1 Preferred Stock and the holders of the Series B-1 Preferred Stock are entitled to the voting rights described below under the heading "-Series B-1 Preferred Stock-Voting Rights."

Adverse Changes. Unless NiSource has received the affirmative vote or consent of the holders of at least two-thirds of the outstanding shares of Series B Preferred Stock, voting as a single class, no amendment to the certificate of incorporation may be adopted that would have a material adverse effect on the existing preferences, rights, powers, duties or obligations of the Series B Preferred Stock. However, such voting requirement shall not be implicated by any amendment to the certificate of incorporation (i) relating to the issuance of additional shares of preferred stock (subject to the voting rights discussed in the following paragraph) and (ii) in connection with a merger or another transaction in which either the Series B Preferred Stock remains outstanding or is exchanged for a series of preferred stock of the surviving entity, in either case, with the terms thereof materially unchanged in any respect adverse to the holders of Series B Preferred Stock.

Parity and Senior Preferred Stock. Unless NiSource has received the affirmative vote or consent of the holders of at least two thirds of the outstanding shares of Series B Preferred Stock, voting as a class together with holders of any Series B Parity Securities and upon which like voting rights have been conferred and are exercisable, NiSource may not: (i) create or issue any Series B Parity Securities (including any additional shares of Series B Preferred Stock, but excluding any payments-in-kind on such shares) if the cumulative dividends payable on the outstanding shares of Series B Preferred Stock (or Series B Parity Securities, if applicable) are in arrears; or (ii) create or issue any Series B Senior Securities.

Dividends

Holders of Series B Preferred Stock will be entitled to receive, when, as and if declared by NiSource's board of directors out of legally available funds for such purpose, cumulative quarterly cash dividends (subject to the dividend rights of any Series B Parity Securities or Series B Senior Securities) at an initial rate of 6.50% per annum of the $25,000 liquidation preference per share (equal to
$1,625 per share per annum). On and after March 15, 2024, dividends will accumulate for each five-year period thereafter according to a formula based on the rate of certain U.S. Treasury securities with a five year maturity plus the applicable margin.

NiSource is prohibited by the terms of the Series B Preferred Stock from declaring or paying dividends on any Series B Junior Securities (other than a dividend payable solely in such Series B Junior Securities) or redeeming, repurchasing or acquiring shares of any Series B Junior Securities unless full cumulative dividends have been paid on all outstanding shares of Series B Preferred Stock and any Series B Parity Securities entitled to dividends through the most recently completed respective dividend periods. In addition, NiSource may not repurchase, redeem or otherwise acquire any shares of Series B Parity Securities, unless
(i) effected pursuant to a purchase or exchange offer made on the same relative terms to all holders of such shares of preferred stock or (ii) (A) full cumulative dividends have been paid or provided for on all outstanding shares of such preferred stock entitled to dividends through the most recently completed respective dividend periods and
(B) NiSource expects to have sufficient funds to pay in full the next dividend on all such outstanding shares of preferred stock.

Redemption

NiSource may redeem the Series B Preferred Stock, at its option, in whole or in part, on March 15, 2024 or on any fifth anniversary thereafter by paying $25,000 per share plus an amount equal to all accumulated and unpaid dividends thereon to, but not including, the redemption date, whether or not declared. In addition, following the occurrence of a "Ratings Event" (as defined in the certificate of designations of the Series B Preferred Stock), NiSource may, at its option, redeem the Series B Preferred Stock in whole, but not in part, at a redemption price equal to $25,500 per share (102% of the liquidation preference) plus an amount equal to all accumulated and unpaid dividends thereon to the redemption date, whether or not declared.

No Conversion or Preemptive Rights

The Series B Preferred Stock is not convertible into any other class of NiSource's capital stock and the holders of the Series B Preferred Stock do not, as holders of Series B Preferred Stock, have any preemptive rights with respect to any shares of NiSource's capital stock or any of its securities convertible into or exercisable for its capital stock.

SERIES B-1 PREFERRED STOCK

The Series B-1 Preferred Stock was issued as a distribution with respect to the Series B Preferred Stock in order to enhance the voting rights of the Series B Preferred Stock to comply with the New York Stock Exchange's minimum voting rights policy. The Series B-1 Preferred Stock is paired with the Series B Preferred Stock and may not be transferred, redeemed or repurchased except in connection with the simultaneous transfer, redemption or repurchase of the underlying Series B Preferred Stock, and upon the transfer, redemption or repurchase of the underlying Series B Preferred Stock, the same number of shares of Series B-1 Preferred Stock must simultaneously be

transferred (to the same transferee), redeemed or repurchased, as the case may be. A summary of certain powers, preferences, rights, qualifications, limitations and restrictions of the Series B-1 Preferred Stock are set forth below.

Ranking

The Series B-1 Preferred Stock ranks, with respect to distributions upon liquidation: (i) senior to NiSource's common stock and any other class or series of capital stock that does not expressly provide that it ranks on a parity with or senior to the Series B-1 Preferred Stock with respect to such distributions (the "Series B-1 Junior Securities"); (ii) on a parity with the Series B Preferred Stock and any other class or series of capital stock that does not expressly provide that it ranks junior or senior to the Series B-1 Preferred Stock with respect to such distributions (the "Series B-1 Parity Securities"); and (iii) junior to any class or series of capital stock that expressly provides that it ranks senior to the Series B-1 Preferred Stock with respect to such distributions (the "Series B-1 Senior Securities").

Liquidation Rights

In the event of any liquidation, the holders of the Series B-1 Preferred Stock are entitled to receive out of NiSource's assets available for distribution to stockholders (subject to the rights of holders of Series B-1 Senior Securities and Series B-1 Parity Securities in respect of distributions upon liquidation), before any distribution of assets is made to holders of Series B-1 Junior Securities, a liquidation preference of$0.0l per share. Any accumulated and unpaid dividends on the Series B-1 Parity Securities will be paid prior to any distributions in liquidation. A consolidation or merger of NiSource with or into any other entity will not be deemed to be a liquidation.

Voting Rights

The Series B-1 Preferred Stock has no voting, consent or approval rights except as set forth below or as otherwise provided by Delaware law. On any matter described below in which the holders of the Series B-1 Preferred Stock are entitled to vote as a class (whether separately or together with the holders of any Series B-1 Parity Securities), such holders will be entitled to twenty-five votes per share.

Adverse Changes. Unless NiSource has received the affirmative vote or consent of the holders of at least two-thirds of the outstanding shares of Series B-1 Preferred Stock, voting as a single class, no amendment to the certificate of incorporation may be adopted that would have a material adverse effect on the existing preferences, rights, powers, duties or obligations of the Series B-1 Preferred Stock. However, such voting requirement shall not be implicated by any amendment to the certificate of incorporation (i) relating to the issuance of additional shares of preferred stock and (ii) in connection with a merger or another transaction in which either the Series B-1 Preferred Stock remains outstanding or is exchanged for a series of preferred stock of the surviving entity, in either case, with the terms thereof materially unchanged in any respect adverse to the holders of Series B-1 Preferred Stock.

Election of Directors upon Nonpayment Events. If and whenever dividends on any shares of Series B Preferred Stock shall not have been declared and paid for at least six dividend periods, whether or not consecutive (a "Nonpayment Event"), the number of directors then constituting NiSource's board of directors will automatically be increased by two and the holders of Series B-1 Preferred Stock, voting as a class together with the holders of any outstanding Series B-1 Parity Securities having like voting rights that are exercisable at that time ("Director Voting Preferred Stock"), shall be entitled to elect the two additional directors (the "Preferred Stock Directors"), provided that (i) such election does not violate the corporate governance requirements of the New York Stock Exchange that companies must have a majority of independent directors and (ii) such director is not prohibited or disqualified from serving as a director of NiSource by any applicable law. The Preferred Stock Directors shall each be entitled to one vote per director on any matter before NiSource's board of directors for a vote.

When all accumulated and unpaid dividends on the Series B Preferred Stock have been paid in full, then (a) the right of the holders of Series B-1 Preferred Stock to elect the Preferred Stock Directors shall cease, (b) the terms of office of the Preferred Stock Directors will automatically terminate and (c) the number of directors constituting NiSource's board of directors will automatically decrease by two. Any Preferred Stock Director may be removed at any time without cause

by holders of a majority of the outstanding shares of the Series B-1 Preferred Stock and Director Voting Preferred Stock (voting together as a single class). So long as a Nonpayment Event continues, any vacancy in the office of a Preferred Stock Director (after the initial election of Preferred Stock Directors) may be filled by the written consent of the Preferred Stock Director remaining in office (if any), in lieu of a vote by the Series B-1 Preferred Stock and Voting Preferred Stock (voting together as a single class).

Dividends

Holders of Series B-1 Preferred Stock are not entitled to receive dividends.

Redemption

The shares of Series B-1 Preferred Stock are subject to mandatory redemption, in whole or in part, at a redemption price of
$0.01 per share upon the redemption of the underlying shares of Series B Preferred Stock with which such shares of Series B-1 Preferred Stock are paired . The shares of Series B-1 Preferred Stock are not otherwise subject to redemption.

No Conversion or Preemptive Rights

The Series B-1 Preferred Stock is not convertible into any other class of NiSource's capital stock and the holders of the Series B-1 Preferred Stock do not, as holders of Series B-1 Preferred Stock, have any preemptive rights with respect to any shares of NiSource 's capital stock or any of its securities convertible into or exercisable for its capital stock.

DEPOSITARY SHARES REPRESENTING SERIES B PREFERRED STOCK AND SERIES B-1 PREFERRED STOCK

General

Each Depositary Share represents a 1/1,000th ownership interest in a share of the Series B Preferred Stock and a 1/1,000th ownership interest in a share of the Series B-1 Preferred Stock. The Depositary Shares are evidenced by depositary receipts issued pursuant to a deposit agreement (the "Deposit Agreement") among NiSource, Computershare Inc. and Computershare Trust Company, N.A., acting jointly as the depositary (the "depositary"), and the holders from time to time of the depositary receipts evidencing the Depositary Shares. This description of the Depositary Shares is qualified in its entirety by the provisions of the respective certificates of designations of the Series B Preferred Stock and Series B-1 Preferred Stock and the Deposit Agreement, each of which is an exhibit to the Annual Report on Form 10-K to which this description is an exhibit and are incorporated herein by reference.

Dividends and Other Distributions

The depositary will distribute any cash dividends or other cash distributions received in respect of the deposited Series B Preferred Stock and Series B-1 Preferred Stock to the record holders of Depositary Shares relating to the underlying Series B Preferred Stock and Series B-1 Preferred Stock in proportion to the number of Depositary Shares held by the holders. The depositary will distribute any property received by it other than cash to the record holders of Depositary Shares entitled to those distributions, unless it determines, in consultation with NiSource , that the distribution cannot be made proportionally among those holders or that it is not feasible to make a distribution. In that event, the depositary may, with NiSource's approval, sell the property (at a public or private sale) and distribute the net proceeds from the sale to the holders of the Depositary Shares in proportion to the number of Depositary Shares they hold.

Redemption of Depositary Shares

If NiSource redeems the Series B Preferred Stock and Series B-1 Preferred Stock represented by the Depositary Shares, a proportionate number of Depositary Shares will be redeemed from the proceeds received by the depositary resulting from the redemption of the Series B Preferred Stock and Series B-1 Preferred Stock held by the depositary . The redemption price per depositary share will be equal to 1/1,000th of the redemption price per share payable with respect to each of the Series B Preferred Stock and Series B- l Preferred Stock. Whenever NiSource redeems shares of Series B Preferred Stock and Series B-1 Preferred Stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of Depositary Shares representing shares of Series B Preferred Stock and Series B-1 Preferred Stock so redeemed.

Voting the Preferred Stock

When the depositary receives notice of any meeting at which the holders of the Series B Preferred Stock and/or Series B-1 Preferred Stock are entitled to vote , the depositary will mail , or otherwise transmit by an authorized method, the information contained in the notice to the record holders of the Depositary Shares. Each record holder of the Depositary Shares on the record date , which will be the same date as the record date for the Series B Preferred Stock and/or Series B-1 Preferred Stock, may instruct the depositary to vote the amount of the Series B Preferred Stock and / or Series B-1 Preferred Stock entitled to vote represented by the holder's Depositary Shares. To the extent practicable , the depositary will vote the number of shares entitled to vote represented by such Depositary Shares in accordance with the instructions it receives. If the depositary does not receive specific instructions from the holders of any Depositary Shares representing the Series B Preferred Stock and/or Series B-1 Preferred Stock entitled to vote , it will abstain from voting the number of shares of Series B Preferred Stock and/or Series B-1 Preferred Stock represented thereby.

Amendment and Termination of the Depositary Agreement

The form of depositary receipt evidencing the Depositary Shares and any provision of the Depositary Agreement may be amended by agreement between the depositary and NiSource . However, any amendment that materially and adversely alters the rights of the holders of Depositary Shares will not be effective unless such amendment has been approved by the holders of at least a majority of the Depositary Shares then outstanding . The Depositary Agreement may be terminated by NiSource upon sixty days' prior written notice to the depositary or by the depositary upon mailing notice to NiSource and the holders of all Depositary Shares then outstanding if at any time sixty days have expired after the depositary provided written notice to NiSource of its resignation and a successor depositary has not been appointed. The Depositary Agreement shall automatically terminate after there has been a final distribution in respect of the Series B Preferred Stock and Series B-1 Preferred Stock in connection with NiSource's liquidation, dissolution or winding and such distribution has been distributed to the holders of Depositary Shares.

Exhibit 10.24

FIRST AMENDMENT TO THE SAVINGS RESTORATION PLAN FOR NISOURCE INC. AND AFFILIATES

(AMENDED AND RESTATED EFFECTIVE NOVEMBER 1, 2020)

BACKGROUND

A. NiSource Inc. (the "Company") maintains the Savings Restoration Plan for NiSource Inc. and Affiliates, amended and restated effective November 1, 2020 (the "Plan").

B. The Company desires to amend the Plan to increase the amount of the Next-Gen Employer credits from 3.0% of Compensation to 4.5% of Compensation, consistent with the Retirement Savings Plan.

C. Article X of the Plan gives the Company the ability to amend the Plan.

PLAN AMENDMENT

Effective January 1, 2023, the Plan is amended as set forth below.

1. Effective January 1, 2023, Section 4.2(c) of the Plan is deleted in its entirety and replaced with the following:

(c) Next-Gen Contribution Credits . With respect to a Participant who is classified by the Employer as an "exempt employee" and who is hired or rehired on or after January 1, 2010, the amount of the Employer credits for a Participant, effective January 1, 2023, shall equal (1) minus (2) below:

(1) The total amount of the Employer Contribution that otherwise would have been contributed to the Basic Plan in an amount equal to 4.5% of the Participant's Compensation (as defined under this Plan) without regard to the Limits;

(2) The actual amount of the Employer Contribution under the Basic Plan that was contributed to the Participant in an amount equal to 4.5% of the Participant's Compensation (as defined under the Basic Plan).

This amount shall be credited to any applicable Participant in addition to any amounts he or she may be entitled to under Sections 4.2(a) and 4.2(b) of this Plan and regardless of whether such Participant has signed a written agreement to participate in this Plan.

Notwithstanding the foregoing, effective January 1, 2023, a Participant who is in job scope level D1 or D2 shall receive an amount of Employer credits equal to the difference between (1) minus (2) below:

(1) The total amount of the Employer Contribution that otherwise would have been contributed to the Basic Plan in an amount equal to 4.5% of the Participant's Compensation (as defined under this Plan);

(2) The actual amount of the Employer Contribution under the Basic Plan that was contributed to the Participant in an amount equal to 4.5% of the Participant's Compensation (as defined under the Basic Plan).

This amount shall be credited to any applicable Participant regardless of whether such Participant has signed a written agreement to participate in this Plan.

2. The remainder of the Plan shall remain unchanged.

IN WITNESS WHEREOF, the Company has caused this First Amendment to be executed on its behalf, by its officer duly authorized, this 12 th day of October, 2023.

NISOURCE INC.

By: __/s/ Melanie Berman _____

Exhibit 10.44

SECOND AMENDED AND RESTATED

LIMITED LIABILITY COMPANY AGREEMENT

OF

NIPSCO HOLDINGS II LLC

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SECOND AMENDED & RESTATED
LIMITED LIABILITY COMPANY AGREEMENT

This SECOND AMENDED & RESTATED LIMITED LIABILITY COMPANY AGREEMENT (this " Agreement ") of NIPSCO Holdings II LLC (the " Company ") is made and entered into as of January 31, 2024 (the " Effective Date "), by and among the Company, NIPSCO Holdings I LLC, an Indiana limited liability company (the " NiSource Member "), BIP Blue Buyer L.L.C., a Delaware limited liability company (the " BIP Investor Member "), BIP Blue Buyer VCOC L.L.C., a Delaware limited liability company (the " VCOC Investor Member " and together with the BIP Investor Member, the " Investor Members "), and solely for the purposes of Article VI , NiSource Inc., a Delaware corporation (the " Parent "). The Company, the NiSource Member, the BIP Investor Member, and the VCOC Investor Member are each sometimes referred to herein as a " Party " and, together, as the " Parties ".

RECITALS

1. On June 17, 2023, the Company, the NiSource Member, the Parent and the BIP Investor Member entered into the PSA, pursuant to which the Company, upon the closing of the transactions contemplated thereby, sold and issued to the BIP Investor Member Membership Interests constituting a 19.9% Percentage Interest.

2. On December 31, 2023 (the " Investment Closing Date "), the Company, the NiSource Member, and the BIP Investor Member entered into that certain Amended and Restated Limited Liability Company Agreement of the Company.

3. On the Investment Closing Date, NiSource, Inc., the NiSource Member, the Company, the BIP Investor Member, and the VCOC Investor Member entered into that certain Membership Interest Assignment Agreement pursuant to which the BIP Investor Member assigned to the VCOC Investor Member 4.5159% of the Membership Interests of the Company, effective as of the Effective Date.

4. Upon the execution and delivery hereof, the NiSource Member will be the owner of Membership Interests constituting an 80.1% Percentage Interest, the BIP Investor Member will be the owner of Membership Interests constituting a 15.3841% Percentage Interest, and the VCOC Investor Member will be the owner of Membership Interests constituting a 4.5159% Percentage Interest.

5. The Parties desire to, and by the execution and delivery of this Agreement hereby do, amend and restate in its entirety the Amended and Restated Limited Liability Company Agreement of the Company, dated as of the Investment Closing Date, in order to provide for, among other things, the admission of the VCOC Investor Member as a Member, the rights and responsibilities of the Parties with respect to the governance, financing and operation of the Company, and certain other matters relating to the business arrangements between the Parties with respect to the Company.

Therefore, in consideration of the mutual covenants and agreements contained in this Agreement and other good and valid consideration the receipt of which is hereby acknowledged by each Party, and intending to be legally bound hereby, the Parties hereby agree as follows:

Article I
GENERAL MATTERS

Section 1.1 Formation . The Parent formed the Company as a limited liability company pursuant to the Act. The Members ratify the organization and formation of the Company and continue the Company, pursuant to the terms and conditions of this Agreement.

Section 1.2 Name . The name of the Company is "NIPSCO Holdings II LLC".

Section 1.3 Purpose .

(a) The purpose of the Company is to, either on its own behalf or through its Subsidiaries, engage in all lawful business for which limited liability companies may be formed under the Act in furtherance of the following activities (the " Company Business "):

(i) owning and operating a public utility engaged in the (A) generation, transmission, distribution, marketing and sale of electricity and/or (B) transmission and distribution of natural gas, within the State of Indiana;

(ii) making direct or indirect investments in, or developing, constructing, commercializing, owning, operating or maintaining assets and facilities relating to the electric or gas business, including renewable energy projects;

(iii) undertaking any business activities conducted as of the Effective Date by the Company or its Subsidiaries;

(iv) engaging in such other activities that are (A) eligible to include in rate base and (B) expected to be eligible to earn a return through rates approved by IURC or FERC; or

(v) engaging in such other activities that the Board deems necessary, convenient or incidental to the conduct, promotion or attainment of the activities described in the foregoing subclauses (i) , (ii) , (iii) and (iv) .

(b) The Company shall not engage in any activity or conduct inconsistent with the Company Business or any reasonable extensions thereof.

Section 1.4 Registered Office . The address of the registered office of the Company in the State of Delaware is 251 Little Falls Drive, Wilmington Delaware, 19808.

Section 1.5 Registered Agent . The name of the registered agent of the Company for service of process on the Company in the State of Delaware is Corporation Service Company.

Section 1.6 Members .

(a) The NiSource Member and each of the Investor Members is hereby or was heretofore admitted to the Company as a Member, and hereby continues as such. Unless admitted to the Company as a Member as provided in this Agreement, no Person shall be, in fact or for any other purpose, a Member.

(b) No Member shall have any right to withdraw from the Company except as expressly set forth herein. No Membership Interest is redeemable or repurchasable by the Company at the option of a Member. Except as expressly set forth in this Agreement, no event affecting a Member (including dissolution, bankruptcy or insolvency) shall affect its obligations under this Agreement or affect the Company.

(c) The Members' names, addresses and Percentage Interests are set forth on the Schedule of Members attached to this Agreement as Schedule 1 .

(d) No Member, acting in its capacity as a Member, shall be entitled to vote on any matter relating to the Company other than as specifically required by the Act or as expressly set forth in this Agreement.

(e) Except as otherwise expressly set forth in this Agreement, any matter requiring the action, consent, vote or other approval of the Members hereunder shall require action, consent, vote or approval of the Members owning at least a majority of the Membership Interests. Except as otherwise expressly set forth in this Agreement, the VCOC Investor Member hereby irrevocably makes, constitutes and appoints the BIP Investor Member as the VCOC Investor Member's true and lawful attorney-in-fact, with full power of substitution, to act, consent or otherwise approve any matter requiring action, consent

or other approval by the VCOC Investor Member in such forms and on such terms and conditions as the BIP Investor Member may deem necessary or desirable. In addition, except as otherwise expressly set forth in this Agreement, the BIP Investor Member shall have the right and power to vote, and VCOC Investor Member grants to the BIP Investor Member its irrevocable proxy to vote, Membership Interests owned by the VCOC Investor Member, together with the Membership Interests owned by BIP Investor Member, with respect to, any matter requiring the consent, vote or other approval of the 19.9% Membership Interest held by the Investor Members, collectively. The execution of any documents by the BIP Investor Member on behalf of the VCOC Investor Member shall be conclusive evidence of its authority as attorney-in-fact or as the holder of the irrevocable proxy for the VCOC Investor Member and generally to act, consent, vote or otherwise approve any matter requiring the action, consent, vote or other approval of the Members under this Agreement. The VCOC Investor Member acknowledges the appointment of the BIP Investor Member as its attorney-in-fact and agrees that the appointment of the BIP Investor Member as its attorney-in-fact and the grant of the irrevocable proxy to the BIP Investor Member under this Section 1.6(e) is coupled with an interest and may not be revoked and will survive insolvency or bankruptcy of the VCOC Investor Member. The BIP Investor Member accepts its appointment and authorization to act as attorney-in-fact and as proxy holder for the VCOC Investor Member. Except as otherwise expressly set forth in this Agreement, the power and authority granted under this Section 1.6(e) will be exclusive.

(f) A Member shall automatically cease to be a Member upon Transfer of all of such Member's Membership Interests made pursuant to and in accordance with the terms of this Agreement. Immediately upon any such permissible Transfer, the Company shall cause such Member to be removed from Schedule 1 to this Agreement and to be substituted by the transferee or transferees in such Transfer, and, except as otherwise expressly provided for herein, such transferee or transferees shall be deemed to be a "Party" for all purposes hereunder and all references to the NiSource Member, the BIP Investor Member, or the VCOC Investor Member, as the case may be, shall be deemed to be references to such transferee or transferees (notwithstanding, in the case that more than one Person is a transferee of such Membership Interests, that such defined terms as used herein are singular in number).

Section 1.7 Powers. The Company shall have the power and authority to do any and all acts necessary or convenient to or in furtherance of the purposes described in Section 1.3, including all power and authority, statutory or otherwise, possessed by, or which may be conferred upon, limited liability companies under the Laws of the State of Delaware.

Section 1.8 Limited Liability Company Agreement. This Agreement shall constitute the "limited liability company agreement" of the Company for the purposes of the Act. The rights, powers, duties, obligations and liabilities of the Members shall be determined pursuant to the Act and this Agreement. To the extent that the rights, powers, duties, obligations and liabilities of any Member are different by reason of any provision of this Agreement than they would be under the Act in the absence of such provision, this Agreement shall control to the fullest extent permitted by the Act and other applicable Law.

Section 1.9 Issuance of Additional Membership Interests. Except for (a) the issuance of any Excluded Membership Interests or (b) the issuance of Membership Interests made pursuant to and in accordance with Section 5.1(c), Article VII, or as otherwise permitted herein, the Company shall not issue any new Membership Interests, or any securities convertible into Membership Interests or other equity interests of the Company, to any Third Party or to the Members other than in accordance with their respective Percentage Interests.

Section 1.10 No State Law Partnership. The Members intend that the Company not be a partnership (including a limited partnership) or joint venture, and that no Member be a partner or joint venturer of any other Member by virtue of this Agreement, for any purposes, and neither this Agreement nor any other document entered into by the Company or any Member relating to the subject matter hereof shall be construed to suggest otherwise. Nothing in this Section 1.10 shall control with respect to income tax treatment of the Company.

Article II
MANAGEMENT

Section 1.1 Directors

. Subject to the provisions of the Act and any limitations in this Agreement as to action required to be authorized or approved by the Members, the business and affairs of the Company shall be managed and all its powers shall be exercised by or under the direction of a board of directors (the " Board " and each duly appointed and continuing member thereof from time to time, a " Director "), and no Member, by virtue of having the status of a Member, shall have any management power over the business and affairs of the Company or any actual or apparent authority to enter into Contracts on behalf of, or to otherwise bind, the Company. Without prejudice to such general powers, but subject to the same limitations, the Board shall be empowered to conduct, manage and control the business and affairs of the Company and to make such rules and regulations therefor not inconsistent with applicable Law or this Agreement, as the Board shall deem to be in the best interest of the Company. Each Director is hereby designated as a "manager" of the Company within the meaning of Section 18-101 of the Act.

Section 1.2 Number of Directors; Proportional Appointment Rights .

(a) The authorized number of Directors constituting the Board shall be seven (7) Directors (the " Total Number of Directors ").

(b) The BIP Investor Member shall, as of the Effective Date, be entitled to appoint two Directors, and the BIP Investor Member shall retain the right to appoint at least two Directors for so long as the Investor Members collectively hold at least a 17.5% Percentage Interest in the aggregate. In the event that the Investor Members' aggregate Percentage Interest is reduced below 17.5% but remains at or above a 9.9% Percentage Interest, the BIP Investor Member shall retain the right to appoint one Director. In the event that the Investor Members' aggregate Percentage Interest is reduced below 9.9%, the BIP Investor Member shall cease to be entitled to appoint a Director. Any Directors appointed by the BIP Investor Member are referred to herein as " Investor Directors ". The appointment of any particular proposed Investor Director shall be subject to the NiSource Member's prior written consent of the identity of such individual prior to his or her appointment to the Board; provided however , that the NiSource Member shall not have any consent right over the appointment of a proposed Investor Director that is a Qualified Designee.

(c) In the event that the Investor Members' aggregate Percentage Interest decreases below 17.5% or 9.9%, as applicable, if the BIP Investor Member fails to remove an Investor Director concurrently with such decrease in the Investor Members' aggregate Percentage Interest to be in compliance with the BIP Investor Member's Director appointment rights set forth in Section 2.2(b) , then the NiSource Member may remove such appropriate number of Investor Directors from the Board such that the BIP Investor Member is in compliance with its Director appointment rights set forth in Section 2.2(b) , such removal being effective immediately.

(d) The NiSource Member shall be entitled to appoint all of the remaining Total Number of Directors that the Investor Member is not entitled to appoint pursuant to Section 2.2(b) . Directors appointed by the NiSource Member are referred to herein as " NiSource Directors "; provided , that any NiSource Director must be a Qualified Designee. The NiSource Member shall further be entitled to designate a NiSource Director to serve as the chairperson of the Board.

(e) For so long as the BIP Investor Member is entitled to appoint an Investor Director, the BIP Investor Member shall be further entitled to designate the Board Observer or any other individual (provided , that such designee is a Qualified Designee) (the " Designated Alternate ") in its place and stead in the event that the Investor Director is unable to attend such meeting (or meetings of Board committees, if any pursuant to Section 2.12). The Designated Alternate will be entitled to exercise the powers of the Investor Director at such meetings, and will be subject to all of the responsibilities of an Investor Director hereunder at such meeting as if they were an Investor Director. The appointment of such Designated Alternate shall be subject to the same approval right of the NiSource Member applicable to the Investor Director under Section 2.2(b) . If the Designated Alternate is serving in lieu of the Investor Director at

any Board or committee meeting, the BIP Investor Member shall provide written notice to the NiSource Member of this fact prior to the commencement of such meeting (which notice may be by way of an email to the NiSource Directors), and such notice shall be recorded in the minutes of such meeting. For the avoidance of doubt, any references to approval or notice by the Investor Director in this Agreement will be deemed to refer to the Investor Director, and not the Designated Alternate, except in respect of the voting on matters presented at the meeting at which the Designated Alternate is attending. In the event that the Designated Alternate is also a Board Observer, at any Board or committee meeting in which he or she is serving as the Investor Director pursuant to this Section 2.2(e) , he or she shall be deemed to be serving only as an Investor Director and not as a Board Observer at such meeting.

Section 1.3 Removal of Directors

. Any one or more Directors may be removed at any time, with or without cause, by the Member that appointed such Director, and except as provided in Section 2.2(c) , may not be removed by any other means. If a Director is convicted by a court or equivalent tribunal of any felony (or equivalent crime in the applicable jurisdiction), or of any misdemeanor (or equivalent crime in the applicable jurisdiction) that involves financial dishonesty or moral turpitude, then the Member that appointed such Director shall, unless consented to by the NiSource Member in the case of an Investor Director and by the BIP Investor Member in the case of a NiSource Director, promptly remove such Director. Delivery of a written notice to the Company by a Member designating for removal of a Director appointed by such Member shall conclusively and with immediate effect constitute the removal of such Director, without the necessity of further action by the Company, the Board, or by the applicable removed Director. Each Director duly appointed by a Member pursuant to and in accordance with the provisions of Section 2.2 shall hold office until his or her resignation, death, permanent disability, removal pursuant to and in accordance with Section 2.2 or with this Section 2.3 , or until a successor Director is duly appointed by the Member that appointed (and continues to be entitled to appoint) such Director.

Section 1.4 Vacancies

. A vacancy shall be deemed to exist in case of the resignation, death, permanent disability or removal of any Director. The Member entitled to appoint a Director to the vacant directorship may appoint or elect a Director thereto to take office (a) immediately, (b) effective upon the departure of the vacating Director, in the case of a resignation, or (c) at such other later time as may be determined by such Member.

Section 1.5 Acts of the Board; Voting

. Except as otherwise expressly set forth in this Agreement (including Section 8.1), a vote of a majority of the Directors present at a duly called and noticed meeting of the Board at which a quorum is present shall be required to authorize or approve any action of the Board. Every act of or decision taken or made by the Directors pursuant to the vote required by this Section 2.5 shall be conclusively regarded as an act of the Board.

Section 1.6 Compensation of Directors . The Board shall have the authority to fix the compensation of Directors for their service to the Company, if any. The Board shall reimburse the Directors for their respective reasonable, documented out-of-pocket expenses incurred for attendance at meetings of the Board consistent with the Company's then-applicable policies related to travel and expenses for directors or executive officers (or, if none exists, such travel and expense policies of Parent). Nothing herein shall be construed to preclude any Director from serving the Company or any of its Affiliates in any other capacity and receiving compensation therefor.

Section 1.7 Meetings of Directors; Notice

. Except as provided pursuant to Section 2.10 , meetings of the Board, both regular and special, for any purpose or purposes may be called at any time by the Board or by the Company at the request of any Director, by providing at least seven calendar days' written notice to each Director unless the chairperson of the Board determines, acting reasonably, that there is a significant and time sensitive matter that requires shorter notice to be given, in which case a meeting of the Board may be called by

giving at least 48 hours' written notice to each Director. Regular Board meetings will be held quarterly. Each notice shall state the purpose(s) of and agenda for the meeting and include all required information, including dial-in numbers or other applicable access information, in order to participate in the meeting by telephonic means, over the internet or by means of any other customary electronic communications equipment. Unless otherwise agreed by unanimous consent of the Board, no proposal shall be put to a vote of the Board unless it has been listed on the agenda for such meeting. Notice of the time and place of meetings shall be delivered personally or by telephone to each Director, or sent by e-mail or other electronic communication to any Director. Any notice given personally or by telephone shall be communicated to the applicable Director. A Director may waive the notice requirement set forth in this Section 2.7 by any means reasonable in the circumstances, including by communication to one or more other Directors, and the presence of a Director at a meeting or the approval by a Director of the minutes thereof shall conclusively constitute a waiver by such Director of such notice requirement.

Section 1.8 Quorum .

(a) Except as otherwise expressly set forth herein, the presence (whether physical, telephonic, over the internet or by means of other customary electronic communications equipment) of a majority of the number of Directors then serving on the Board (without regard to the Total Number of Directors), including at least one Investor Director, at a meeting of the Board shall constitute a quorum of the Board for the transaction of all business thereat; provided , that if quorum fails at two (2) consecutive attempted meetings that are called pertaining to the same subject matter with proper notice due to the failure of the Investor Director(s) to attend, then at the third attempted meeting only a majority of the number of Directors then serving on the Board (without regard to the Total Number of Directors or the attendance of the Investor Director(s)) must be present in person, by telephone or other electronic means or by proxy in order to constitute a quorum for the transaction of business for purposes of conducting only those matters that were included on the agenda for the attempted meetings immediately preceding such third attempted meeting; provided , that, at least twenty-four (24) hours prior written notice of any rescheduled meeting is required to be provided to the other Directors.

(b) If a quorum is not present at any meeting of the Board, the Directors present at such meeting may adjourn the meeting, without notice other than announcement at the meeting.

Section 1.9 Place and Method of Meetings .

(a) Meetings of the Board may be held at any place, whether within or outside the State of Delaware or the State of Indiana, and meetings may be held, in whole or in part, by telephonic means, over the internet or by means of any other customary electronic communications equipment. The place at which (or, if applicable, the electronic communication methods by which) a meeting will be held may be specified in the applicable notice of the meeting.

(b) The Directors may participate in meetings of the Board by telephonic means, over the internet or by means of any other customary electronic communications equipment, and, to the fullest extent permitted by applicable Law, shall be deemed to be present at such meeting for all purposes, including for purposes of determining quorum and of voting.

Section 1.10 Action by the Board Without a Meeting

. Any action required or permitted to be taken by the Board may be taken without a meeting if a number of Directors the vote of whom would be minimally necessary to approve such action at a meeting of the Board shall individually or collectively consent in writing to such action; provided , that in order for such consent to be effective it shall have been provided to all Directors at least forty-eight (48) hours prior to its stated effectiveness, unless such prior notice is waived in writing by the Directors taking any such written action which includes at least one (1) Investor Director. Notwithstanding the foregoing, no action set forth in Section 8.1 that requires the consent of the BIP Investor Member shall be effected by written action entered into pursuant to this Section 2.10 without the BIP Investor Member's written consent. Any written actions of the Board may be in counterparts and transmitted by e-mail and shall be filed with the minutes of the proceedings of the Board. Such written actions shall have the same force and effect as a vote of the Board.

Section 1.11 Duties of Directors . Other than as set forth in Section 9.3 , each member of the Board shall have fiduciary duties identical to those of directors of a business corporation organized under the General Corporation Law of the State of Delaware and except to the extent not permitted by applicable Law, no member of the Board shall be personally liable to the Company or its Members for monetary damages for breach of its fiduciary duties in such capacity. The provisions of this Agreement, to the extent that they expand or restrict the duties and liabilities of the Board, otherwise existing at law or in equity, are agreed by the Members to replace such other duties and liabilities of the Board.

Section 1.12 Committees . The Board may create one or more committees of the Board, delegate responsibilities, duties and powers to such one or more committees, and appoint Directors to serve thereon. Each Director appointed to serve on any such committee shall serve at the pleasure of the Board, or otherwise in accordance with the terms of the resolution designating the applicable committee. Section 2.4 , Section 2.7 , Section 2.8 , Section 2.9 and Section 2.10 shall each apply to any committee of the Board with the same terms applicable to the Board, *mutatis mutandis* . For each committee of the Board, the Board shall designate one Investor Director to serve on each such committee so long as the BIP Investor Member is entitled to appoint a Director pursuant to Section 2.2 .

Section 1.13 Investor Member Board Observer

. The BIP Investor Member shall be entitled to appoint one Person (which shall be an individual) to serve as an observer of the Board (the " Board Observer ") for so long as (i) the BIP Investor Member is entitled to appoint only one (1) Investor Director, but in no event when the BIP Investor Member is entitled to appoint two (2) Investor Directors or (ii) the Investor Members' aggregate Percentage Interest is greater than or equal to 4.9% but in no event if the BIP Investor Member is entitled to appoint two (2) Directors, the identity of whom shall be subject to the prior written consent of the NiSource Member. The Board Observer shall have the right to receive notice of, attend and participate in all meetings of the Board (and any committee thereof) and to receive all information provided to Directors at the same time and in the same manner as provided to such Directors; provided , however , that the Company and the Board will be entitled to withhold access to any portion of the information and to exclude the Board Observer from any portion of any meeting of the Board (or any committee thereof) if the Company or the Board determines in good faith in reliance upon the advice of counsel that access to such information or attendance at such meeting (i) is reasonably necessary to preserve an attorney-client privilege of the Company or the Board or (ii) otherwise implicates any conflict of interest between any Investor Member, on the one hand, and a particular matter or transaction under consideration by the Board, on the other hand; provided , however , that the BIP Investor Member shall be notified of any intent to exclude the Board Observer in reliance on clause (ii) above in advance of any meeting from which the Board Observer is to be excluded to the extent reasonably practicable; provided , further , that, any Board Observer that is excluded shall only be excluded for such portion of the meeting during which such conflicted matter or transaction is being discussed. For the avoidance of doubt, the Board Observer shall not have any voting rights with respect to any matter brought before the Board and shall not be counted in any manner with respect to whether a quorum is present at a meeting of the Board, and (without limiting the Company's obligations to provide the Board Observer with notice of meetings of the Board and any committee thereof as set forth in this Section 2.13) no defect in the provision of notice to the Board Observer of any meeting of the Board shall be construed to constitute a defect in the provision of notice to Directors. The Board Observer shall be bound by the same confidentiality obligations as the Directors as set forth in Section 9.6 . The BIP Investor Member may cause the Board Observer to resign or appoint a replacement Board Observer from time to time by giving written notice to the Company. In the event that the Investor Members' aggregate Percentage Interest becomes less than 4.9%, the BIP Investor Member's rights under this Section 2.13 shall immediately cease. For the avoidance of doubt, the sole purpose of this Section 2.13 is to provide observation rights (subject to the limitations and conditions set forth in this Section 2.13) to an individual Representative of the BIP Investor Member, and in no event will any Board Observer be construed to be a third-party beneficiary of this Agreement, an agent of the Company of any kind or for any purpose, or have any other claim against the Company or the Members in relation to any matter whatsoever.

Section 1.14 Related Party Matters .

(a) The Parties acknowledge that certain Affiliates of the Company provide various services to the Company and its Subsidiaries and that all of such services shall continue in the ordinary course of business. All agreements between any member of the Outside Group, on the one hand, and the Company Group, on the other hand, (such transactions, " Affiliate Agreements "), shall be (i) entered into and carried out in a manner that, except as may be required by any applicable Law or Order, is (A) consistent with past practices and the corporate allocation and affiliate transaction policies of the Outside Group in effect at such time and (B) on terms and conditions that are pursuant to the corporate allocation policies and affiliate transaction policies of the Outside Group as of such time to the extent that they are non-discriminatory against the Company and its Subsidiaries and are generally consistent with the corporate allocation policies and affiliate transaction policies of the Outside Group, (ii) entered into and carried out in accordance with the requirements of any applicable Law or Order (including, for the avoidance of doubt, on such terms and conditions as may be required to obtain the approval of the applicable Governmental Body in respect of such transaction) and (iii) if applicable pursuant to Section 8.1 , approved by the Board. Notwithstanding anything to the contrary in this Agreement, except as required by applicable Law, the NiSource Member shall ensure during the term of this Agreement that any methodologies used to allocate costs to the Company Group (i) are and will be consistently applied to other members of the Outside Group in a manner that does not have a disproportionate adverse impact on the Company or any of its Subsidiaries as compared to any member of the Outside Group and (ii) would not result in any fines or penalties that are imposed on any member of the Outside Group being allocated to the Company or any of its Subsidiaries. The NiSource Member shall also use commercially reasonable efforts to ensure corporate separateness from the NiSource Member and the other members of the Outside Group in a manner and consistent with the Company Group's and the Outside Group's respective past practices and applicable Law and Orders. The NiSource Member shall continue to audit its corporate services annually by its then current auditor in the ordinary course and shall share such audit with the BIP Investor Member (including any work papers and other supporting documentation reasonably requested by the BIP Investor Member (subject to its prior execution of a customary non-reliance letter agreement to the extent requested by such auditor)).

(b) Each of the Investor Members acknowledges and agrees that (i) the Company Group and the Outside Group has prior to the Effective Date engaged in Affiliate Agreements, and will, pursuant to and in accordance with the provisions of Section 2.14(a) , from and after the Effective Date engage in new Affiliate Agreements, subject to the BIP Investor Member's approval rights under Section 8.1 (if applicable) and (ii) all services provided by any member of the Outside Group to any member of the Company Group as of the Effective Date and (iii) the promissory notes held or payable by the Company's Subsidiary, Northern Indiana Public Service Company LLC (" NIPSCO "), payable to NiSource Development Company, Inc. (the " NiSource Notes ") shall or will remain outstanding and be payable in accordance with their terms or sooner as the Board determines in good faith is appropriate.

(c) In the event the Company and/or the NiSource Member becomes aware of any material breach or material default (it being understood that, for purposes of this clause (c) , a breach or default will be deemed to be "material" if the reasonably expected amount of damages that would be sustained by the Company and its Affiliates as a result of such breach or default, or series of related breaches or defaults, would exceed $30,000,000 in the aggregate, subject to an annual increase by the CPI Escalator) by any member of the Company Group or Outside Group under any Affiliate Agreement (an " Affiliate Agreement Default "), the Company and/or the NiSource Member, as applicable, shall promptly, but in any event within ten (10) Business Days after becoming aware of such Affiliate Agreement Default, send a written notice (an " Affiliate Agreement Default Notice ") to the Company and the BIP Investor Member setting forth in reasonable detail the nature of such Affiliate Agreement Default and the reasonable estimate of the current and future anticipated losses associated with such Affiliate Transaction Default (to the extent feasible to make a reasonable estimate at such time). After delivery of such Affiliate Agreement Default Notice to the BIP Investor Member, the Company (and, if the Company did not provide the Affiliate Agreement Default Notice, the NiSource Member) shall promptly provide the BIP Investor Member with any additional information reasonably requested by the BIP Investor Member and available to the NiSource Member relating to such Affiliate Agreement Default. The defaulting party under such Affiliate Agreement shall have (i) twenty (20) Business Days following the expiration of the applicable cure period in respect of such Affiliate Agreement, to fully cure any monetary Affiliate Agreement Default, and (ii) sixty (60) days following the expiration of the applicable cure period in respect of such Affiliate Agreement, to fully cure any non-monetary Affiliate Agreement Default, subject

to and consistent with applicable Law and Orders, if capable of being cured. In the event that any material alleged Affiliate Agreement Default is not timely cured in accordance with the preceding sentence, the BIP Investor Member shall have the sole right to cause the Company and its Subsidiaries to take, or refrain from taking, any actions in connection with the enforcement of or compliance with the rights or obligations of the Company or any of its Subsidiaries under the terms of the applicable Affiliate Agreement. In addition to, and not in limitation of, the foregoing provisions of this Section 2.14(c) , the Company shall notify the BIP Investor Member prior to, or within ten (10) days following, its execution of any new Affiliate Agreement or any material amendment to any Affiliate Agreement setting forth in reasonable detail the nature of such new Affiliate Agreement or such amendment and, upon request from the BIP Investor Member, shall provide copies of all Contracts relating to such new Affiliate Agreement or such amendment within five (5) Business Days of such request.

Article III
OFFICERS

Section 1.1 Appointment and Tenure .

(a) The Board may, from time to time, designate officers of the Company to carry out the day-to-day business of the Company.

(b) The officers of the Company shall be comprised of one or more individuals designated from time to time by the Board. Each officer shall hold his or her office for such term and shall have such authority and exercise such powers and perform such duties as shall be determined from time to time by the Board. Any number of offices may be held by the same individual. The salaries or other compensation, if any, of the officers shall be fixed from time to time by the Directors.

(c) The officers of the Company may consist of a president, a secretary and a treasurer. The Board may also designate one or more vice presidents, assistant secretaries and assistant treasurers. The Board may designate such other officers and assistant officers and agents as the Board may deem necessary or appropriate.

Section 1.2 Removal

. Any officer may be removed as such at any time by the Board, either with or without cause, in its discretion, subject to the consultation right of the BIP Investor Member set forth in Section 8.2 .

Section 1.3 President

. The president, if one is designated, shall be the chief executive officer of the Company, shall have general and active management of the day-to-day business and affairs of the Company as authorized from time to time by the Board, and shall be authorized and directed to implement all actions, resolutions, initiatives and business plans adopted by the Board.

Section 1.4 Vice Presidents

. The vice presidents, if any are designated, in the order of their election, unless otherwise determined by the Board, shall, in the absence or disability of the president, perform the duties and have the authority and exercise the powers of the president. They shall perform such other duties and have such other authority and powers as the Board may from time to time prescribe.

Section 1.5 Secretary; Assistant Secretaries

. The secretary, if one is designated, shall perform such duties and have such powers as the Board may from time to time prescribe. The assistant secretaries, if any are designated, and unless otherwise determined by the Board, shall, in the absence or disability of the secretary, perform the duties and exercise the powers of the Secretary. They shall perform such other duties and have such other powers as the Board may from time to time prescribe.

Section 1.6 Treasurer; Assistant Treasurers

. The treasurer, if one is designated, shall have custody of the Company's funds and securities and shall keep full and accurate accounts and records of receipts, disbursements and other transactions in books belonging to the Company, and shall deposit all moneys and other valuable effects in the name and to the credit of the Company in such depositories as may be designated from time to time by the Board. The treasurer shall disburse the funds of the Company as may be ordered by the Board, taking proper vouchers for such disbursements, and shall render the president and the Board, when so directed, an account of all of his or her transactions as treasurer and of the financial condition of the Company. The treasurer shall perform such other duties and have such other powers as the Board may from time to time prescribe. If required by the Board, the treasurer shall give the Company a bond of such type, character and amount as the Board may require. The assistant treasurers, if any are designated, unless otherwise determined by the Board, shall, in the absence or disability of the treasurer, perform the duties and exercise the powers of the treasurer. They shall perform such other duties and have such other powers as the Board may from time to time prescribe.

Section 1.7 Duties of Officers . Other than as set forth in Section 9.3 with respect to any Representative of Parent or its Affiliates who is also an officer of the Company, each officer of the Company (in such individual's capacity as an officer) will owe the Company, its Subsidiaries and the Members such fiduciary duties that apply to officers of a Delaware corporation. No provision of this Agreement will be deemed to limit or eliminate such fiduciary duties.

Article IV
DEFAULT; DISSOLUTION

Section 1.1 Events of Default

. The following shall constitute events of default (each, an " Event of Default ") by the applicable Member under this Agreement:

(a) any material breach of this Agreement by such Member;

(b) any failure by such Member to make any Mandatory Capital Contribution pursuant to and in accordance with a Capital Request Notice issued pursuant to Section 5.1 or, with respect to an Additional Funding Requirement (other than a Mandatory Capital Contribution), a duly authorized officer of each of the Investor Members has affirmed in writing that such Investor Member would make such Additional Funding Requirement in its Response to Capital Call but failed to do so within the time period set forth in Section 5.1 , in any case any such failure to fund by any Investor Member shall be deemed to be a failure to fund by all of the Investor Members;

(c) any purported Transfer by such Member made other than pursuant to and in accordance with the terms and conditions of this Agreement; and

(d) the filing of a petition seeking relief, or the consent to the entry of a decree or Order for relief in an involuntary case, under the bankruptcy, rearrangement, reorganization or other debtor relief Laws of the United States or any state or any other competent jurisdiction or a general assignment for the benefit of its creditors by such Member or by any of its controlling Affiliates.

Section 1.2 Default Notice

. If an Event of Default occurs, then any Member (other than the Defaulting Member) may deliver to the Company and to the Member subject to the Event of Default (the " Defaulting Member "; provided , that at any time the Defaulting Member is an Investor Member, then both Investor Members shall be deemed Defaulting Members until such Investor Member ceases to be a Defaulting Member according to the terms of this Agreement) a notice of the occurrence of such Event of Default, setting forth the circumstances of such Event of Default. If, within thirty (30) days following the delivery of such notice (or, with respect to an Event of Default set forth in Section 4.1(b) , ten (10) days), the Defaulting Member has not cured the event giving rise to the Event of Default (if capable of being so

cured), the provisions of this Agreement applicable to a " Defaulting Member " shall apply to such Defaulting Member and, in addition to any other rights and remedies provided under this Agreement, (i) if the Defaulting Member is an Investor Member, the Defaulting Member's voting rights, including its approval rights in Section 8.1 , shall be suspended and (ii) any net Available Cash required to be distributed to the Defaulting Member shall instead be distributed to the non-Defaulting Members, or the Company, as applicable, if such breach is capable of being cured by the payment of such amounts which such clauses (i) and (ii) shall apply as applicable (and such Member shall be considered a " Defaulting Member ") until the applicable Event of Default and the material effects thereof have been cured (if capable of being so cured).

Section 1.3 Dissolution .

(a) Subject to obtaining the requisite authorization, approval or consent of any Governmental Body, the Company shall dissolve, and its affairs shall be wound up, upon either (i) the approval by the Board and the written consent of all of the Members or (ii) the entry of a decree of judicial dissolution under Section 18-802 of the Act (each, an " Event of Dissolution ").

(b) Upon the occurrence of an Event of Dissolution, the Company will continue solely for the purposes of winding up its affairs in an orderly manner, liquidating its assets and satisfying the claims of its creditors and the Members. No Member, acting in its capacity as such, will take any action that is inconsistent with, or not necessary to or appropriate for, the winding up of the Company's business and affairs. All covenants contained and obligations provided for in this Agreement will continue to be fully binding upon the Members until such time as the property of the Company has been distributed pursuant to Section 5.3 and the certificate of formation of the Company has been canceled pursuant to the Act.

(c) After the occurrence of an Event of Dissolution, and after all of the Company's debts, liabilities and obligations have been paid and discharged or adequate reserves have been made therefor and all of the remaining assets of the Company have been distributed to the Members, the Company shall make necessary resolutions and filings to dissolve the Company under the Act.

Article V
CAPITAL CONTRIBUTIONS; DISTRIBUTIONS; ALLOCATIONS

Section 1.1 Capital Contributions .

(a) If the Board determines that it is in the best interests of the Company to obtain additional equity capital for purposes of (i) developing, acquiring or maintaining Qualifying Core Assets or funding ordinary course operations of the Company Business, (ii) satisfying the Company's obligations to Third Parties (including in respect of the Indebtedness of the Company Group or under any Contract), (iii) complying with applicable Law or Order, or (iv) funding any Emergency Expenditures (any such determination by the Board an " Additional Funding Requirement "), then the Board may direct the Company to submit to the Members a written capital funding request notice (a " Capital Request Notice "), which Capital Request Notice shall set forth (A) the anticipated amount of, and the reason for, such Additional Funding Requirement, (B) each Member's requested share of such Additional Funding Requirement, which with respect to each Member shall equal such Member's Percentage Interest multiplied by the aggregate amount of the Additional Funding Requirement (such share, the " Pro Rata Request Amount ") and (C) the funding date for such Additional Funding Requirement (the " Capital Request Funding Date "), which Capital Request Funding Date shall not be earlier than forty-five (45) days following the date on which such Capital Request Notice is delivered to the Members except for any Capital Request Notices pertaining to Emergency Expenditures in which case the Capital Request Funding Date shall not be earlier than ten (10) Business Days. Any Additional Funding Requirements for the period from the Investment Closing Date and including the date that is three (3) years from the Investment Closing Date and which do not exceed the Maximum Investor Commitment shall be a " Mandatory Capital Contribution ". Any Additional Funding Requirement shall require each Member to contribute its Pro Rata Request Amount; provided , that any obligations of the Investor Members under this Section 5.1(a) to contribute their respective Pro Rata Request Amounts shall be joint and several. Requests for additional equity capital other than pursuant to a Mandatory Capital Contribution shall be determined by the Board and each Member may, but shall not be obligated to, contribute its Pro Rata

Request Amount as called for in the applicable Capital Request Notices; provided, that in the event the BIP Investor Member elects to contribute its Pro Rata Request Amount as called for in the applicable Capital Request Notice and the VCOC Investor Member elects not to contribute its Pro Rata Request Amount, then the BIP Investor Member shall be required to fund the total Pro Rata Request Amount for the Investor Members, including such Pro Rata Request Amount allocated to the VCOC Investor Member. For the avoidance of doubt, other than (i) a Mandatory Capital Contribution pursuant to this Section 5.1 , (ii) the joint and several obligations of the Investor Members to contribute their respective Pro Rata Request Amounts as set forth in this Section 5.1 and (iii) any obligation of the BIP Investor Member to fund on any Pro Rata Request Amount allocated to the VCOC Investor Member pursuant to the immediately the preceding sentence, no Member shall have any obligation to fund any such requests for additional equity capital unless such Member indicates it will do so in accordance with this Section 5.1 . Upon the receipt of a Capital Request Notice, each Member shall, within twenty (20) days of such receipt, provide written notice to the Company and the other Members as to the extent to which such Member intends to fund its Pro Rata Request Amount, whether in whole, in part or not at all (a " Response To Capital Call "). If one Member indicates in its Response To Capital Call that it does not intend to fund its Pro Rata Request Amount in full, and any other Member had, prior thereto, submitted a Response To Capital Call indicating that it intends to fund a greater percentage than any such other Member of its Pro Rata Request Amount, then any such other Member will be entitled to amend its Response To Capital Call to reduce its percentage funding to an amount representing a percentage of its Pro Rata Request Amount not less than the lower percentage indicated in the other Member's Response to Capital Call; provided , that no Investor Member shall be entitled to reduce its percentage funding pursuant to this sentence if the Member that indicated its intent not to fund its Pro Rata Request Amount in full is an Investor Member. If no Response to Capital Call is received within such twenty (20) days, the Member shall be deemed to have elected to not fund.

(b) If any Member refuses or fails to make all or any portion of its Pro Rata Request Amount pursuant to this Section 5.1 on or prior to the applicable Capital Request Funding Date (such Member, the " Non-Contributing Member ", and the unfunded amount, the " Unfunded Amount "), then the Company shall provide written notice thereof to the other Member(s) (the " Contribution Unfunded Amount Notice "); provided , that if the Non-Contributing Member is an Investor Member, the Investor Members jointly shall be deemed the Non-Contributing Member and all references in this Section 5.1(b) to the Pro Rata Request Amount of the Non-Contributing Member shall refer to the aggregate Pro Rata Request Amount of both Investor Members combined, and:

(i) Excess Contribution . To the extent that the Non-Contributing Member contributes a portion (but less than all) of its Pro Rata Request Amount, and any other Member who is not a Non-Contributing Member (an " Over-Contributing Member ") has contributed a greater percentage of its Pro Rata Request Amount than the Non-Contributing Member, such Over-Contributing Member shall have the right to elect (which election shall be made by written notice to the Company and the other Members no later than 10 Business Days following the date of the Contribution Unfunded Amount Notice and any may consist of any combination thereof) to (A) receive a special distribution of the amount of such excess (the " Excess Contribution "), such that the Excess Contribution is returned to such Over-Contributing Member (and the Company shall cause such special distribution to be made as promptly as practicable), (B) have the portion of such Excess Contribution that would have been the Non-Contributing Member's share thereof treated as a loan to the Company (consistent with the methodology in clause (ii)(A) , below), or (C) except in the event that the Non-Contributing Member is the NiSource Member, have the portion of such Excess Contribution that would have been the Non-Contributing Member's share thereof treated as a contribution to capital (consistent with the methodology in clause (ii)(B) below).

(ii) Top-Up Right . A Member that has paid its full Pro Rata Request Amount (the " Contributing Member "; provided , that no Investor Member may be a Contributing Member if the other Investor Member has not paid its full Pro Rata Request Amount unless an Investor Member has funded the full Pro Rata Request Amount of any other Investor Member on behalf of such Investor Member) shall have the right (but not the obligation) to elect (which election shall be made by written notice to the Company and the other Members no later than ten (10) Business Days following the receipt of the Contribution Unfunded Amount Notice) to contribute any portion of the Unfunded Amount in accordance with this Section 5.1(b) either (A) as a loan to the Company, or (B) except in the event that the Non-

Contributing Member is the NiSource Member, as a capital contribution to the Company (or as any combination thereof as the Contributing Member elects) in accordance with the following procedures:

(A) Loan . The Contributing Member may elect to advance all or a portion of the Unfunded Amount to the Company on behalf of the Non-Contributing Member, which advance shall be treated as a loan by the Contributing Member to the Company (an " Unfunded Amount Loan ") at an interest rate equal to a floating rate equal to the Wall Street Journal Prime Rate plus 0.75% per annum. Subject to the terms of this Agreement, each Unfunded Amount Loan shall be repaid out of any subsequent distributions made pursuant to Section 5.2 to which the Non-Contributing Member would otherwise be entitled under this Agreement, and such payments shall be applied first to the payment of accrued but unpaid interest on each such Unfunded Amount Loan and then to the payment of the outstanding principal, until such Unfunded Amount Loan is paid in full.

(B) Capital Contribution . Except in the event that the Non-Contributing Member is the NiSource Member, the Contributing Member may elect to contribute an amount equal to all or a portion of the Unfunded Amount to the Company. If the Contributing Member elects to contribute to the Company all or a portion of the Unfunded Amount, then, on or after the earlier of the date that the Non-Contributing Member indicates it will not cure the failure to fund its full Pro Rata Request Amount and the thirtieth (30 th) day following the date of the Contribution Unfunded Amount Notice, the Company shall issue to the Contributing Member the amount of additional Membership Interests that can be purchased for such funded amount at a price per Membership Interest equal to 90% of the Fair Market Value of the Company (measured as of the date that such contribution is to be made) per Membership Interest until the NiSource Member has purchased up to $250,000,000 of additional Membership Interests pursuant hereto, and thereafter at Fair Market Value of the Company, and the Contributing Member's and the Non-Contributing Member's respective Percentage Interests will be adjusted accordingly. For the avoidance of doubt, this subsection shall in all respects not be subject to the rights and procedures set forth in Section 7.1 .

(C) Cure Right . Notwithstanding anything to the contrary in this Section 5.1 , on or before the thirtieth (30 th) day following the date of the Contribution Unfunded Amount Notice, a Non-Contributing Member may make a contribution to the Company equal to the sum of the Unfunded Amount plus, if the Contributing Member already made an Unfunded Amount Loan in respect of such Unfunded Amount, any interest accrued on the Unfunded Amount Loan, following which (1) the Unfunded Amount advanced by the Contributing Member to the Company together with any such interest shall be paid to the Contributing Member, and (2) the former Non-Contributing Member shall be deemed to have cured its failure to pay the Pro Rata Request Amount prior to the Capital Request Funding Date with respect to the applicable Capital Request Notice.

For the avoidance of doubt, the remedies set forth in this Section 5.1(b)(ii)(C) shall not apply to an Event of Default by the NiSource Member.

(c) If the Non-Contributing Member is an Investor Member and it refuses or fails to make its full Pro Rata Request Amount pursuant to this Section 5.1 on or prior to the applicable Capital Request Funding Date and the Contributing Member has not fully funded the Unfunded Amount in accordance with Section 5.1(b) , then on or after the thirtieth (30 th) day following the date of the applicable Contribution Unfunded Amount Notice, the Board may authorize the Company to seek additional equity funds on commercially reasonable terms from a Third Party in an amount up to the difference between the total Additional Funding Requirement requested and the total funds received by the Company from the Non-Contributing Member and the Contributing Member (including any additional funds that the Contributing Member may have contributed pursuant to Section 5.1(b)), and to issue Membership Interests to Third Parties in connection therewith pursuant to this Section 5.1(c) . The terms and rights of the Membership Interests issued pursuant to this Section 5.1 must be on terms no better than the Membership Interests that would have been issued to the applicable Member had they been a Contributing Member. If the Board determines to seek additional equity funds from and issue Membership Interests to a Third Party pursuant to this Section 5.1(c) , then the Company must

consummate such issuance within 180 days following the Capital Request Funding Date. If such issuance is not consummated within such 180-day period, then the Company's right to so issue Membership Interests to a Third Party in connection with the applicable Additional Funding Requirement shall be lapsed, and the Company shall not thereafter issue any Membership Interests to a Third Party in connection with such Additional Funding Requirement; provided , that, if a definitive agreement providing for such issuance is executed prior to the expiration of such 180-day period but the issuance has not been consummated at the expiration of such period solely as a result of a failure to receive the requisite authorization, approval or consent of any Governmental Body in respect of such issuance, then such period shall be extended solely to the extent necessary to permit the receipt of all such authorizations, approvals or consents which are in process but have not been received from the relevant Governmental Body as of such original expiration date and the consummation of the issuance provided for in such definitive agreement; provided , further , that the Company shall have used its reasonable best efforts in seeking such authorizations, approvals and consents. Upon the completion of such issuance of Membership Interests pursuant to this Section 5.1(c) , the Company shall give written notice to the Members of such issuance, which notice shall specify (i) the total number of new Membership Interests issued, (ii) the price per Membership Interest at which the Company issued the Membership Interests, and (iii) any other material terms of the issuance. Upon the issuance of new Membership Interests pursuant to this Section 5.1(c) , the Contributing Member's and Non-Contributing Member's respective Percentage Interests will be adjusted accordingly. In no event shall any such issuance be subject to Section 7.1 or 8.1 .

(d) If a Member does not make a Mandatory Capital Contribution or indicates in its Response to Capital Call that it shall make its Pro Rata Request Amount but then does not fund such amounts, such Member shall be a Defaulting Member, provided , that at any time the Defaulting Member is an Investor Member, then both Investor Members shall be deemed Defaulting Members until such Investor Member ceases to be a Defaulting Member according to the terms of this Agreement.

(e) In the event that there is an Investor Call Trigger, the NiSource Member (or its Affiliate) may (but is not required to), at its option at any time, acquire all (but not less than all) of the Membership Interests held by the Investor Members (the " Call Right ") by giving written notice (the " Call Notice ") to the BIP Investor Member of its election to exercise the Call Right; provided , that, other than with respect to clause (ii) or (iii) of the definition of Investor Call Trigger, the applicable Investor Member shall have sixty (60) days following the Call Notice to cure the event giving rise to the Call Notice, if capable of being so cured (the " Cure Period "). The purchase price payable by the NiSource Member in connection with the exercise of the Call Right shall be equal to the product of (i) with respect to an Investor Call Trigger pursuant to clause (i) of the definition thereof, 90% of the Fair Market Value of the Company, (ii) with respect to an Investor Call Trigger pursuant to clause (ii) of the definition thereof, 100% of the Fair Market Value of the Company and (iii) with respect to an Investor Call Trigger pursuant to clause (iii) of the definition thereof, the greater of 100% of the Fair Market Value of the Company or such amount which would satisfy the Spin Return Threshold (in each case, measured as of the date of the delivery of the Call Notice to the BIP Investor Member), multiplied (ii) by a fraction, (A) the numerator of which is the number of Membership Interests that the Investor Members own in the aggregate at such time and (B) the denominator of which is the total number of Membership Interests then outstanding (the amount equal to such product, the " Call Exercise Price "). If the Call Right is exercised by the NiSource Member, each of the Parties shall take all actions as may be reasonably necessary to consummate the transactions contemplated by this Section 5.1(e) as promptly as practicable, but in any event not later than thirty (30) days after the end of the Cure Period, or so long as necessary to obtain all required authorizations, approvals, or consents (such period, the " Call Consummation Period "), including entering into agreements and delivering certificates and instruments and consents as may be deemed necessary; provided , that, with respect to an Investor Call Trigger pursuant to clause (iii) of the definition thereof, the closing of the Call Right shall occur concurrently with or immediately prior to the underlying spin-off, split-off or similar transaction giving rise to the Call Right. If either Investor Member fails to take all actions necessary to consummate the Transfer of the Membership Interests held by it in accordance with this Section 5.1(e) prior to the expiration of the Call Consummation Period, then the Investor Members jointly shall be deemed to be in material breach of this Agreement for purposes of Article IV and for all other purposes hereunder, shall be deemed a Defaulting Member, and shall be deemed to have granted (and hereby grants, contingent only on the occurrence of such failure) an irrevocable appointment of any Person nominated for the purpose by the NiSource Member to be the Investor Members' agent and

attorney to execute all necessary documentation and instruments on its behalf to Transfer the Investor Member's Membership Interests to the Company as the holder thereof, in each case consistent with the provisions of this Section 5.1(e) . At the consummation of any purchase and sale pursuant to this Section 5.1(e) , the Investor Members shall sell to the NiSource Member all of the Membership Interests owned by the Investor Members in exchange for the Call Exercise Price. Contemporaneously with its receipt from the NiSource Member of the Call Exercise Price, the Investor Members shall Transfer to the NiSource Member all of the Membership Interests owned by the Investor Members, free and clear of all Liens. The Members and the Company acknowledge and agree that they shall cooperate reasonably to obtain any necessary authorization, approval or consent of any Governmental Body to consummate the transactions contemplated by this Section 5.1(e) . For the avoidance of doubt, in the event the Call Right is exercised, the BIP Investor Member may request the Fair Market Value be determined in accordance with Section 13.15 , regardless of the Investor Members' aggregate Percentage Interest at such time.

(f) The BIP Investor Member has delivered to the Company on the Investment Closing Date the Equity Commitment Letter. In the event that either Investor Member fails to make any Mandatory Capital Contribution from the Investment Closing Date to and including the third (3 rd) anniversary of the Investment Closing Date, and so long as the Maximum Investor Commitment has not been fully paid, the Company shall be entitled to enforce the Equity Commitment Letter for any portion of the Investor Members' aggregate Pro Rata Request Amount, in addition to the other remedies provided herein (with the Directors appointed by the BIP Investor Member abstaining from determining any such enforcement).

(g) Notwithstanding anything contained herein to the contrary, to the extent the Company has not distributed one hundred percent (100%) of the Purchase Price (as defined in the PSA) to the NiSource Member prior to the Effective Date (any such shortfall, the " NiSource Shortfall Amount "), the NiSource Member shall have no obligation with respect to any Additional Funding Requirement pursuant to Section 5.1(a) unless or until the cumulative amount of any Additional Funding Requirement otherwise imposed upon the NiSource Member exceeds the NiSource Shortfall Amount, if any. For the avoidance of doubt, the NiSource Shortfall Amount, if any, shall in no way affect the Members' Percentage Interests herein, and the NiSource Shortfall Amount, if any, shall not be Available Cash subject to distribution to the Members pursuant to Section 5.2 .

Section 1.2 Distributions Generally .

(a) Except as otherwise provided herein and subject to Section 5.2(b) , Section 5.2(c) , and the Act, no later than seventy-five (75) days after the end of each fiscal quarter, the Company shall make distributions in cash of all its Available Cash in respect of such fiscal quarter. The Company may make such other more frequent distributions (including interim distributions) at such times and in such amounts as the Board may determine.

(b) Except as otherwise provided herein, all distributions shall be paid to the Members only in cash and in the same proportion as their respective Percentage Interest; provided , that, in the case of distributions to be paid in respect of any period during which the Percentage Interest of the Members changed, such distributions shall be prorated to reflect the Percentage Interest of the Members on each day of such measurement period, and the Company and the Members shall take such action as necessary to effectuate such proration.

(c) With respect to each taxable year, at such times necessary to allow the Members to timely satisfy all of their U.S. federal, state and local and non-U.S. tax liabilities, prior to any distributions pursuant to Section 5.2(a) and subject to Available Cash and any restrictions contained in any loan agreement or other contract to which the Company is a party or by which it is bound, the Company shall make cash distributions (" Tax Distributions ") to each Member equal to such Member's quarterly Assumed Tax Liability determined based on the Board's good faith estimate of the projected Profits for such taxable year; provided , however , that to the extent a Member would otherwise be entitled to receive less than its Percentage Interest of the aggregate Tax Distributions to be paid pursuant to this Section 5.2(c) on any given date, then the Tax Distributions to such Member shall be increased, as necessary, to ensure that all such Tax Distributions made pursuant to this Section 5.2(c) are made pro rata in accordance with the Members' respective Percentage Interests. The Company and the Board shall not have any liability to any Member for penalties arising from non-payment or incorrect estimates of such

Member's estimated tax payments. Any distributions made pursuant to this Section 5.2(c) shall be treated for purposes of this Agreement as having been distributed pursuant to Section 5.2(a) and shall reduce, dollar-for-dollar, the amount otherwise distributable to such Member pursuant to Section 5.2(a) . To the extent the Company does not have sufficient funds and thereby is unable to pay to the Members the full amount of any Tax Distribution otherwise payable pursuant to this Section 5.2(c) , the Company shall pay the amount of such shortfall to the Members (pro rata, in accordance with the amount of any such shortfall then owning to such Members) as promptly thereafter as such funds become available. If with respect to any taxable year, the aggregate amount of distributions made to a Member under this Section 5.2(c) is in excess of the amount that would result from the application of this Section 5.2(c) to the entire taxable year, then the amount of such excess shall be treated as an advance against, and shall reduce the amount of, any future distributions made with respect to such Member pursuant to this Section 5.2(c), but shall not reduce Tax Distributions made to a Member to provide such Member with its pro rata Percentage Interest of Tax Distributions.

(d) Notwithstanding the terms of this Section 5.2 and any other provision of this Agreement, (i) the Company shall not make any distribution to any Member on account of its Membership Interests to the extent such distribution would violate the Act, other applicable Law or an Order, and (ii) a Member may direct the payment of part or all of any distribution to another Person by providing written notice of such direction to the Company.

Section 1.3 Distributions upon the Occurrence of an Event of Dissolution . Upon the occurrence of an Event of Dissolution, the Board will proceed, subject to the provisions herein, to wind up the affairs of the Company, liquidate and distribute the remaining assets of the Company (provided , however , that all distributions shall be paid to the Members only in cash and in accordance with the following order of priority: (i) first, to the NiSource Member to the extent the NiSource Shortfall Amount, if any, exceeds the cumulative amount of any Additional Funding Requirement otherwise imposed upon the NiSource Member pursuant to Section 5.1(a) , and (ii) second, to the Members in accordance with their Percentage Interests) and apply the proceeds of such liquidation in the order of priority in accordance with Section 18-804 of the Act or as may otherwise be agreed to by the Members; provided , however , that notwithstanding anything contained herein to the contrary, the NiSource Notes shall be paid first. If the assets of the Company remaining after the payment or discharge of all debts and liabilities of the Company are insufficient to return capital contributions of each Member, such Member shall have no recourse against the Company or any other Member.

Section 1.4 Capital Accounts .

(a) A separate Capital Account for each Member shall be established on the books and records of the Company in compliance with Section 704(b) of the Code and the Treasury Regulations. The initial Capital Accounts of each Member are set forth on Schedule 1 . This Section 5.4(a) and the other provisions of this Agreement relating to the maintenance of Capital Accounts are intended to comply with Treasury Regulation Sections 1.704-1(b) and 1.704-2, and shall be interpreted and applied in a manner consistent with such Treasury Regulation, as determined by the Board in its reasonable discretion.

(b) No Member shall be required to pay to any other Member or the Company any deficit or negative balance which may exist from time to time in such Member's Capital Account (including upon and after dissolution of the Company).

Section 1.5 Withdrawal of Capital; Interest . Except as expressly provided in this Agreement, (a) no Member may withdraw capital or receive any distributions from the Company and (b) no interest shall be paid by the Company on any capital contribution or distribution.

Section 1.6 Allocation of Profits and Losses .

(a) Subject to Section 5.6(b) , and after the application of the allocation rules in Section 5.7 , Profits and Losses and, if the Board in its discretion determines it to be necessary, individual items thereof, for an Allocation Year (or other relevant period) shall be allocated among the Members for such Allocation Year (or other relevant period) in a manner determined by the Board so as to produce, as

nearly as possible, the sum of (a) the Capital Account balance for each Member at the end of such Allocation Year (or other relevant period) and (b) such Member's share of Company Minimum Gain and Member Nonrecourse Debt Minimum Gain, if any, equal to the hypothetical cash that would be distributed to such Member if (x) the Company were dissolved, its affairs wound up and its assets sold for an amount of hypothetical cash equal to the sum of the Gross Asset Values of the assets at the end of such Allocation Year (or other relevant period), (y) the Company paid all of its liabilities in accordance with their terms up to the amount of the hypothetical cash (limited with respect to each Nonrecourse Liability to the Gross Asset Value of the asset securing such liability), and (z) the remaining hypothetical cash from the deemed sale were immediately distributed to the Members in accordance with Section 5.3 .

(b) Notwithstanding the foregoing provisions of Section 5.6(a) , the Losses (or items of expense or deduction or loss) allocated pursuant to Section 5.6(a) shall not exceed the maximum amount that can be so allocated without causing any Member to have an Adjusted Capital Account Deficit at the end of any Allocation Year (or other relevant period). In the event some, but not all, of the Members would have an Adjusted Capital Account Deficit as a consequence of an allocation of Losses pursuant to Section 5.6(a) , the limitation set forth in this Section 5.6(b) shall be applied on a Member-by-Member basis so as to allocate the maximum permissible Losses to each Member under Treasury Regulations Section 1.704-1(b)(2)(ii)(d). All Losses (or items of expense or deduction or loss) in excess of the limitation set forth in this Section 5.6(b) shall be allocated to other Members in accordance with the positive balances in such Members' Adjusted Capital Accounts so as to allocate the maximum permissible Losses to each Member under Treasury Regulations Section 1.704-1(b)(2)(ii)(d).

Section 1.7 Special Allocations . Any allocation of Profits and Losses (or items thereof) for purposes of maintaining Capital Accounts will, however, be subject to any adjustment required to comply with Treasury Regulations Sections 1.704-1 and 1.704-2, including the following adjustments and special allocations which shall be made in the following order of priority and prior to any allocation under Section 5.6(a) :

(a) Except as otherwise provided in Treasury Regulations Section 1.704-2(f), notwithstanding any other provision of this Article V , if there is a net decrease in Company Minimum Gain during an Allocation Year (or other relevant period), then each Member shall be specially allocated items of Company income and gain for such Allocation Year (or other relevant period) (and, if necessary, for subsequent Allocation Years (or other relevant periods)) in an amount equal to such Member's share of the net decrease in Company Minimum Gain, determined in accordance with Treasury Regulations Section 1.704-2(g)(2). Allocations pursuant to the previous sentence shall be made in proportion to the respective amounts required to be allocated to each Member in accordance with Treasury Regulations Sections 1.704-2(f)(6) and 1.704-2(j)(2). This Section 5.7(a) is intended to comply with the minimum gain chargeback requirement of Treasury Regulations Section 1.704-2(f) and shall be interpreted consistently therewith.

(b) Except as otherwise provided in Treasury Regulations Section 1.704-2(i)(4), notwithstanding any other provision of this Article V, if there is a net decrease in Member Nonrecourse Debt Minimum Gain attributable to a Member Nonrecourse Debt during any Allocation Year (or other relevant period), then each Member who has a share of the Member Nonrecourse Debt Minimum Gain attributable to such Member Nonrecourse Debt, determined in accordance with Treasury Regulations Section 1.704-2(i)(5), shall be specially allocated items of Company income and gain for such Allocation Year (or other relevant period) (and, if necessary, for subsequent Allocation Years (or other relevant periods)) in an amount equal to such Member's share of the net decrease in Member Nonrecourse Debt Minimum Gain attributable to such Member Nonrecourse Debt, determined in a manner consistent with the provisions of Treasury Regulations Section 1.704-2(i)(4). The items to be allocated shall be determined in accordance with Treasury Regulations Sections 1.704-2(i)(4) and 1.704-2(j)(2). This Section 5.7(b) is intended to comply with the Member nonrecourse debt minimum gain chargeback requirement of Regulations Section 1.704-2(i)(4) and shall be interpreted consistently therewith.

(c) If any Member unexpectedly receives an adjustment, allocation, or distribution of the type contemplated by Treasury Regulations Sections 1.704-1(b)(2)(ii)(d)(4), 1.704-1(b)(2)(ii)(d)(5) or 1.704-1(b)(2)(ii)(d)(6) resulting in, or increasing, an Adjusted Capital Account Deficit for such Member, then items of Company income and gain shall be specially allocated to all such Members in an amount

and manner sufficient to eliminate, to the extent required by the Treasury Regulations, the Adjusted Capital Account Deficit of such Member as quickly as possible, provided that an allocation pursuant to this Section 5.7(c) shall be made only if and to the extent that such Member would have an Adjusted Capital Account Deficit after all other allocations provided for in this Article V have been tentatively made as if this Section 5.7(c) were not in this Agreement. It is intended that this Section 5.7(c) qualify and be construed as a "qualified income offset" within the meaning of Treasury Regulations Section 1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

(d) If any Member has an Adjusted Capital Account Deficit at the end of any Allocation Year (or other relevant period) in excess of the sum of (A) the amount such Member is required to restore pursuant to the provisions of this Agreement and (B) the amount such Member is deemed obligated to restore pursuant to Treasury Regulations Sections 1.704-2(g) and 1.704-2(i)(5), such Member shall be specially allocated items of Company income and gain in the amount of such deficit as quickly as possible; provided , however , that an allocation pursuant to this Section 5.7(d) shall be made only if and to the extent that such Member would have an Adjusted Capital Account Deficit after all other allocations provided for in this Section 5.7 have been tentatively made as if Section 5.7(c) and this Section 5.7(d) were not in this Agreement.

(e) To the extent that an adjustment to the adjusted tax basis of any Company asset pursuant to Code Section 734(b) is required, pursuant to Treasury Regulations Section 1.704-1(b)(2)(iv)(m), to be taken into account in determining Capital Accounts as the result of a distribution to a Member in complete liquidation of its Membership Interest, the amount of such adjustment to the Capital Accounts shall be treated as an item of gain (if the adjustment increases the basis of the asset) or loss (if the adjustment decreases such basis), and such gain or loss shall be specially allocated to the Members in a manner consistent with the manner in which their Capital Accounts are required to be adjusted pursuant to Treasury Regulations Section 1.704-1(b)(2)(iv)(m).

(f) The Nonrecourse Deductions for each Allocation Year (or other relevant period) shall be allocated to the Members in proportion to their relative Percentage Interests.

(g) The Member Nonrecourse Deductions shall be allocated each Allocation Year (or other relevant period) to the Member that bears the economic risk of loss (within the meaning of Treasury Regulations Section 1.752-2) for the Member Nonrecourse Debt to which such Member Nonrecourse Deductions are attributable.

(h) The allocations set forth in Section 5.7(a) through Section 5.7(g) (collectively, the " Regulatory Allocations ") are intended to comply with certain requirements of the Treasury Regulations. It is the intent of the parties to this Agreement that, to the extent possible, all Regulatory Allocations will be offset in the current Allocation Year or future Allocation Years either with other Regulatory Allocations or with special allocations of other items of Company income, gain, loss or deduction pursuant to this Article V . Therefore, notwithstanding any other provision of this Section 5.7(h) (other than the Regulatory Allocations), the Board shall make such offsetting special allocations of Company income, gain, loss, or deduction (to the extent permissible) among the Members so that, after such offsetting allocations are made, each Member's Capital Account balance is, to the extent possible, equal to the Capital Account balance such Member would have had if the Regulatory Allocations were not part of the Agreement and all Company items were allocated pursuant to Section 5.6(a) .

Section 1.8 Other Allocation Rules for Profits and Losses for Capital Accounts .

(a) In the event Members are admitted to the Company pursuant to this Agreement on different dates, the Company items of income, gain, loss, deduction, and credit allocated to the Members for each Allocation Year during which Members are so admitted shall be allocated among the Members in proportion to their respective interests during such Allocation Year using any reasonable convention permitted by Section 706 of the Code and selected by the Board (or its designee).

(b) In the event a Member transfers its Membership Interests during an Allocation Year, the allocation of Company items of income, gain, loss, deduction, and credit allocated to such Member and its transferee for such Allocation Year shall be made between such Member and its transferee in accordance

with Section 706 of the Code using any reasonable convention permitted by Section 706 of the Code and selected by the Board (or its designee).

Section 1.9 Tax Allocations; Code Section 704(c) Allocations .

(a) Except as provided in this Section 5.9 , for income tax purposes under the Code and the Treasury Regulations each Company item of income, gain, loss, deduction and credit shall be allocated among the Members in the same manner as its correlative item of Profit and Loss for the Allocation Year (or other relevant period).

(b) In accordance with Code Section 704(c) and the Treasury Regulations, items of income, gain, loss, and deduction with respect to any property of the Company shall, solely for income tax purposes, be allocated among the Members so as to take account of any variation between the adjusted tax basis of such property and its initial Gross Asset Value pursuant to any permissible method under the Treasury Regulations as may be determined by the Partnership Representative in its discretion; provided , however , with respect to any Company asset that is contributed to the Company with a Gross Asset Value that varies from its basis in the hands of the contributing Member immediately preceding the date of contribution shall be allocated among the Members for income tax purposes using the "traditional method," with no "curative allocation" of income or gain to offset any "shortfall" in depreciation that results by reason of the use of the "traditional method," as defined in Treasury Regulations Section 1.704-3(b), including upon sale of any property or upon the a subsequent issuance of additional membership interests, an in-kind contribution of property to the Company in exchange for membership interest, or a redemption of membership interests.

(c) If any portion of gain recognized from the disposition of assets by the Company represents the "recapture" of previously allocated deductions by virtue of the application of Code Section 1245 or 1250 (the " Recapture Gain "), such Recapture Gain shall be allocated, solely for income tax purposes, in accordance with Treasury Regulations Sections 1.1245-1(e)(2) and (3) and 1.1250-1(f).

(d) Tax credits and tax credit recapture shall be allocated among the Members in accordance with any reasonable method selected by the Board (or its designee) that is permitted by applicable tax laws.

(e) Unless otherwise provided in this Section 5.9 , any material elections or other decisions relating to allocations for income tax purposes, including selecting any allocation method under Treasury Regulation Section 1.704-3, shall be made by the Board and shall reflect the economic intent of parties.

(f) Allocations pursuant to this Section 5.9 are solely for income tax purposes and shall not affect, or in any way be taken into account in computing, any Member's Capital Account.

Section 1.10 Allocation of Liabilities . The liabilities of the Company shall be allocated to the Members in any manner permitted under Code Section 752 and Treasury Regulations promulgated thereunder and as selected by the Board (or its designee); provided , however, for the avoidance of doubt, NIPSCO's intercompany debt payable to Parent as of Closing is recourse debt and shall be allocated one hundred percent (100%) to NIPSCO Holdings I under Treasury Regulations Section 1.752-2(c) for disguised sale and basis purposes.

Section 1.11 Compliance with Tax Laws . The allocation rules set forth in Section 5.6 through Section 5.10 are intended to comply with the Code and Treasury Regulations and to ensure that all allocations under this Article V are respected for United States federal income tax purposes and shall be interpreted consistently with such intent. If, for any reason, the Board determines that any provision of Section 5.6 through Section 5.10 does not comply with the Code or Treasury Regulations or that the allocations under this Article V may not be respected for United States federal income tax purposes, the Board may, subject to the next sentence, take all reasonable actions, including amending this Article V or adjusting a Member's Capital Account or how Capital Accounts are maintained, to ensure compliance with the Code and Treasury Regulations and that the allocations provided for in this Article V shall be respected for United States federal income tax purposes. Nothing in this Section 5.11 shall permit any changes to the provisions of Section 5.2 or Section 5.3 .

Article VI
TRANSFERS OF MEMBERSHIP INTERESTS

Section 1.1 General Restriction .

(a) No Member shall Transfer any of its Membership Interests except pursuant to and in accordance with this Article VI . Any purported Transfer by any Member of its Membership Interests in violation of this Section 6.1(a) , or without compliance in all respects with the provisions of this Article VI pertaining to such purported Transfer, shall be invalid and void ab initio, and such purported Transfer by such Member shall constitute a material breach of this Agreement for purposes of Article VI .

(b) Subject to Section 6.2 , neither the Investor Members nor the NiSource Member may Transfer any of its or their Membership Interests to any Person prior to the date that is the third (3 rd) anniversary of the Investment Closing Date (the " Lock-Up Period "), other than (i) in connection with any spin off, split off or similar transaction of the Company, the NiSource Member or NIPSCO, or any of their Affiliates, in each case, subject to the NiSource Member's compliance with Section 5.1(e) or Section 6.5 and the satisfaction of the Spin Return Threshold, or (ii) with the prior written consent of the NiSource Member, on the one hand, or the BIP Investor Member, on the other hand, as applicable. After the expiration of the Lock-Up Period, each of the Investor Members and the NiSource Member, as applicable, may Transfer its Membership Interests in accordance with this Article VI . Notwithstanding the forgoing, each of the Members may at any time Transfer Membership Interests in compliance with Section 6.2 .

(c) Transfers by Members in accordance with and pursuant to this Article VI shall entitle each applicable transferee to the rights and obligations of the transferor under this Agreement.

(d) The Investor Members and the NiSource Member acknowledge any indirect Transfers of any Member's Membership Interest shall be deemed a Transfer by such Member hereunder. The Parent has joined this Agreement solely for the purpose of acknowledging the obligations of the NiSource Member under this Article VI .

Section 1.2 Transfers to Permitted Transferees; Liens by Members .

(a) Notwithstanding Section 6.1 , each of the Members may Transfer at any time all or any portion of the Membership Interests held by it to any one of its Permitted Transferees; provided , that, in connection with any such Transfer, (a) such Permitted Transferee shall, in writing, assume all of the rights and obligations of the transferring Member as a Member under this Agreement and as a Party hereto with respect to the Transferred Membership Interests, (b) such Permitted Transferee is as creditworthy as the transferring Member and provides evidence thereof to the non-transferring Members, (c) the transferring Member remains liable for all liabilities and obligations of the Permitted Transferee, and (d) effective provision shall be made whereby such Permitted Transferee shall be required, prior to the time when it shall cease to be a Permitted Transferee of the transferring Member, to Transfer such Membership Interests to the transferring Member or to another Person that would be a Permitted Transferee of the transferring Member as of such applicable time. In the event that a Member (including, as the case may be, a Permitted Transferee) intends to Transfer its Membership Interests to a Permitted Transferee, such transferring Member or the Permitted Transferee, as applicable, shall notify the other Members and the Company of the intended Transfer at least twenty (20) Business Days prior to the intended Transfer.

(b) Each Member shall be permitted to directly or indirectly Encumber its Membership Interests or any equity interests in such Member in connection with any debt financing, the proceeds of which have been or will be used by such Member to finance its purchase of such Membership Interests (whether in respect of an issuance of new Membership Interests by the Company or the purchase of existing Membership Interests from a Member or the refinancing of any such debt financing in the future), to fund the capital expenditure needs of the Company and its Subsidiaries or to fund its capital needs for any Mandatory Capital Contribution and neither such Lien nor any commencement or consummation of foreclosure proceedings or exercise of foreclosure remedies by a secured party on a Member's Membership Interests Encumbered in connection with any such debt financing shall, in either case, be considered a "Transfer" for any purpose under this Agreement; provided , that (i) such Member

shall be obligated to promptly notify the other Members and the Company in writing following the commencement of any such foreclosure remedies or proceedings, (ii) in the event of the consummation of such a foreclosure, such Member will automatically cease to be deemed the owner of the Membership Interests so foreclosed and will cease to have any rights in respect thereof (with the financing source foreclosing on such Membership Interests succeeding to the rights and responsibilities of the Member hereunder), and (iii) the consummation of any such foreclosure will be subject to the receipt of any required authorization, approval or consent of all applicable Governmental Bodies; provided , further , following exercise of any foreclosure or similar rights, such lender or similar Person may not further Transfer such Membership Interests without complying with this Article VI , including, Section 6.3 .

Section 1.3 Right of First Offer .

(a) Prior to any Transfer by a Member (each, a " Transferring Member ") of all or any portion of its Membership Interests other than to a Permitted Transferee of such Transferring Member, the Transferring Member must first offer to sell to the other Members (the "Non-Transferring Member "; provided , that (x) if the Transferring Member is an Investor Member, the other Investor Member shall not be deemed a Non-Transferring Member for any purpose under this Section 6.3 and (y) if the Transferring Member is the NiSource Member, the Investor Members jointly shall be deemed the Non-Transferring Member for all purposes under this Section 6.3) all of its Membership Interests that it desires to sell (such Membership Interests to be offered for sale to the Non-Transferring Member pursuant to this Section 6.3 , the " Subject Membership Interests "), in each case, in accordance with the procedures set forth in the provisions of this Section 6.3 .

(i) The Transferring Member shall first deliver to the Non-Transferring Member a written notice which shall be a binding offer (a " Sale Notice ") setting forth the cash price and all of the other material terms and conditions at which the Transferring Member is willing to sell the Subject Membership Interests to the Non-Transferring Member, which notice shall constitute an offer to the Non-Transferring Member to effect such purchase and sale on the terms set forth therein. Any such Sale Notice shall be firm, not subject to withdrawal and prepared and delivered in good faith. Within ninety (90) days following its receipt of a Sale Notice, the Non-Transferring Member may accept the Transferring Member's offer and purchase the Subject Membership Interests at the cash price and upon the other material terms and conditions set forth in the Sale Notice, in which event the closing of the purchase and sale of the Subject Membership Interests will take place as promptly as practicable, subject to customary closing conditions, including the receipt of required regulatory approvals. The Sale Notice shall contain representations and warranties by the Transferring Member to the Non-Transferring Member that (A) the Transferring Member has full right, title and interest in and to the Subject Membership Interests, (B) the Transferring Member has all the necessary power and authority and has taken all necessary action to Transfer the Subject Membership Interests to the Non-Transferring Member as contemplated by this Section 6.3 , and (C) the Subject Membership Interests are free and clear of any and all Liens other than those arising as a result of or under the terms of this Agreement and those arising under securities Laws of general applicability pertaining to limitations on the transfer of unregistered securities or (D) such other customary representations and warranties.

(ii) If the Non-Transferring Member does not accept the Transferring Member's offer within such ninety (90)-day period, then the Transferring Member will, for a period of 180 days commencing on the earlier of (A) the expiration of such ninety (90)-day period and (B) the delivery of a written notice by the Non-Transferring Member to the Transferring Member rejecting the offer set forth in the Sale Notice (if any) (such 180-day period, the " Sale Period "), be entitled to sell the Subject Membership Interests to any one Third Party at the same or higher price and upon other terms and conditions (excluding price) that are not more favorable to the acquiror than those specified in the Sale Notice, subject to the other terms of this Section 6.3 . If such sale to any Third Party is not completed prior to the expiration of the Sale Period, then the process initiated by the delivery of the Sale Notice shall be lapsed, and the Transferring Member will be required to repeat the process set forth in this Section 6.3 before entering into any agreement with respect to, or consummating, any sale of Membership Interests to any Third Party; provided , that if a definitive agreement providing for the consummation of such sale is executed within the Sale Period but such sale has not been consummated at the expiration of the Sale Period solely as a result of a failure to receive the requisite authorization, approval or consent of any Governmental Body in respect of such sale, then the Sale Period shall be extended solely to the extent

necessary to permit the receipt of all such authorizations, approvals or consents which are in process but have not been received from the relevant Governmental Body as of the original expiration date of the Sale Period and the consummation of the sale provided for in such definitive agreement; provided , that the Transferring Member shall have used efforts in seeking such authorizations, approvals and consents, consistent with its obligations under such definitive agreements in respect thereof.

(b) The Investor Members and their respective Permitted Transferees (if any) shall not be permitted to Transfer any of their Membership Interests to a Prohibited Competitor without the prior written consent of the NiSource Member. Within ten (10) Business Days after January 1, 2024 (and each year thereafter during the ten (10) Business Day period beginning on January 1 of the applicable year), the NiSource Member shall have the right (i) to update the list of Prohibited Competitors set forth on Appendix (A) to replace no more than three (3) of the Prohibited Competitors with other Competitors designated by the NiSource Member, and (ii) in addition to any replacements pursuant to clause (i), to add up to two (2) additional Competitors designated by the NiSource Member to such list.

(c) No Transfer of Membership Interests by an Investor Member to any Third Party pursuant to Section 6.3(a)(ii) may be effected if it would, or would reasonably be expected to in the reasonable and good faith determination of the NiSource Member in consultation with the Board, (i) have a material and adverse effect on the Company Group or (ii) create a material risk of a material adverse regulatory consequence on any member of the Company Group or the Outside Group as a result of the identity of the Third Party transferee, any action taken or reasonably expected to be taken by any Governmental Body with respect to such Transfer or change in Tax status of any Person caused or reasonably expected to be caused by such Transfer, any terms or conditions of such Transfer, any requirement that the Membership Interests be registered under any applicable securities Laws in connection with or as a result of such Transfer, or any other similar matter. For purposes of this Section 6.3 and Section 6.4 , "control" means (x) the ownership of at least a majority of the issued and outstanding Membership Interests of the Company, or (y) the ability to elect, directly or indirectly, a majority of the Directors of the Company in accordance with this Agreement.

(d) Prior to the consummation of any Transfer pursuant to Section 6.3(a)(ii) , the Transferring Member shall have delivered to the Board and the Non-Transferring Member evidence reasonably satisfactory to the Board (with the Directors appointed by the Transferring Member abstaining from any such determination) and to the Non-Transferring Member that (i) the transferee is a Qualified Transferee and (ii) the Transfer complies with the provisions of Section 6.3(b) (if applicable) and Section 6.3(c) .

Section 1.4 Tag-Along Rights .

(a) Other than with respect to a Transfer proposed and made in accordance with Section 6.5 , in the event that the NiSource Member proposes to effect a Transfer to a Third Party transferee (the " Tag-Along Buyer ") of a number of its Membership Interests constituting more than 25% of the total Membership Interests then outstanding (a " Tag-Along Sale "), then the NiSource Member shall give the Investor Members written notice (a " Tag-Along Notice ") of such proposed Transfer at least thirty (30) days prior to the consummation of such Tag-Along Sale, setting forth (w) the number of Membership Interests (" Tag-Along Offered Membership Interests ") proposed to be Transferred to the Tag-Along Buyer and the purchase price, (x) the identity of the Tag-Along Buyer, (y) any other material terms and conditions of the proposed Transfer and (z) the intended dates on which the NiSource Member will enter into a definitive agreement in respect of such proposed Transfer and consummate such proposed Transfer.

(b) Upon delivery of a Tag-Along Notice, the Investor Members shall have the right to sell up to their respective Tag Portions, at the same price per Membership Interest, for the same form of consideration and pursuant to the same terms and conditions (including time of payment) as set forth in the Tag-Along Notice (or, if different, as such are applicable at the time of the entry into a definitive agreement in respect of, or at the time of the consummation of, the Tag-Along Sale). If an Investor Member wishes to participate in the Tag-Along Sale, then such Investor Member shall provide written notice to the NiSource Member no less than forty-five (45) days after the date of the Tag-Along Notice, indicating such election, provided however if the BIP Investor Member elects to sell its respective Tag Portion the VCOC Investor Member shall be required to sell its respective Tag Portion on the same terms set forth in the election notice by the BIP Investor Member. Such notice shall set forth the number of its

Membership Interests that such Investor Member elects to include in the Tag-Along Sale (which number shall not exceed its Tag Portion), and such notice shall constitute such Investor Member's binding agreement to sell such Membership Interests on the terms and subject to the conditions applicable to the Tag-Along Sale.

(c) Any Transfer of an Investor Member's Membership Interests in a Tag-Along Sale shall be on the same terms and conditions as the Transfer of the NiSource Member's Membership Interests in such Tag-Along Sale, except as otherwise provided in this Section 6.4(c) . Any participating Investor Member shall be required to make customary representations and warranties in connection with the Transfer of its Membership Interests, including as to its ownership and authority to Transfer, free and clear of all Liens, such Membership Interests and shall indemnify and hold harmless, to the fullest extent permitted by applicable Law, the Tag-Along Buyer against all losses of whatever nature arising out of, in connection with or related to any breach of any representation or warranty made by, or agreements, understandings or covenants of such Investor Member, as the case may be, under the terms of the agreements relating to such Transfer of such Investor Member's Membership Interests, in each case not to exceed the equivalent obligations to indemnify and hold harmless the Tag-Along Buyer provided by the NiSource Member; provided , that (i) liability for misrepresentation or indemnity shall (as between the NiSource Member and any such Investor Member) be expressly stated to be several but not joint and the NiSource Member and any such Investor Member shall not be liable for any breach of covenants or representations or warranties as to the Membership Interests of any other Member and shall not, in any event, be liable for more than its pro rata share (based on the proceeds to be received) of any liability for misrepresentation or indemnity, (ii) any participating Investor Member shall benefit from any releases of sellers or other provisions in the transaction documentation of general applicability to sellers to the same extent as the NiSource Member, (iii) any participating Investor Member shall not be obligated to agree to any non-customary administrative covenants (such as any non-compete covenants that would restrict its or its Affiliates' business activities), and (iv) any participating Investor Member shall not be obligated to provide indemnification obligations that exceed its proceeds from the Tag-Along Sale.

(d) Notwithstanding the foregoing, and for the avoidance of doubt, no Investor Member shall be entitled to Transfer its Membership Interests pursuant to this Section 6.4 in the event that, notwithstanding delivery of a written notice of election to participate in such Tag-Along Sale pursuant to this Section 6.4 , such Investor Member fails to consummate the Transfer of its Membership Interests (on the terms and conditions required by this Section 6.4) in the applicable Tag-Along Sale.

(e) For the avoidance of doubt, the rights conferred to each Investor Member under this Section 6.4 do not apply in the event of a Change in Control of the NiSource Member.

Section 1.5 Drag-Along Rights .

(a) Following the end of the Lock-Up Period, except for the exclusions set forth in Section 6.1(b) thereto, in the event that the NiSource Member intends to effect a sale of all or any portion of the Membership Interests owned by the NiSource Member and such Membership Interests constitute at least a majority of the issued and outstanding Membership Interests of the Company (a " Drag-Along Sale "), then the NiSource Member shall have the option (but not the obligation) to require each Investor Member to Transfer all of its Membership Interests to the Third Party buyer (the " Drag-Along Buyer ") (or to such other Party as the Drag-Along Buyer directs) in accordance with the provisions of this Section 6.5 (such right of the NiSource Member, the " Drag-Along Right ").

(b) If the NiSource Member elects to exercise the Drag-Along Right pursuant to Section 6.5(a) , then the NiSource Member shall send a written notice to each applicable Investor Member (a " Drag-Along Notice ") specifying (i) that such Investor Member is required to Transfer all of its Membership Interests pursuant to this Section 6.5 , (ii) the amount and form of consideration payable for such Investor Member's Membership Interests, (iii) the name of the Third Party to which such Investor Member's Membership Interests are to be Transferred (or which is otherwise entitled to direct the disposition thereof at the consummation of the Drag-Along Sale), (iv) any other material terms and conditions of the proposed Transfer and (v) the intended dates on which the NiSource Member will enter into a definitive agreement in respect of such proposed Transfer and consummate such proposed Transfer.

(c) In the event that the NiSource Member elects to exercise the Drag-Along Right, then each Investor Member hereby agrees with respect to all Membership Interests it holds:

(i) in the event such transaction requires the approval of Members, to vote (in person, by proxy or by action by written consent, as applicable) all of its Membership Interests in favor of such Drag-Along Sale;

(ii) to execute and deliver all related documentation and take such other action reasonably necessary to enter into definitive agreements in respect of and to consummate the proposed Drag-Along Sale in accordance with, and subject to the terms of, this Section 6.5 ; and

(iii) not to deposit its Membership Interests in a voting trust or subject any Membership Interests to any arrangement or agreement with respect to the voting of such Membership Interests, unless specifically requested to do so by the Drag-Along Buyer in connection with a Drag-Along Sale.

(d) Subject to Section 6.5(e) , any Transfer of an Investor Member's Membership Interests in a Drag-Along Sale shall be on the same terms and conditions as the proposed Transfer of the NiSource Member's Membership Interests in the Drag-Along Sale. Upon the request of the NiSource Member, each Investor Member shall be required to make customary representations and warranties in connection with the Transfer of such Investor Member's Membership Interests, including as to its ownership and authority to Transfer, free and clear of all Liens, its Membership Interests, and shall indemnify and hold harmless, to the fullest extent permitted by applicable Law, the Drag-Along Buyer against all losses of whatever nature arising out of, in connection with or related to any breach of any representation or warranty made by, or agreements, understandings or covenants of such Investor Member as the case may be, under the terms of the agreements relating to such Transfer of such Investor Member's Membership Interests, in each case not to exceed the equivalent obligations to indemnify and hold harmless the Drag-Along Buyer provided by the NiSource Member; provided , that (i) liability for misrepresentation or indemnity shall (as between the NiSource Member and such Investor Member) be expressly stated to be several but not joint and the NiSource Member and such Investor Member shall not be liable for any breach of covenants or representations or warranties as to the Membership Interests of any other Member and shall not, in any event, be liable for more than its pro rata share (based on the proceeds to be received) of any liability for misrepresentation or indemnity, (ii) such Investor Member shall benefit from any releases of sellers or other provisions in the transaction documentation of general applicability to sellers to the same extent as the NiSource Member and (iii) such Investor Member shall not be obligated to provide indemnification obligations that exceed its proceeds from the Drag-Along Sale.

(e) Any Transfer required to be made by an Investor Member pursuant to this Section 6.5 shall be for consideration consisting of cash or cash equivalents (or a combination thereof). Without the consent of the applicable Investor Member, an Investor Member shall not be required in connection with such Drag-Along Sale to agree to any material indemnification obligations, material, non-customary administrative covenants (including, but not limited to, restrictive covenants (such as non-solicit and non-compete covenants) that would restrict its or its Affiliates' business activities).

(f) At the consummation of the Drag-Along Sale, each Investor Member shall Transfer all of its Membership Interests to the Drag-Along Buyer (or its designee), and the Drag-Along Buyer shall pay the consideration due for such Investor Member's Membership Interest. If either Investor Member has failed, as of immediately prior to the time that the consummation of the Drag-Along Sale would otherwise have occurred, to have taken all actions necessary in accordance with this Agreement to consummate the Transfer of the Membership Interests held by it, then such Investor Member shall be deemed to be in material breach of this Agreement for purposes of Article IV and for all other purposes hereunder, shall be a Defaulting Member, and shall be deemed to have granted (and hereby grants, contingent only on the occurrence of such failure) an irrevocable appointment of any Person nominated for the purpose by the NiSource Member to be such Investor Member's agent and attorney to execute all necessary documentation and instruments on its behalf to Transfer such Investor Member's Membership Interest to the Drag-Along Buyer (or as it may direct) as the holder thereof, in each case consistent with the terms set forth in this Section 6.5 .

(g) The NiSource Member shall have a period of 180 days commencing on the delivery of the Drag-Along Notice (such 180-day period, the " Drag Sale Period ") to consummate the Drag-Along Sale. If the Drag-Along Sale is not completed prior to the expiration of the Drag Sale Period, then the process initiated by the delivery of the Drag-Along Notice shall be lapsed, and the NiSource Member will be required to repeat the process set forth in this Section 6.5 to pursue any Drag-Along Sale; provided that if a definitive agreement providing for the consummation of such Drag-Along Sale is executed within the Drag Sale Period but such Drag-Along Sale has not been consummated at the expiration of the Drag Sale Period solely as a result of a failure to receive the requisite authorization, approval or consent of any Governmental Body in respect of such Drag-Along Sale, then the Drag Sale Period shall be extended solely to the extent necessary to permit the receipt of all such authorizations, approvals or consents which are in process but have not been received from the relevant Governmental Body as of the original expiration date of the Drag Sale Period and the consummation of the Drag-Along Sale provided for in such definitive agreement; provided , that the NiSource Member shall have used efforts in seeking such authorizations, approvals and consents consistent with its obligations under such definitive agreement(s) in respect thereof.

(h) Notwithstanding the foregoing, the NiSource Member may not exercise the Drag-Along Right or consummate any Drag-Along Sale, without the prior written consent of the BIP Investor Member unless the applicable Drag-Along Sale would result in the Investor Members receiving proceeds resulting in the Investor Members collectively achieving at least a IRR of 10% (the " Investor Return Threshold ") and a MOIC of 2.15x (the " MOIC Return Threshold "); provided , that any shortfall in the Investor Members collectively achieving the Investor Return Threshold or the MOIC Return Threshold may be paid by the NiSource Member to the Investor Members in immediately available funds at the closing of the Drag-Along Sale, in which case the prior written consent of the BIP Investor Member shall not be required to exercise the Drag-Along Right or consummate such Drag- Along Sale.

(i) For the avoidance of doubt, the rights conferred to the NiSource Member under this Section 6.5 do not apply in the event of a Change in Control of the NiSource Member.

Section 1.6 Cooperation . The transferring Member acknowledges and agrees that it shall cooperate reasonably to obtain the requisite authorization, approval or consent of any Governmental Body necessary to consummate any Transfers contemplated or permitted by this Article VI . The Members shall have the right in connection with any Transfer of Membership Interests permitted by this Agreement (or in connection with the investigation or consideration of any such potential Transfer) to require the Company to reasonably cooperate with potential purchasers in such prospective Transfer (at the sole cost and expense of the applicable Member or such potential purchasers) by taking such actions reasonably requested by the applicable Member or such potential purchasers to cooperate in such Transfer, including (a) preparing or assisting in the preparation of due diligence materials and (b) providing such reasonable access to the Company's and each of its Subsidiaries' books, records, properties and other materials (subject, in each case, to the execution of customary confidentiality and non-disclosure agreements and subject to attorney-client privilege) to potential purchasers; provided that no such cooperation by the Company shall be required (i) until the relevant potential purchaser executes and delivers to the Company a customary confidentiality agreement, (ii) to the extent such cooperation would unreasonably interfere with the normal business operations of the Company or any of its Subsidiaries, and (iii) to the extent the provision of any information would (A) conflict with, or constitute a violation of, any applicable Law or Order or cause a loss of attorney-client privilege of the Company or any of its Subsidiaries, (B) in the NiSource Member's reasonable determination, require the disclosure of any information that is proprietary, confidential or sensitive to the NiSource Member or to any member of the NiSource Outside Group, or (C) require the disclosure of any information relating to any joint, combined, consolidated or unitary Tax Return that includes the NiSource Member or any other member of the Outside Group or any supporting work papers or other documentation related thereto.

Section 1.7 Sale of Investor Member . Notwithstanding anything to the contrary in this Agreement, if an Investor Member is participating in any sale of Membership Interests pursuant to Section 6.3 , Tag-Along Sale or Drag-Along Sale or any other Transfer of its Membership Interests, the owners of such Investor Member (or, as applicable, the regarded owner of such Investor Member for U.S. federal income tax purposes) (each, a " Blocker Seller ") shall, use commercially reasonable efforts to sell, and the NiSource Member and the Company will use commercially reasonable efforts to structure such

sale or transfer such that the Blocker Seller is able to sell, equity interests in such Investor Member (or, as applicable, the regarded owner of such Investor Member for U.S. federal income tax purposes), in lieu of selling the Membership Interests held (directly or indirectly) by such Investor Member in exchange for consideration equal to the value of the Membership Interests as determined in such sale pursuant to Section 6.3 , Tag-Along Sale or Drag-Along Sale or other Transfer, held (directly or indirectly) by such Investor Member without discount (as appropriately adjusted for any partial sale).

Article VII
PREEMPTIVE RIGHTS

Section 1.1 Preemptive Rights

. The Company hereby grants to each Member the right to purchase such Member's Preemptive Right Share of all (or any part) of any New Securities that the Company may from time to time issue after the Effective Date (the " Preemptive Right "); provided , however , that the Preemptive Right shall not apply with respect to New Securities issues or to be issued in any public offering or pursuant to failures to fund Additional Funding Requirements or as otherwise specifically provided herein. In the event the Company proposes to undertake an issuance of New Securities (in a single transaction or a series of related transactions), the Company shall give to each Member written notice of its intention to issue New Securities (the " Preemptive Right Participation Notice "), describing the amount and type of New Securities, the cash purchase price and the general terms upon which it proposes to issue such New Securities. Each Member shall have twenty (20) days from the date of receipt of any such Preemptive Right Participation Notice (the " Preemptive Right Notice Period ") to agree in writing to purchase for cash up to such Member's Preemptive Right Share of such New Securities for the price and upon the terms and conditions specified in the Preemptive Right Participation Notice by giving written notice to the Company and stating therein the quantity of New Securities to be purchased (not to exceed such Members' Preemptive Right Share) as well as the maximum amount of New Securities it would purchase. If any Member fails to so respond in writing within the Preemptive Right Notice Period, then such Member shall forfeit the right hereunder to purchase its Preemptive Right Share of such New Securities and the Company will allocate the rights to purchase such New Securities to any other Member that indicated it would purchase New Securities in excess of its Preemptive Right Share based on their relative Preemptive Right Shares. Subject to obtaining the requisite authorization, approval or consent of any Governmental Body, the closing of any purchase by any Member pursuant to this Section 7.1 shall be consummated concurrently with the consummation of the issuance or sale described in the Preemptive Right Participation Notice. The Company shall be free to complete the proposed issuance or sale of New Securities described in the Preemptive Right Participation Notice with respect to any New Securities not elected to be purchased pursuant to this Section 7.1 in accordance with the terms and conditions set forth in the Preemptive Right Participation Notice (except that the amount of New Securities to be issued or sold by the Company may be reduced). If a Member indicates in its response to a Preemptive Right Participation Notice that it shall purchase New Securities but then does not fund such amounts, such Member shall be a Defaulting Member.

Article VIII
PROTECTIVE PROVISIONS

Section 1.1 Investor Member Threshold Matters

. Notwithstanding anything to the contrary in this Agreement, the Company shall not cause or permit, in each case, so long as the Investor Members' aggregate Percentage Interest is equal to or greater than the Investor Consent Threshold (except with respect to subclauses (a) – (g) and (i) , in which case so long as the Investor Members' aggregate Percentage Interest is at least 4.9%), and no Investor Member is a Defaulting Member, without the prior written consent of the BIP Investor Member (except that no such written consent shall be required to the extent that such matter is necessary to comply with applicable Law or Order or is in response to an Emergency Situation):

(a) make an election or take any other action that results in a change in the tax classification of the Company or any of its Subsidiaries, with respect to its Subsidiaries only if such change adversely affects the BIP Investor Member;

(b) any non- *pro rata* repurchase or redemption of any equity interests issued by the Company;

(c) any (i) issuance of any class of equity interest in the Company, other than pursuant to Sections 1.9 , 5.1 , Section 7.1 or as otherwise specifically contemplated herein or (ii) change to the existing rights or obligations of any class of equity interest of the Company if such change would have a disproportionate material adverse impact on any Member in a manner different from the NiSource Member;

(d) the filing of a petition seeking relief, or the consent to the entry of a decree or order for relief in an involuntary case, under the bankruptcy, rearrangement, reorganization or other debtor relief Laws of the United States or any state or any other competent jurisdiction or a general assignment for the benefit of its creditors by the Company or any of its Subsidiaries of all or substantially all of the assets of the Company and its Subsidiaries;

(e) the conversion of the Company or NIPSCO from its current legal business entity form to any other business entity form (*e.g.* , the conversion of the Company from a Delaware limited liability company to a Delaware corporation);

(f) the listing of any equity interests of the Company or its Subsidiaries on any stock exchange (other than any spin off, split off or similar transaction of the Company, the NiSource Member or NIPSCO, or any of their Affiliates, which, for the avoidance of doubt, shall be subject to Sections 5.1(e) or 6.5 and the Spin Return Threshold);

(g) any amendment or modification to any Organizational Document of the Company or any Subsidiary of the Company, other than (i) ministerial amendments thereto or (ii) amendments thereto that are not disproportionately adverse to the BIP Investor Member as compared to any other holder of equity interests of the Company;

(h) the transfer, sale or other disposition, whether by the way of asset sale, stock sale, merger, or otherwise, of (i) all or substantially all of the assets of the Company Group, taken as a whole on a consolidated basis, or (ii) assets of the Company's Subsidiaries having a Fair Market Value in excess of 2.5% of the Rate Base Amount in the aggregate in any transaction or series of related transactions, other than Qualifying Core Assets and Excluded Transactions (it being understood, for the avoidance of doubt, that this Section 8.1(h) shall not be deemed to restrict a transfer, sale or other disposition of the equity of the Company) and other than pursuant to Article VI or a Change in Control of the Company, or the NiSource Member or as set forth below;

(i) the transfer, sale, issuance, or other disposition of any equity interests in NIPSCO or in any Subsidiary of the Company that directly or indirectly holds any equity interests in NIPSCO to any Person that is not the Company or one of its wholly-owned Subsidiaries;

(j) any new agreements or amendments to existing agreements, among the Company or any of its Subsidiaries, on the one hand, and any Member or any of their respective Affiliates (other than the Company or any of its Subsidiaries), on the other hand, which such agreement (or series of related transactions) are entered into after the Effective Date, other than those that (i) are on an arms-length basis and (ii) involve revenues or expenditures of less than $15,000,000 per Contract or series of related transactions individually or less than $40,000,000 in the aggregate, subject to an annual increase by the CPI Escalator, for any fiscal year for all such affiliate transactions (it being acknowledged and agreed that no prior written consent of the BIP Investor Member will be required with respect to any amendments to any affiliate transaction made in the ordinary course of business unless to the extent such amendment would have a disproportionately adverse effect on the Company Group (relative to other regulated utilities then owned by Parent or its Affiliates (other than the Company and its Subsidiaries))) in any material respect;

(k) the acquisition by the Company or any of the Company's Subsidiaries of any equity interests or assets of any Person or the entry into joint ventures, in each case, having a Fair Market Value

in excess of 2.5% of the Rate Base Amount in the aggregate in any calendar year, other than in connection with Qualifying Core Assets or Excluded Transactions;

(l) any capital expenditure by the Company or its Subsidiaries, that is in excess of 1.0% of the Rate Base Amount in any calendar year and is not made (i) in connection with a Qualifying Core Asset, (ii) reasonably necessary to fund an Emergency Expenditures, or (iii) an Excluded Transaction;

(m) incurring long-term Indebtedness (other than the refinancing of existing Indebtedness on commercially reasonable terms consistent with current market conditions as determined by the Board) by the Company or its Subsidiaries, if, after giving pro forma effect to such incurrence and the application of the proceeds therefrom, the Company's and its Subsidiaries' Debt-to-Capital Ratio would exceed the then-current target Debt-to-Capital Ratio approved by the IURC by more than 200 basis points for two consecutive (2) quarters; provided , that the Company shall notify the BIP Investor Member at least ten (10) Business Days prior to the Company or any of its Subsidiaries incurring any Indebtedness in excess of the annual budget;

(n) making any political or charitable contribution made by or on behalf of the Company or any of its Subsidiaries to any Governmental Body or any official, representative or staff thereof, including any community leaders or elected officials, in excess of $250,000 individually or $1,000,000 in the aggregate in a fiscal year; and

(o) entering into any binding agreement or arrangement by the Company or any of its Subsidiaries to effect any of the foregoing actions.

Notwithstanding the foregoing, no BIP Investor Member approval shall be required with respect to any spin off, split off or similar transaction of the Company, the NiSource Member or NIPSCO, or any of their Affiliates; provided , that any such transaction must satisfy the requirements of Section 5.1(e) or Section 6.5 and the Spin Return Threshold.

Section 1.2 Consultation Matters . For so long as (x) the Investor Members' aggregate Percentage Interest is at least 9.9% and (y) no Investor Member is a Defaulting Member, the Company (and, as applicable, the Board) shall use reasonable efforts to consult in good faith with the BIP Investor Member prior to the Company undertaking, or causing or permitting any of its Subsidiaries to undertake, the following matters (except as would be impracticable in respect of a particular action that the Board reasonably believes to be necessary or appropriate to comply with applicable Law, Order or in response to an Emergency Situation):

(a) appointing or replacing the President, and the head of electric and the head of gas of NIPSCO;

(b) establishing or materially amending, or material deviating from the then-current plan or budget of the Company and its Subsidiaries; provided , that the Company (and, as applicable, the Board) the NiSource Member and the Parent shall (i) provide to the BIP Investor Member a draft of the business plan and budget of the Company and its Subsidiaries for a given fiscal year no later than November 10 of the prior fiscal year, which budget shall include quarterly fiscal projections, (ii) schedule and attend a meeting among representatives of the Company, the NiSource Member, the Parent and the BIP Investor Member, including the Chief Financial Officer and Head of Regulatory Affairs of the Parent, no later than November 24 of the prior fiscal year, to discuss the draft business plan and budget, (iii) schedule and attend a meeting between the Chief Executive Officer of the Parent and the Global Head of Infrastructure of Blackstone Inc., within 5 Business Days of a written request by the BIP Investor Member, to discuss the draft business plan and budget as well as any changes proposed by BIP Investor Member and (iv) consider the BIP Investor Member's comments to the business plan and budget in good faith; and

(c) material decisions relating to the conduct (including the settlement) of any litigation, administrative, or criminal proceeding to which the Company or any of its Subsidiaries is a party where (i) it is reasonably expected that the liability of the Company and its Subsidiaries would exceed $75,000,000 (as adjusted by the CPI Escalator) (solely with respect to litigation proceedings), (ii) such proceeding would have material reputational damage on the Company or its Subsidiaries, or (iii) such

proceeding would reasonably be expected to have a material and adverse effect on the BIP Investor Member or any of its Affiliates (other than in its or (if applicable, their) capacity as an investor in the Company); provided , that, for the avoidance of doubt, the foregoing shall not be applicable to any ordinary course regulatory proceedings (including rate cases) that do not involve claims of criminal conduct or intentional violations of applicable Law.

Section 1.3 Indebtedness . The Company and its Subsidiaries shall use reasonable best efforts to incur Indebtedness, both intercompany and with respect to any Third Party, such that the regulated capital structure of NIPSCO remains consistent with authorized levels.

Section 1.4 Additional Actions . The NiSource Member and Investor Members further agree to the additional actions set forth on Schedule 2 .

Section 1.5 Actions by the Investor Directors on behalf of the BIP Investor Member . Where any action requires the consent of the BIP Investor Member pursuant to Section 8.1 , the Investor Directors shall, unless the BIP Investor Member indicates in writing to the NiSource Member otherwise, have the authority to provide such consent on behalf of the BIP Investor Member at any meeting of the Board called to discuss such matters, and the Company, the other Members and the other Directors shall be entitled to rely on such action of the Investor Directors as an action of the BIP Investor Member with such action being binding upon the BIP Investor Member.

Section 1.6 Acknowledgement of Purpose of Provisions . It is hereby acknowledged and agreed by the Parties that the rights of the Investor Members set forth in this Article VIII are protection mechanisms for each Investor Member acting in its capacity as an investor in the Company and are not for purposes of, and should not be construed or otherwise interpreted as, providing either Investor Member or any of its Representatives or Affiliates with the ability to take any action that would constitute exercising substantial influence or control over the Company or any of its Subsidiaries or would otherwise provide either Investor Member or any of their respective Representatives or Affiliates with any right to direct the operation of the business of the Company or any of its Subsidiaries.

Article IX
OTHER COVENANTS AND AGREEMENTS

Section 1.1 Books and Records .

(a) The Company shall keep and maintain, or cause to be kept and maintained, books and records of accounts, taxes, financial information and all matters pertaining to the Company and its Subsidiaries at the offices and place of business of the Company in a commercially reasonable manner consistent with the manner in which similar books and records are kept and maintained by other members of the Outside Group. Each Member (other than any Defaulting Member) and its duly authorized Representatives shall have the right to, at reasonable times during normal business hours, upon reasonable notice, under supervision of the Company's personnel and in such a manner as to not unreasonably interfere with the normal operations of any member of the Company Group, visit and inspect the books and records of the Company Group, and, at its expense, make copies of and take extracts from any books and records of the Company Group; provided , that, in the case of an Investor Member, any Person gaining access to such information regarding the Company Group pursuant to this Section 9.1 shall agree to hold in strict confidence, not make any disclosure of, and not use for purposes other than good faith administration of such Investor Member's continuing investment, all information regarding any member of the Company Group that is not otherwise publicly available.

(b) Notwithstanding the foregoing, the Company shall not be obligated to provide to either Investor Member any record or information (i) relating to the negotiation and consummation of the transactions contemplated by this Agreement and the PSA, including confidential communications with Representatives or Advisors, including legal counsel, representing the Company or any of its Affiliates, (ii) that is subject to an attorney-client or other legal privilege, (iii) that, in the NiSource Member's reasonable determination, are proprietary, confidential or sensitive to the NiSource Member or to any other member of the Outside Group, (iv) relating to any joint, combined, consolidated or unitary Tax Return that includes the NiSource Member or any other member of the Outside Group or any supporting

work papers or other documentation related thereto if such work papers or documentation includes the information of the NiSource Member or Outside Group, or (v) the provision of which would violate any applicable Law or Order; provided , with respect to (ii) and (iv) above that the Company shall use commercially reasonable efforts to develop an alternative to make such information available, including to make redactions to any such material and provide such redacted materials to such Investor Member.

(c) Each Member shall reimburse the Company for all reasonable, documented, out-of-pocket costs and expenses incurred by the Company in connection with such Member's exercise of its inspection and information rights pursuant to this Section 9.1 .

Section 1.2 Financial Reports . The Company shall provide, or otherwise make available, to any Member (unless such Member is a Defaulting Member):

(a) on an annual basis, within 120 days after the end of each fiscal year, an audited consolidated balance sheet, statement of operations and statement of cash flow of NIPSCO and its Subsidiaries;

(b) on a quarterly basis, within 60 days after the end of each fiscal quarter, an unaudited consolidated balance sheet and related quarter and year to date statement of operation and related quarter and year to date statement of cash flow of NIPSCO and its Subsidiaries;

(c) on a monthly basis, within 30 days after the end of each month-end, an unaudited income statement as readily available of NIPSCO and its Subsidiaries and related financial information prepared in the ordinary course;

(d) on an annual basis (or more frequently, if applicable), as soon as reasonably practicable after the approval thereof by the Board, the annual budget and business plan for NIPSCO and its Subsidiaries;

(e) on an annual basis, as soon as reasonably practicable after the approval thereof by the Board, financial forecasts for NIPSCO and its Subsidiaries for the fiscal year, which shall be in such manner and form as approved by the Board, and which shall include a projection of income and a projected cash flow statement for each fiscal quarter in such fiscal year and a projected balance sheet as of the end of each fiscal quarter in such fiscal year;

(f) (i) within 45 days after the end of each fiscal year, an estimated Schedule K-1 for the immediately preceding taxable year based on best-available information to date and depreciation will be subject to change based on final year end audit and financial reporting results and (ii) not less than 45 days prior to the due date, including extensions, for the filing of the Company's federal information return for the immediately preceding taxable year, a final Schedule K-1, along with copies of all other federal, state and local income tax returns or reports filed by the Company for the previous year, as may be required as a result of the operations of the Company, and a schedule of Company book tax differences for the immediately preceding year;

(g) each Investor Member shall promptly upon request by the NiSource Member provide the following information: (i) Form SS-4/IRS determination letter and Form 8832 Entity Classification Election and (ii) Form W-9; and

(h) promptly, upon reasonable notice, any information that is reasonably requested by any Member in order to manage its regulatory or tax affairs or make filings with Governmental Bodies, including but not limited to Federal and Indiana corporate tax returns and financial statements (whether or not audited) for either Investor Member (or the regarded owner of either Investor Member if such Investor Member is a disregarded entity for tax purposes).

Section 1.3 Other Business; Corporate Opportunities .

(a) To the extent permitted by applicable Law, any Member and any Affiliate of any Member may engage in, possess an interest in or otherwise be involved in other business ventures of any nature or description, independently or with others, similar or dissimilar to the businesses of the Company Group, and neither the Company nor any other Member shall have any rights by virtue of this Agreement in and to such independent ventures or the income or profits derived therefrom, and the pursuit of any such venture, even if competitive with the businesses of the Company Group, shall be deemed not to be wrongful or improper so long as it is consistent with all Laws and Orders applicable to the Company and its Subsidiaries.

(b) The Company and each Member expressly acknowledge and agree that, (i) neither the Members nor any of their respective Affiliates or Representatives shall have any duty to communicate or present an investment or business opportunity to the Company in which the Company may, but for the provisions of this Section 9.3 , have an interest or expectancy (a " Corporate Opportunity "), and (ii) neither the Members nor any of their respective Affiliates or Representatives (even if such Person is also an officer or Director of the Company) shall be deemed to have breached any duty or obligation to the Company by reason of the fact that such Person pursues or acquires a Corporate Opportunity for itself or directs, sells, assigns or transfers such Corporate Opportunity to another Person or does not communicate information regarding such Corporate Opportunity to the Company. The Company and each Member expressly renounce any interest in Corporate Opportunities and any expectancy that a Corporate Opportunity will be offered to the Company.

Section 1.4 Compliance with Laws .

(a) The Company shall and shall cause its Subsidiaries to use their respective commercially reasonable efforts to procure that the Company and its Subsidiaries and Company Group's respective Representatives shall not in the course of their actions for, or on behalf of, any member of the Company Group:

(i) offer promise, provide or authorize the provision of any money, property, contribution, gift, entertainment or other thing of value, directly or knowingly indirectly, to any government official, to unlawfully influence official action or secure an improper advantage, or to unlawfully encourage the recipient to improperly influence or affect any act or decision of any Governmental Body, in each case, in order to assist any member of the Company Group in obtaining or retaining business, or otherwise act in violation of any applicable Anti-Corruption Laws;

(ii) violate any applicable Anti-Money Laundering Laws; or

(iii) engage in any unlawful dealings or transactions with or for the benefit of any Sanctioned Person or otherwise violate Sanctions.

(b) The Company shall promptly notify the Members of (i) any allegations of material misconduct by any member of the Company Group or any actions, suits or proceedings by or before any Governmental Body to which any member of the Company Group becomes a party, or to which the Company becomes aware that any Representative of the Company Group (in relation to such Representative's actions for, or on behalf of, any member of the Company Group) is a party, in each case, relating to any material breach or suspected material breach of any applicable Anti-Corruption Laws, Anti-Money Laundering Laws, or Sanctions or (ii) any fact or circumstances of which it becomes aware that would reasonably be expected to result in a breach of this Section 9.4 .

Section 1.5 Non-Solicit

. Without the prior written consent of the Company, during the term of this Agreement, each Investor Member shall not, shall cause its Affiliates not to, and shall use its reasonable best efforts to procure that other Persons in which it is invested do not, solicit for employment, hire or engage as a consultant any individual who is serving in any position within the then-current NiSource Leadership Team; provided , that this Section 9.5 shall not prohibit any Person from issuing general public solicitations not specifically targeted at the then-current NiSource Leadership Team or from hiring or engaging any Person responding to such general solicitations.

Section 1.6 Confidentiality .

(a) Each Member shall, and shall cause its Representatives to, keep confidential and not divulge any information (including all budgets, business plans and analyses) concerning the Company and its Subsidiaries, including their respective assets, business, operations, financial condition and prospects, or with respect to another Member of this Agreement (" Confidential Information "), and to use such Confidential Information only in connection with the operation of the Company and its Subsidiaries or such Member's administration of its investment in the Company; provided that nothing herein shall prevent any Member from disclosing such Confidential Information (i) upon the Order of any court or administrative agency, (ii) upon the request or demand of any Governmental Body having jurisdiction over such party, (iii) to the extent compelled by legal process or required pursuant to binding requirement of any Governmental Body, (iv) to the other Parties, (v) to such party's Representatives that in the reasonable judgment of such party need to know such Confidential Information, (vi) to any potential Permitted Transferee in connection with a proposed Transfer of Membership Interests from a Member so long as such transferee agrees to be bound by the provisions of this Section 9.6 as if a Member, or (vii) to actual and prospective limited partners of such Member or its Affiliates in connection with reporting requirements or fundraising efforts; provided , further , that in the case of clauses (i) , (ii) or (iii) , such Member shall prior to making any disclosure seek a protective order or other relief to prevent or reduce the scope of such disclosure, to the extent legally permissible, notify the other Parties of the proposed disclosure as far in advance of such disclosure as practicable and use reasonable efforts to ensure that any Confidential Information so disclosed is accorded confidential treatment, when and if available; provided , further , that in the cases of clauses (v) through (vii) , such party receiving any Confidential Information is bound to an obligation of confidentiality no less stringent than that contained in this Agreement including such other protective provisions to protect the misuse of material non-public information.

(b) The restrictions in Section 9.6(a) shall not apply to information that (i) is or becomes generally available to the public other than as a result of a disclosure by a Member or any of its Representatives in violation of this Agreement, (ii) is or has been independently developed or conceived by such Member or its Affiliates without use of the Company's or any of its Subsidiaries' Confidential Information or (iii) becomes available to the receiving Member or any of its Representatives on a non-confidential basis from a source other than the Company or any of its Subsidiaries, any other Party or any of their respective Representatives; provided , that such source is not known by the recipient of the information to be bound by a confidentiality agreement with the disclosing party or any of its Representatives.

(c) Each Party shall inform any Representatives to whom it provides Confidential Information that such information is confidential and instruct them (i) to keep such Confidential Information confidential and (ii) not to disclose Confidential Information to any Third Party (other than those Persons to whom such Confidential Information has already been disclosed in accordance with the terms of this Agreement). The disclosing Party shall be responsible for any breach of this Section 9.6 by the Person to whom the Confidential Information is disclosed.

(d) The restrictions in Section 9.6(a) shall not restrict any Member and its Affiliates from disclosing any Confidential Information required to be disclosed under applicable securities Laws or the rules of any stock exchange on which any of their securities are traded.

(e) Notwithstanding anything herein to the contrary, the provisions of this Section 9.6 shall survive the termination of this Agreement for a period of three (3) years and, with respect to each Member, shall survive for a period of three (3) years following the date on which such Member is no longer a Member. The provisions of this Section 9.6 shall supersede the provisions of any non-disclosure agreements entered into by the Company (or its Affiliates, including the NiSource Member) and any of the Members (or their respective Affiliates) with respect to the transactions contemplated hereby or by the PSA prior to the Effective Date.

Section 1.7 Expenses . Except as otherwise expressly provided herein, all costs and expenses, including fees and disbursements of Representatives and other Advisors, incurred in connection with this Agreement and the transactions contemplated hereby, shall be paid by the Party incurring such costs and expenses. Notwithstanding the foregoing, should any litigation be commenced between the Parties or

their Representatives concerning this Agreement or the rights, duties, or obligations hereunder, the Party or Parties prevailing in such proceeding shall be entitled, in addition to any other relief granted, to the reasonable attorneys' fees and other litigation costs incurred by reason of such litigation.

Section 1.8 Obligations in Respect of Financings .

(a) Subject to Section 9.8(b) , during the term of this Agreement, the NiSource Member and the Company shall cooperate with each Investor Member as reasonably requested by such Investor Member in connection with any Debt Financing. Such assistance shall include (i) providing to such Investor Member such information as may be reasonably necessary in connection with the Debt Financing, and (ii) taking such other actions as are reasonably requested by such Investor Member to facilitate the consummation of any Debt Financing.

(b) Notwithstanding anything in Section 9.8(a) or this Agreement to the contrary, the cooperation requested by either Investor Member pursuant to Section 9.8(a) shall not (i) unreasonably interfere with the ongoing operations of the NiSource Member or its Subsidiaries, or (ii) require the NiSource Member or any of its Subsidiaries (other than the Company) to (A) pay any commitment or other similar fee, (B) have or incur any liability or obligation in connection with any Debt Financing, including under any agreement or any document related to any Debt Financing, (C) commit to taking any action (including entering into any Contract) or to otherwise execute any document, agreement, certificate or instrument in connection with any Debt Financing or (D) take any action that would conflict with, violate or breach or result in a violation or breach of or default under any Contract, this Agreement or any other document contemplated hereby or any Law or regulatory requirements. In no event shall the Company or NiSource Member be required to provide information relating to the transactions contemplated hereby or with any other Person in connection with any possible sale or transfer of assets or equity of the Company and its Subsidiaries, any information subject to the attorney-client privilege or any confidential or sensitive information, or relating to any Tax Return.

Section 1.9 Credit Support . For so long as there are (a) any guarantees, credit support, letters of credit or financial assurances of a member of the Outside Group related to support obligations of the Company Group, each Member shall pay the portion equal to its Percentage Interest of any payment or draw request on such credit support facilities on or before the applicable payment date required or (b) any guarantees, credit support, letters of credit or financial assurances of the Company or any of its Subsidiaries related to support obligations of a member of the Outside Group, the NiSource Member shall pay all such payments on or before the applicable payment date required. If a Member does not make a payment in accordance with the above, the Company may issue a Capital Call Request Notice in accordance with Section 5.1 for such amount from the applicable Member. For the avoidance of doubt, the failure to make the payment in clauses (a) or (b) prior to a Capital Call Request Notice shall not be an Event of Default and the failure to fund pursuant to a Capital Call Request Notice shall be treated in accordance with Section 5.1 . Notwithstanding the foregoing, if the VCOC Investor Member fails to make its payment in accordance with this Section 9.9 , the BIP Investor Member shall be obligated to make such payment.

Article X
TAX MATTERS

Section 1.1 Tax Classification . The Parties intend that the Company be classified as a partnership for U.S. federal income (and applicable state and local) Tax purposes. Without limiting Section 8.1(a) , neither the Company nor any Member shall make any election to change the tax classification of the Company or otherwise take any action inconsistent with such intended tax classification without the consent of the Board (or its designee).

Section 1.2 Partnership Representative

.

(a) The NiSource Member is hereby designated the "Partnership Representative" within the meaning of Code Section 6223(a) of the Company. The Partnership Representative shall, if required, designate from time to time a "designated individual" to act on behalf of the Partnership Representative, and such designated individual shall be subject to replacement by the Partnership Representative in accordance with the Code and Treasury Regulations. If any state or local tax law provides for a tax matters partner, partnership representative, or person having similar rights, powers, authority, or obligations, the Partnership Representative shall also serve in such capacity. The Partnership Representative is authorized to represent the Company before the Internal Revenue Service and any other governmental agency with jurisdiction, make all decisions regarding permitted elections under the Code, Treasury Regulations, and other state and local tax law with respect to tax proceedings; provided , however , the Partnership Representative shall not enter into any settlement or similar agreement without the consent of the Board (such consent not to be unreasonably withheld, conditioned, or delayed). All Members (and former Members) agree to cooperate with, and to do and refrain from doing any or all things reasonably required by the Partnership Representative in connection with the conduct of all such proceedings or to otherwise allow the Company and the Partnership Representative to comply with the partnership audit provisions of the Code, Treasury Regulations, and similar state and local law. All Members shall cooperate in good faith to amend this Section 10.2 or other provisions of this Agreement as necessary to reflect any statutory amendments or the promulgation of Treasury Regulations or other administrative authority promulgated under the Partnership Audit Rules so as to, to the extent possible, preserve the relative rights, duties, and obligations of the Members hereunder. The Company shall, to the fullest extent permitted by law, reimburse and indemnify the Partnership Representative for all third-party expenses (including legal and accounting fees), claims, liabilities, losses, and damages incurred as the Partnership Representative in connection with any examination, administrative, or judicial proceeding, or otherwise acting in its capacity as Partnership Representative.

(b) Notwithstanding anything to the contrary in this Agreement, each Member (including, for purposes of this Section 10.2 , any Person who is or becomes a Member but who for any reason ceases to be a Member) (i) hereby covenants to treat each item of income, gain, loss, deduction, or credit attributable to the Company in a manner consistent with the treatment of such income, gain, loss deduction, or credit on the tax return of the Company or as determined in a notice of final partnership adjustment pursuant to Section 6226 of the Code, (ii) hereby agrees to indemnify and hold harmless the Company from such Member's share of any tax and any penalties, interest, and additions to tax attributable to any adjustment to the income, gain, loss, deduction, or credit of the Company pursuant to Section 6226 of the Code, and (iii) hereby agrees to take all other actions as the Partnership Representative may reasonably direct with respect to the Member's (or, in respect of the Member, the Company's) tax liabilities, which shall not include filing an amended return for any "reviewed year" to account for all adjustments under Section 6225(a) of the Code properly allocable to the Member as provided in and otherwise contemplated by Section 6225(c) of the Code and any Treasury Regulations that may be promulgated thereunder. If the Company or any other entity in which the Company holds an interest is obligated to pay any amount to a governmental agency or body or to any other Person (or otherwise makes a payment) of any taxes arising under a federal, state, or local tax audit or other proceeding and the Partnership Representative determines that all or a portion of such payment is specifically attributable to a Member (or former Member), then such Member (or former Member) shall reimburse the Company in full for the entire amount paid (including any interest, penalties, and expenses associated with such payment). The obligations of a Member under this Section 10.2 shall survive such Member's sale or other disposition of its interests in the Company and the termination, dissolution, liquidation, or winding up of the Company.

(c) The Partnership Representative (i) shall keep the Investor Members reasonably informed of any material tax audit, settlement or proceeding and (ii) shall not settle or otherwise compromise a material tax audit, settlement or proceeding that would have a material adverse impact on either Investor Member, without the BIP Investor Member's prior written consent (such consent not to be unreasonably withheld, conditioned, or delayed).

Section 1.3 Tax Elections . Except as otherwise provided by this Agreement, all material elections and decisions required or permitted to be made by the Company under any applicable tax law shall be determined by the NiSource Member; provided however , that any election with respect to taxes that is disproportionately materially adverse to either Investor Member shall require the BIP Investor

Member's prior consent (such consent not to be unreasonably withheld, conditioned, or delayed). The elections shall include, but not be limited to, the following:

(a) Upon the written request of a Member, the Company may make the election under Section 754 of the Code in accordance with applicable regulations thereunder for the Company and each applicable Subsidiary;

(b) To the extent permitted under Section 706 of the Code, to elect the calendar year as the Company's taxable year and, (i) for clarity, to the extent the Company is permitted to adopt the calendar year, no other year shall be adopted as the taxable year and (ii) to the extent any additional filings or elections are required, to make such required filings or elections;

(c) To elect the accrual method of accounting;

(d) To elect to amortize any organizational expenses of the Company ratably over a period of one hundred eighty (180) months as permitted by Section 709(b) of the Code, and to elect to deduct the start-up expenditures of the Company as permitted by Section 195(b) of the Code;

(e) If "bonus depreciation" is available with respect to qualified property, the NiSource Member shall make the election described in Section 168(k)(7) of the Code to opt out of "bonus depreciation" for the Taxable Year during which the placed in service date occurs.

(f) Based upon current knowledge of the facts pertaining to the transactions contemplated by the PSA as of the Investment Closing Date, the Company will not report the transactions contemplated by the PSA to the IRS as a "reportable transaction" pursuant to Section 6011 of the Code, the relevant Treasury Regulations and any other administrative practice or procedure;

(g) To the extent permitted by law, to elect to apply the de minimis safe harbor under Treasury Regulations Section 1.263(a)-1(f);

(h) To the extent permitted under Code Section 461(h)(3), to elect the adoption of the exception for certain recurring items;

(i) To the extent permitted under Code Section 461(c), to elect to ratably accrue real property taxes; and

(j) To elect under Code Section 163(j) to be treated as an excepted trade or business.

Section 1.4 Cooperation . Each Investor Member shall, and shall cause its Affiliates to, provide to the NiSource Member and its Subsidiaries (including the Company and its Subsidiaries), and the NiSource Member and the Company shall, and shall cause their Affiliates to, provide to each Investor Member, in each case, such cooperation, documentation and information as any of them reasonably may request in connection with (a) filing any Tax Return, amended Tax Return or claim for refund, (b) determining a liability for Taxes or (c) preparing for or conducting any Tax audits, examinations or other proceedings by any taxing authority of any Governmental Body.

Section 1.5 Withholding

. The Company may withhold and pay over to the United States Internal Revenue Service (or any other relevant Tax authority) such amounts as it is required to withhold or pay over, pursuant to the Code or any other applicable Tax Law, on account of a Member, including in respect of distributions made pursuant to Section 5.2 or Section 5.3 , and, for the avoidance of doubt, the amount of any such distribution or other payment to a Member shall be net of any such withholding. To the extent that any amounts are so withheld and paid over, such amounts shall be treated as paid to the Person(s) in respect of which such withholding was made. For all purposes under this Agreement, any amounts withheld or paid with respect to a Member pursuant to this Section 10.5 shall offset any distributions to which such Member is entitled concurrently with such withholding or payment and shall be treated as having been

distributed to such Member pursuant to Section 5.2 or Section 5.3 at the time such offset is made. To the extent that the cumulative amount of such withholding or payment exceeds the distributions to which such Member is entitled concurrently with such withholding or payment, the amount of such excess shall be promptly paid to the Company by the Member on whose behalf such withholding is required to be made; provided , however , that any such payment shall not be treated as a Capital Contribution and shall not reduce the amount that a Member is otherwise obligated to contribute to the Company. To the extent that a Member claims to be entitled to a reduced rate of, or exemption from, a withholding Tax pursuant to an applicable income Tax treaty, or otherwise, such Member shall furnish the Company with such information and forms as such Member may be required to complete where necessary to comply with any and all Laws and regulations governing the obligations of withholding Tax agents, and the Company shall apply such reduced rate of, or exemption from, withholding Tax as reflected on such information and forms that have been provided by such Member. Each Member agrees that if any information or form provided pursuant to this Section 10.5 expires or becomes obsolete or inaccurate in any respect, such Member shall update such form or information.

Section 1.6 Certain Representations and Warranties . Each Member represents and warrants that any such information and forms furnished by such Member shall be true and accurate and agrees to indemnify the Company from any and all damages, costs and out-of-pocket expenses resulting from the filing of inaccurate or incomplete information or forms relating to such withholding Taxes.

Article XI
LIABILITY; EXCULPATION; INDEMNIFICATION

Section 1.1 Liability; Member Duties . The debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise, shall be solely the debts, obligations and liabilities of the Company, and no Covered Person shall be obligated personally for any such debt, obligation or liability of the Company solely by reason of being a Covered Person. Each Member acknowledges and agrees that each Member, in its capacity as a Member, may decide or determine any matter subject to the approval of such Member pursuant to any provision of this Agreement in the sole and absolute discretion of such Member, and in making such decision or determination such Member shall have no duty, fiduciary or otherwise, to any other Member or to the Company Group, it being the intent of all Members that such Member, in its capacity as a Member, has the right to make such determination solely on the basis of its own interests.

Section 1.2 Exculpation . To the fullest extent permitted by applicable Law, no Covered Person shall be liable to the Company or any other Covered Person for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this Agreement, except that a Covered Person shall be liable for any such loss, damage or claim incurred by reason of such Covered Person's fraud or willful misconduct.

Section 1.3 Indemnification

. The Company shall indemnify, defend and hold harmless any Person who was or is a party or is threatened to be made a party to any threatened, pending or completed actions, suits or proceedings by reason of the fact that such Person is or was a Director or officer of the Company, or is or was a Director or officer of the Company serving at the request of the Company as a director, officer or agent of another limited liability company, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' and experts' fees), judgments, settlements, penalties and fines actually and reasonably incurred by him or her in connection with the defense or settlement of such, action, suit or proceeding if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Company; and, with respect to any criminal action or proceeding, either he or she had reasonable cause to believe such conduct was lawful or no reasonable cause to believe such conduct was unlawful; provided , however , for the avoidance of doubt, this Section 11.3 shall not apply with respect to any such actions between the Company and such Person or pursuant to claims under the PSA.

Section 1.4 Authorization

. To the extent that such present or former Director or officer of the Company has been successful, on the merits or otherwise, in the defense of any action, suit or proceeding referred to in Section 11.3 , or in the defense of any claim, issue or matter therein, the Company shall indemnify him or her against expenses (including attorneys' fees) actually and reasonably incurred by him or her in connection therewith. Any other indemnification under Section 11.3 shall be made by the Company only as authorized in the specific case, upon a determination that indemnification of the present or former Director or officer is permissible in the circumstances because such present or former Director or officer has met the applicable standard of conduct. Such determination shall be made, with respect to a Person who is a Director or officer at the time of such determination, (a) by a majority vote of the Directors who are not parties to such action, suit or proceeding, even with less than a quorum, or (b) if there are no such Directors, or if such Directors so direct, by independent legal counsel in a written opinion, or (c) by the NiSource Member and the BIP Investor Member. Such determination shall be made, with respect to former Directors and officers, by any Person or Persons having the authority to act on the matter on behalf of the Company.

Section 1.5 Reliance on Information

. For purposes of any determination under Section 11.3 , a present or former Director or officer of the Company shall be deemed to have acted in good faith and have otherwise met the applicable standard of conduct set forth in Section 11.3 if his or her action is based on the records or books of account of the Company or on information supplied to him or her by a Director or an officer of the Company in the course of his or her duties, or on the advice of legal counsel for the Company or on information or records given or reports made to the Company by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Company. The provisions of this Section 11.5 shall not be deemed to be exclusive or to limit in any way the circumstances in which a present or former Director or officer of the Company may be deemed to have met the applicable standard of conduct set forth in Section 11.3 .

Section 1.6 Advancement of Expenses . Expenses (including reasonable attorneys' fees) incurred by the present or former Director or officer of the Company in defending any civil, criminal, administrative or investigative action, suit or proceeding may be paid by the Company as authorized in the specific case in the same manner described in Section 11.4 , upon receipt of a written affirmation of the present or former Director or officer that he or she has met the standard of conduct described in Section 11.3 and upon receipt of a written undertaking by or on behalf of him or her to repay such amount if it shall ultimately be determined that he or she did not meet the standard of conduct, and a determination is made that the facts then known to those making the determination shall not preclude indemnification under this Article XI .

Section 1.7 Non-Exclusive Provisions . The indemnification and advancement of expenses provided by, or granted pursuant to, this Article XI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled. The Company hereby acknowledges that certain of its Directors and certain of its Members and the direct and indirect partners therein or owners thereof (the " Fund Indemnitees ") may have rights to indemnification, advancement of expenses and/or insurance with respect to their service on the Board (collectively, the " Fund Indemnitors "). The Company hereby agrees: (a) that it is the indemnitor of first resort (i.e., its obligations to the Fund Indemnitees are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by the Fund Indemnitees are secondary) and (b) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof, except to the extent that a Fund Indemnitee breaches its undertaking to repay advanced expenses as provided in Section 11.6 . The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of the Fund Indemnitees with respect to any claim for which the Fund Indemnitees have sought indemnification from the Company shall affect the foregoing and that the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of the Fund Indemnitees against the Company.

Section 1.8 Survival of Indemnification and Advancement of Expenses . The indemnification and advancement of expenses provided by, or granted pursuant to, this Article XI shall, unless otherwise

provided when authorized or ratified, continue as to a Person who has ceased to be a Director or officer of the Company and shall inure to the benefit of his or her heirs, executors and administrators.

Section 1.9 Limitations . Notwithstanding anything contained in this Article XI to the contrary, the Company shall not be obligated to indemnify any Director or officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such Person unless such proceeding (or part thereof) was authorized or consented to by the Board.

Article XII
REPRESENTATIONS AND WARRANTIES

Section 1.1 Members Representations and Warranties . Each Member hereby represents and warrants, severally and not jointly, to the Company and to the other Member as follows:

(a) Such Member is a company duly organized, validly existing and in good standing under the Laws of its jurisdiction of incorporation or formation, as applicable, with full power and authority to enter into this Agreement and perform all of its obligations hereunder.

(b) The execution and delivery of this Agreement by such Member, and the performance by such Member of its obligations hereunder, have been duly and validly authorized by all requisite action by such Member, and no other proceedings on the part of such Member are necessary to authorize the execution, delivery or performance of this Agreement by such Member.

(c) This Agreement has been duly and validly executed and delivered by such Member, and, assuming that this Agreement is a valid and binding obligation of the other Parties, this Agreement constitutes a valid and binding obligation of such Member, enforceable against such Member in accordance with its terms, except as limited by the application of bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other Laws relating to or affecting creditors' rights or general principles of equity.

(d) The execution and delivery by such Member of this Agreement, and the performance by such Member of its obligations hereunder, does not (i) violate or breach its Organizational Documents, (ii) violate any applicable Law to which such Member is subject or by which any of its assets are bound, or (iii) result in any breach of or constitute a default (or an event that, with notice or lapse of time or both, would become a default) under any Contract to which such Member is a party or by which any of its assets are bound.

(e) Such Member is acquiring its Membership Interests (i) for such Member's own account and not directly or indirectly for the account of any other Person and (ii) for investment and not with a view to their sale or distribution. Such Member understands that the Membership Interests have not been registered under the Securities Act and may be resold only if registered pursuant to the provisions of the Securities Act or if an exemption from registration is available. Such Member understands that no public market now exists for the Membership Interests and that it is unlikely that a public market will ever exist for the Membership Interests. Such Member understands that its investment in the Company is highly speculative in nature and is subject to a high degree of risk of loss, in whole or in part.

Article XIII
MISCELLANEOUS

Section 1.1 Notices . Except as otherwise expressly provided herein, all notices, demands and other communications to be given or delivered under or by reason of the provisions of this Agreement shall be in writing and shall be deemed to have been given (a) when personally delivered, (b) when transmitted by electronic mail (unless if transmitted after 5:00 p.m. Eastern time or other than on a Business Day, then on the next Business Day) to the address specified below (with confirmation of transmission), (c) when sent by internationally-recognized courier in which case it shall be deemed to have been given at the time of actual recorded delivery, or (d) the third (3 rd) Business Day following the day on which the same is sent by certified or registered mail, postage prepaid, in each case, to the

respective Party at the number, electronic mail address or street address, as applicable, set forth below, or at such other number, electronic mail address or street address as such Party may specify by written notice to the other Party.

Notices to either Investor Member :

BIP Blue Buyer L.L.C. or BIP Blue Buyer VCOC L.L.C.
345 Park Avenue
New York, NY 10154
Attention: Legal Counsel – Blackstone Infrastructure Partners; Max Wade
Email: BIP-Legal@blackstone.com; max.wade@blackstone.com

with copies to (which shall not constitute notice):

Latham & Watkins LLP
1271 Avenue of the Americas
New York, NY 10020
Attention: David Allinson
Email: david.allinson@lw.com

and

Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas
New York, NY 10019
Attention: Ravi Purohit
Email: rpurohit@paulweiss.com

Notices to the NiSource Member :

NIPSCO Holdings I LLC
290 W. Nationwide Boulevard
Columbus, OH 43215
Attention: Shawn Anderson, Executive Vice President and Chief Financial Officer; Kim Cuccia, Senior Vice President, General Counsel and Corporate Secretary
Email: sanderson@nisource.com; kscuccia@nisource.com

with a copy to (which shall not constitute notice):

McGuireWoods LLP
800 East Canal Street
Richmond, Virginia 23219
Attention: Joanne Katsantonis; Emilie McNally
Email: jkatsantonis@mcguirewoods.com; emcnally@mcguirewoods.com

Notices to the Company :

NIPSCO Holdings II LLC
290 W. Nationwide Boulevard
Columbus, OH 43215
Attention: Shawn Anderson, Executive Vice President and Chief Financial Officer; Kim Cuccia, Senior Vice President, General Counsel and Corporate Secretary
Email: sanderson@nisource.com; kscuccia@nisource.com

with a copy to (which shall not constitute notice):

McGuireWoods LLP
800 East Canal Street
Richmond, Virginia 23219
Attention: Joanne Katsantonis; Emilie McNally
Email: jkatsantonis@mcguirewoods.com; emcnally@mcguirewoods.com

Section 1.2 Assignment . This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns; provided , that no Member, nor the Company, shall purport to assign or Transfer all or any of its rights or obligations under this Agreement nor grant, declare, create or dispose of any right or interest in this Agreement in whole or in part except with respect to a Transfer in accordance with the terms of this Agreement, and any attempted or purported assignment hereof not in accordance with the terms hereof shall be void ab initio.

Section 1.3 Waiver of Partition . Each Member hereby waives any right to partition of the Company property.

Section 1.4 Further Assurances . From and after the Effective Date, from time to time, as and when requested by any Party and at such Party's expense, any other Party shall execute and deliver, or cause to be executed and delivered, all such documents and instruments and shall take, or cause to be taken, all such further or other actions as such requesting Party may reasonably deem necessary or desirable to carry out the purposes and intent of this Agreement.

Section 1.5 Third Party Beneficiaries . Except as otherwise expressly provided herein, nothing expressed or referred to in this Agreement shall be construed to give any Person other than the Parties any legal or equitable right, remedy or claim under or with respect to this Agreement or any provision of this Agreement; provided , that Covered Persons are express third party beneficiaries of Article XI .

Section 1.6 Parties in Interest; Non-Recourse . This Agreement shall inure to the benefit of, and be binding upon, the Parties and their respective successors, legal representatives and permitted assigns. This Agreement may only be enforced against, and any claim, action, suit, proceeding or investigation based upon, arising out of or related to this Agreement may only be brought against, the Persons that are expressly named as Parties to this Agreement. Except to the extent named as a Party to this Agreement, and then only to the extent of the specific obligations of such Parties set forth in this Agreement, no past, present or future shareholder, member, partner, manager, director, officer, employee, Affiliate (without giving effect to the proviso set forth in the definition thereof), agent or advisor of any Party shall have any liability (whether in contract, tort, equity or otherwise or by or through theories of equity, agency, control, instrumentality, alter ego, domination, sham, single business enterprise, piercing the veil, undercapitalization or any other attempt to avoid or disregard the entity form of any Person not a Party) for any of the representations, warranties, covenants, agreements or other obligations or liabilities of any of the Parties or for any claim, action, suit, proceeding or investigation based upon, arising out of or related to this Agreement. Notwithstanding anything contained herein, in no event shall this Section 13.6 limit in any way or waive any rights the Company or the NiSource Member may have with respect to the Equity Commitment Letter.

Section 1.7 Severability . If any term, provision, covenant or restriction contained in this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void, unenforceable or against its regulatory policy, the remainder of the terms, provisions, covenants and restrictions contained in this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and, to the extent permitted and possible, any invalid, void or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid, void or unenforceable term.

Section 1.8 Construction . The language used in this Agreement shall be deemed to be the language chosen by the Parties to express their mutual intent, and no rule of strict construction shall be applied against any Person. The headings of the sections and paragraphs of this Agreement have been

inserted for convenience of reference only and shall in no way restrict or otherwise modify any of the terms or provisions hereof.

Section 1.9 Complete Agreement . This Agreement (including any schedules thereto), constitutes the entire agreement of the Parties hereto with respect to the subject matter hereof and thereof and supersedes any prior understandings, agreements or representations by or among the Parties hereto or Affiliates thereof, written or oral, to the extent they relate in any way to the subject matter hereof.

Section 1.10 Amendment; Waiver . Subject to Article VIII , neither this Agreement nor any other Organizational Document of the Company may be amended (whether by merger or otherwise) except in a written instrument signed by Members owning at least a majority of the Membership Interests; provided , that (a) the prior written consent of any Member shall be required in respect of any such proposed modification, alteration, supplement or amendment that would have a material disproportionate adverse impact on that Member (in its capacity as a Member) as compared to the other Members (in their capacity as Members) and (b) notwithstanding anything in this Agreement to the contrary, Article V , Article VI , Article VII , Article VIII and this Section 13.10 may not be amended other than by a written instrument signed by the BIP Investor Member. In the event that the Company issues Membership Interests to one or more Third Parties pursuant to Section 5.1(c) or Section 7.1 , the Members and the Company shall negotiate in good faith to amend this Agreement to the extent reasonably necessary to reflect such additional Members. Any amendment or revision to Schedule 1 that is made by an officer solely to reflect information regarding Members or the Transfer or issuance of Membership Interests made in accordance with the terms of this Agreement shall not be considered an amendment to this Agreement and shall not require any Board or Member approval. Any failure or delay on the part of any Party in exercising any power or right hereunder shall not operate as a waiver thereof, nor shall any single or partial exercise of any such right or power preclude any other or further exercise thereof or the exercise of any other right or power hereunder or otherwise available at law or in equity.

Section 1.11 Governing Law . This Agreement, and any claim, action, suit, investigation or proceeding of any kind whatsoever, including a counterclaim, cross-claim or defense, regardless of the legal theory under which such liability or obligation may be sought to be imposed, whether sounding in contract or tort, or whether at law or in equity, or otherwise under any legal or equitable theory, that may be based upon, arising out of or related to this Agreement or the negotiation, execution or performance of this Agreement or the transactions contemplated hereby shall be governed by and construed in accordance with the internal Laws of the State of Delaware applicable to agreements executed and performed entirely within such State without regards to conflicts of law principles of the State of Delaware or any other jurisdiction that would cause the Laws of any jurisdiction other than the State of Delaware to apply.

Section 1.12 Specific Performance

. The Parties agree that irreparable damage, for which monetary relief, even if available, shall not be an adequate remedy, would occur in the event that any provision of this Agreement is not performed in accordance with its specific terms or is otherwise breached. It is accordingly agreed that (a) the Parties shall be entitled to seek an injunction or injunctions, specific performance or other equitable relief to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof without proof of damages or otherwise, this being in addition to any other remedy to which they are entitled under this Agreement, and (b) the right of specific performance and other equitable relief is an integral part of this Agreement and the business and legal understandings among the Members with respect to the Company, and without that right, none of the Members would have entered into this Agreement. The Parties acknowledge and agree that any Party pursuing an injunction or injunctions or other Order to prevent breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement in accordance with this Section 13.12 shall not be required to provide any bond or other security in connection with any such Order. The remedies available to the Parties pursuant to this Section 13.12 shall be in addition to any other remedy to which they may be entitled at law or in equity, and the election to pursue an injunction or specific performance shall not restrict, impair or otherwise limit any Party from seeking to collect or collecting damages. Each of the Parties agrees that it shall not oppose the granting of an injunction, specific performance and other equitable relief on the basis that any other Party has an adequate remedy at law or that any award of specific performance is not an appropriate remedy for any reason at law or in equity.

Section 1.13 Escalation; Arbitration .

(a) In connection with any dispute, controversy or claim among the Members relating to or arising out of this Agreement, the Members will use their reasonable efforts to resolve such dispute within thirty (30) days. If the dispute has not been resolved within such thirty (30) day period, the Members will escalate the dispute to the respective Senior Officers, who will meet to discuss and use their reasonable efforts to resolve the dispute. If the Members remain unable to resolve the dispute within thirty (30) days of the initial meeting of the Senior Officers or such later date as the Members subject to such dispute may agree, such dispute shall be finally settled by binding arbitration administered by the American Arbitration Association (" AAA ") utilizing its Commercial Arbitration Rules in effect as of the date the arbitration is commenced. The arbitration shall be conducted before a single arbitrator, if the Parties can agree on the one arbitrator. If the Parties cannot agree on a single arbitrator, there shall be a panel of three arbitrators with one chosen by the BIP Investor Member, one chosen by the NiSource Member, and the third arbitrator selected by the two Members-appointed arbitrators. If a Party fails to appoint an arbitrator within 30 days following a written request by another Party to do so or if the two party-appointed arbitrators fail to agree upon the selection of a third arbitrator, as applicable, within 30 days following their appointment, the additional arbitrator shall be selected by the AAA pursuant to its applicable procedures. Each arbitrator shall be disinterested and have at least 20 years of experience with commercial matters. The arbitrator(s) shall have the power to award any appropriate remedy consistent with the objectives of the arbitration and subject to, and consistent with, all Laws and Orders applicable to the Company and its Subsidiaries (including, for the avoidance of doubt, the necessity of obtaining any requisite authorization, approval or consent of any Governmental Body necessary to implement the appropriate remedy). The decision of the one arbitrator or, if applicable, the majority of the three arbitrators shall be final and binding upon the Parties (subject only to limited review as required by applicable Law). Judgment upon the award of the arbitrator(s) may be entered in any court of competent jurisdiction or otherwise enforced in any jurisdiction in any manner provided by applicable Law. The losing Party shall pay the prevailing Party's attorney's fees and costs and the costs associated with the arbitration, including expert fees and costs and the arbitrators' fees and costs; provided , however , that each Party shall bear its own fees and costs until the arbitrator(s) determine which, if any, Party is the prevailing Party and the amount that is due to such prevailing Party. The arbitration proceedings shall take place in Chicago, Illinois and, for the avoidance of doubt, the arbitration proceedings shall be conducted in the English language.

(b) All discussions, negotiations and proceedings under this Section 13.13 , and all evidence given or discovered pursuant hereto, will be maintained in strict confidence by all Parties, except where disclosure is required by applicable Law, necessary to comply with any legal requirements of such Party or necessary or advisable in order for a Party to assert any legal rights or remedies, including the filing of a complaint with a court or, based on the advice of counsel, such disclosure is determined to be necessary or advisable under applicable securities Laws or the rules of any stock exchange on which any of such Party's securities are traded. Disclosure of the existence of any arbitration or of any award rendered therein may be made as part of any action in court for interim or provisional relief or to confirm or enforce such award.

(c) Any settlement discussions occurring and negotiating positions taken by any Party in connection with the procedures under this Section 13.13 will be subject to Rule 408 of the Federal Rules of Civil Procedure and shall not be admissible as evidence in any proceeding relating to the subject matter of this Agreement.

(d) The fact that the dispute resolution procedure specified in this Section 13.13 has been or may be invoked will not excuse any Party from performing its obligations under this Agreement, and during the pendency of any such procedure, all Parties must continue to perform their respective obligations in good faith. In addition, in no event shall the fact that this provision has been invoked and the pendency of the proceedings limit, suspend, delay or waive any other rights and remedies provided in this Agreement to any Member.

(e) Notwithstanding the agreement to arbitrate contained in this Section 13.13 , in the event that either Party wishes to seek a temporary restraining order, a preliminary or temporary injunction, or other injunctive relief in connection with any claim, demand, cause of action, dispute, controversy, or

other matter arising out of or relating to this Agreement or the alleged breach thereof, whether such claim sounds in contract, tort, or otherwise, at law or in equity, under state or federal law, whether provided by statute or the common law, each Party shall have the right to pursue such injunctive relief in court, rather than by arbitration. The Parties agree that such action for a temporary restraining order, a preliminary or temporary injunction, or other injunctive relief may be brought in the state or federal courts of Delaware, or in any other forum in which jurisdiction is appropriate.

Section 1.14 Counterparts . This Agreement may be executed in counterparts, and any Party may execute any such counterpart, each of which when executed and delivered shall be deemed to be an original and all of which counterparts taken together shall constitute one and the same instrument. This Agreement shall become effective when each Party shall have received a counterpart hereof signed by the other Parties. The Parties agree that the delivery of this Agreement may be effected by means of an exchange of facsimile or electronically transmitted signatures.

Section 1.15 Fair Market Value Determination

. In the event the Board makes a determination of Fair Market Value under this Agreement, upon request by the NiSource Member or the BIP Investor Member, so long as such Member holds a Percentage Interest (or, with respect to the BIP Investor Member, the Investor Members collectively hold an aggregate Percentage Interest) greater than 5%, within five Business Days after receiving written notice of the Board's determination in connection with any determination of Fair Market Value of Membership Interests or other assets under this Agreement (which determination shall be provided by the Company to each Member promptly following the making thereof), the Company shall select a nationally recognized independent valuation firm with no existing or prior business or personal relationship with any Member or any of its Affiliates in the three year period immediately preceding the date of engagement, pursuant to this Section 13.15 (the " Independent Evaluator ") to determine such Fair Market Value. Each of the Company and the requesting Member shall submit their view of the Fair Market Value of the Membership Interests or the relevant asset(s) to the Independent Evaluator, and each party will receive copies of all information provided to the Independent Evaluator by the other party. The final Independent Evaluator's determination of the Fair Market Value of such Membership Interests or asset(s) shall be set forth in a detailed written report addressed to the Company and the Members within 30 days following the Company's selection of such Independent Evaluator and such determination shall be final, conclusive and binding. In rendering its decision, the Independent Evaluator shall determine which of the positions of the Company and the requesting Member submitted to the Independent Evaluator is, in the aggregate, more accurate (which report shall include a worksheet setting forth the material calculations used in arriving at such determination), and, based on such determination, adopt either the Fair Market Value determined by the Company or the requesting Member. Any fees and expenses of the Independent Evaluator incurred in resolving the disputed matter(s) will be borne by the party whose positions were not adopted by the Independent Evaluator. Notwithstanding the foregoing, the Board's determination of Fair Market Value under this Agreement shall be conclusive and relied upon by the Members in carrying out their obligations hereunder, unless and until the Independent Evaluator determines otherwise. The pendency of this process shall not excuse the performance of any obligations of a Member hereunder.

Section 1.16 Certain Definitions . As used in this Agreement, the following terms shall have the meanings ascribed to them below:

" Act " means the Delaware Limited Liability Company Act, as amended from time to time.

" Actual Performance Management Net Income " means Net Income of NIPSCO Consolidated adjusted for income taxes computed or imputed on Net Income. For these purposes, " NIPSCO Consolidated " is defined as NIPSCO and its consolidated subsidiaries including NIPSCO Accounts Receivable Corporation and its controlling investments in tax equity financings related to renewable projects. On an annual basis, Parent will provide to the Investor Members a schedule calculating Actual Performance Management Net Income including supporting documentation.

" Advisors " means, with respect to any Person, the accountants, attorneys, consultants, advisors, investment bankers, or other representatives of such Person.

" Adjusted Capital Account " means, with respect to any Member, the balance in such Member's Capital Account as of the end of the relevant Allocation Year or other period, after giving effect to the following adjustments:

(a) Add to such Capital Account the following items:

(i) The amount, if any, that such Member is obligated to contribute to the Company upon liquidation of such Member's Interest; and

(ii) The amount that such Member is obligated to restore or is deemed to be obligated to restore pursuant to Treasury Regulations Section 1.704-1(b)(2)(ii)(c) or the penultimate sentence of each of Treasury Regulations Sections 1.704-2(g)(1) and 1.704-2(i)(5).

(b) Subtract from such Capital Account such Member's share of the items described in Treasury Regulations Sections 1.704-1(b)(2)(ii)(d)(4), 1.704-1(b)(2)(ii)(d)(5) and 1.704-1(b)(2)(ii)(d)(6).

The foregoing definition of Adjusted Capital Account is intended to comply with the provisions of Treasury Regulations Section 1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

" Adjusted Capital Account Deficit " means, with respect to any Member, the deficit balance, if any, in such Member's Adjusted Capital Account as of the end of the Allocation Year (or other relevant period).

" Affiliate " of any particular Person means any other Person controlling, controlled by or under common control with such particular Person, where "control" means the possession, directly or indirectly, of the power to direct the management and policies of a Person whether through the ownership of voting securities, Contract or otherwise; provided , however , that (i) no portfolio company of any investment fund affiliated with or advised by The Blackstone Group Inc. or Blackstone Infrastructure Partners L.P. shall be deemed to be an "Affiliate" of either Investor Member (excluding the Investor Members' Subsidiaries) and (ii) no investment fund affiliated with or advised by The Blackstone Group Inc. shall be deemed an "Affiliate" of either Investor Member (excluding Blackstone Infrastructure Partners L.P. together with its controlled investment vehicles).

" Allocation Year " means (a) the period commencing on the Investment Closing Date and ending on the immediately succeeding December 31; (b) any subsequent twelve (12) month period commencing on January 1 and ending on December 31; or (c) any portion of the period described in preceding clause (a) or (b) for which the Company is required to allocate items of the Company income, gain, loss, deduction or credit.

" Anti-Corruption Laws " means any Law concerning or relating to bribery or corruption imposed, administered or enforced by any Governmental Body.

" Anti-Money Laundering Laws " means any Law concerning or relating to money laundering, any predicate crime to money laundering or any record keeping, disclosure or reporting requirements related to money laundering imposed, administered or enforced by any Governmental Body.

" Assumed Tax Liability " means, for any Member, the product of (a) such Member's allocable share of net taxable income of the Company for such Fiscal Year (or applicable portion thereof), reduced by such Member's allocable share of cumulative net taxable loss of the Company not previously been taken into account (calculated taking into account the effect of any basis adjustment under Code Section 734, 743 or 754 and allocations pursuant to Code Section 704(c)), determined as if such Member has no items of income, gain, loss, deduction or credit other than through the Company, multiplied by (b) the Assumed Tax Rate.

" Assumed Tax Rate " means the highest effective combined marginal U.S. federal, state and local income tax rate applicable to a corporation for such Fiscal Year (taking into account the character of the underlying taxable income) and the deductibility of state and local income taxes for U.S. federal income

tax purposes (and any applicable limitations thereon). The Assumed Tax Rate shall be the same for each Member.

" Available Cash " means, for any fiscal quarter, the cash flow generated from the normal business operations of the Company and its Subsidiaries in such fiscal quarter, less any amounts that the Board reasonably determines are necessary and appropriate to be retained in order to (a) permit the Company and its Subsidiaries to pay their obligations as they become due in the ordinary course of business, (b) make all payments required or that the Board determines is appropriate under the NiSource Notes, (c) maintain the Company's and its Subsidiaries' target regulatory capital structure and investment grade credit metrics, (d) fund planned capital expenditures, (e) maintain an adequate level of working capital, (f) maintain prudent reserves for future obligations (including contingent obligations of the Company and its Subsidiaries), (g) comply with applicable Law, Order, the terms of the Company's and its Subsidiaries' Indebtedness (including making any required payments of principal or interest in satisfaction of Indebtedness), or (h) respond to an Emergency Situation, with the requirement of the Company and its Subsidiaries, to make upward cash distributions (on a quarterly basis) of at least 50% of the such applicable entity's Net Income for the relevant period (but, in any case, no less than all Available Cash).

" Business Day " means any day other than a Saturday, Sunday or a day on which banking institutions located in New York, New York or Delaware are closed generally.

" Capital Account " means the capital account maintained for each Member on the Company's books and records in accordance with the following provisions:

(a) To each Member's Capital Account there shall be added (i) such Member's Capital Contributions, (ii) such Member's allocable share of Net Profits and any items in the nature of income or gain that are specially allocated to such Member pursuant to Section 5.6 or Section 5.7 hereof or other provisions of this Agreement, and (iii) the amount of any Company liabilities assumed by such Member or which are secured by any property distributed to such Member.

(b) From each Member's Capital Account there shall be subtracted (i) the amount of (A) cash and (B) the Gross Asset Value of any Company assets (other than cash) distributed to such Member pursuant to any provision of this Agreement, (ii) such Member's allocable share of Net Losses and any other items in the nature of expenses or losses that are specially allocated to such Member pursuant to Section 5.6 or Section 5.7 hereof or other provisions of this Agreement, and (iii) liabilities of such Member assumed by the Company or which are secured by any property contributed by such Member to the Company.

(c) In the event any Membership Interest is transferred in accordance with the terms of this Agreement, the transferee shall succeed to the Capital Account of the transferor to the extent it relates to the transferred Membership Interest.

(d) In determining the amount of any liability for purposes of subparagraphs (a) and (b) above, there shall be taken into account Code Section 752(c) and any other applicable provisions of the Code and Regulations.

The foregoing provisions and the other provisions of this Agreement relating to the maintenance of Capital Accounts are intended to comply with Regulations Sections 1.704-1(b) and 1.704-2 and shall be interpreted and applied in a manner consistent with such Regulations.

" Capital Contribution " means, with respect to any Member, the total amount of cash and the initial Gross Asset Value of property (other than cash) contributed to the capital of the Company by such Member, whether as an initial Capital Contribution or as an additional Capital Contribution.

" Change in Control " means with respect to the applicable Party, any person or group (within the meaning of Sections 13(d)(3) and 14(d)(2) of the Securities Exchange Act of 1934, as amended) at any time becoming the beneficial owner of more than 50% of the combined voting power of the voting securities of such Party (including through general partner and limited partner arrangements).

" Code " means the Internal Revenue Code of 1986, as amended.

" Company Group " means the Company and each of its Subsidiaries, collectively.

" Company Minimum Gain " has the meaning set forth in Treasury Regulations Sections 1.704-2(b)(2) and 1.704-2(d)(1) for the phrase "partnership minimum gain."

" Competitor " means any Person that is, or through its Subsidiaries is, directly involved in or competes with the Company Business in the United States. For the avoidance of doubt, a Competitor shall not include any financial sponsors that own equity in any Person that is directly involved in the Company Business in the United States.

" Contract " means any written agreement, arrangement, commitment, indenture, instrument, purchase order, license or other binding agreement.

" Covered Person " means any (a) Member, any Affiliate of a Member or any officers, directors, shareholders, partners, members, employees, representatives or agents of a Member or their respective direct or indirect Affiliates, (b) Director, or (c) employee, officer, or agent of the Company or its Affiliates.

" CPI Escalato r" means that certain increase calculated annually on the anniversary of the Effective Date by the percentage increase of services measured by the consumer price index as determined by the U.S. Department of Labor, Bureau of Labor Statistics.

" Debt Financing " means any debt financing incurred by the BIP Investor Member or any of its Affiliates (other than the Company), including, the incurrence of any loans or the issuance of any bonds, notes, debentures or hybrid securities.

" Debt-to-Capital Ratio " means the debt-to-capital ratio of NIPSCO as calculated for IURC purposes.

" Depreciation " means, for Allocation Year or other period, an amount equal to the depreciation, amortization or other cost recovery deduction allowable for federal income tax purposes with respect to an asset for such Allocation Year or other period, except that (a) with respect to an asset the Gross Asset Value of which differs from its adjusted basis for U.S. federal income tax purposes and which difference is being eliminated by use of the "remedial allocation method" as defined in Treasury Regulations Section 1.704-3(d), Depreciation for such period shall be the amount of the book basis recovered for such period under the rules prescribed in Treasury Regulations Section 1.704-3(d)(2), and (b) if the Gross Asset Value of an asset differs from its adjusted basis for federal income tax purposes at the beginning of such Allocation Year or other period, Depreciation shall be an amount that bears the same ratio to such beginning Gross Asset Value as the federal income tax depreciation, amortization or other cost recovery deduction for such Allocation Year or other period bears to such beginning adjusted tax basis; provided , however , that if the federal income tax depreciation, amortization or other cost recovery deduction for such Allocation Year or other period is zero, Depreciation shall be determined with reference to such beginning Gross Asset Value using any reasonable method selected by the Board.

" Emergency Expenditure " means amounts required to be incurred in order to respond to an Emergency Situation or to avoid an Emergency Situation in a manner that is consistent with general practices applicable to facilities used in the Company Business or consistent with the past operations of the Company or its Subsidiaries, but only to the extent such expenditures are reasonably designed to ameliorate the consequences, or an immediate threat of any of the consequences, of the issues set forth in the definition of " Emergency Situation ".

" Emergency Situation " means, with respect to the business of the Company and its Subsidiaries, any abnormal system condition or abnormal situation requiring immediate action to maintain the system, frequency, loading within acceptable limits or voltage or to prevent loss of firm load, material equipment damage or tripping of system elements that would reasonably be excepted to materially and adversely affect reliability of an electric system or any other occurrence or condition that requires immediate action

to prevent or mitigate an immediate and material threat to the safety of Persons or the operational integrity of the assets and business of the Company or its Subsidiaries or any other condition or occurrence requiring prompt implementation of emergency procedures as defined by the applicable transmission grid operator, distribution or transmitting utility.

" Encumber " means to place a Lien against.

" Equity Commitment Letter " means the Equity Commitment Letter dated as of the Investment Closing Date by Blackstone Infrastructure Partners L.P. for the benefit of the Company in the amount equal to $250,000,000 minus the Additional Capital Contribution Amount (as defined in the PSA) (the " Maximum Investor Commitment ").

" Exchange Act " has the meaning set forth in the definition of "Excluded Membership Interests".

" Excluded Membership Interests " means any Membership Interests or other equity interests in the Company issued in connection with:

(a) any issuance to a Third Party pursuant to and in accordance with Section 7.1 ;

(b) any arrangement approved unanimously by the Board for the return of income or capital to the Members;

(c) any equity split, equity dividend or any similar recapitalization; or

(d) the commencement of any offering or registration of Membership Interests or other equity interests of the Company or any of its Subsidiaries, pursuant to a registration statement filed in accordance with the United States Securities Act of 1933 (the " Securities Act ") or under the Securities and Exchange Act of 1934 (the " Exchange Act ").

" Excluded Transactions " means Transactions in the ordinary course of the Company Business, with respect to (i) tax equity financings related to renewable projects, or (ii) pilot programs and similar undertakings by the Company or its Subsidiaries in connection with the Company Business.

" Fair Market Value " means, with respect to any asset (including equity interest), the price at which the asset would change hands between a willing buyer and a willing seller that are not affiliated parties, neither being under any compulsion to buy or to sell, and both having knowledge of the relevant facts and taking into account the full useful life of the asset. In valuing Membership Interests, no consideration of any control, liquidity or minority discount or premium shall be taken into account. Fair Market Value shall be determined by the Board in accordance with the foregoing, subject to Section 13.15 .

" FERC " means the U.S. Federal Energy Regulatory Commission or any successor agency thereto.

" GAAP " means United States generally accepted accounting principles applied on a consistent basis during the periods involved.

" Governmental Body " means any national, foreign, federal, regional, state, local, municipal or other governmental authority of any nature (including any division, department, agency, commission or other regulatory body thereof) and any court or arbitral tribunal, including any governmental, quasi-governmental or non-governmental body administering, regulating or having general oversight over electricity, power or the transmission or transportation thereof, including any regional transmission operator, independent system operator and any market monitor thereof.

" Gross Asset Value " means, with respect to any asset, the asset's adjusted basis for federal income tax purposes, except as follows:

(a) The initial Gross Asset Value of any asset contributed by a Member to the Company shall be the gross fair market value of such asset on the date of the contribution, as determined by the Board, provided that the initial Gross Asset Values of the assets contributed to the Company pursuant to Section 5.1 shall be as set forth on Schedule 1 .

(b) The Gross Asset Values of all Company assets immediately prior to the occurrence of any event described in subparagraphs (i) through (v) below shall be adjusted to equal their respective gross fair market values, as determined by the Board, as of the following times: The Gross Asset Values of all Company assets shall be adjusted to equal their respective gross fair market values, as determined by the Board, as of the following times: (i) the acquisition of an additional interest in the Company by any new or existing Member in exchange for more than a de minimis Capital Contribution; (ii) the distribution by the Company to a Member of more than a de minimis amount of Property as consideration for an interest in the Company; (iii) the liquidation of the Company within the meaning of Treasury Regulations Section 1.704-1(b)(2)(ii)(g); (iv) in connection with the grant of an interest in the Company (other than a de minimis interest) as consideration for the provision of services to or for the benefit of the Company by an existing Member acting in a partner capacity, or by a new Member acting in a partner capacity in anticipation of being a Member; and (v) the acquisition of an interest in the Company upon the exercise of a non-compensatory option in accordance with Treasury Regulations Section 1.704-1(b)(2)(iv)(s); provided , however , adjustments pursuant to clause (i) , clause (ii) , and clause (iv) above shall be made only if the Board reasonably determines that such adjustments are necessary or appropriate to reflect the relative economic interests of the Members in the Company; and provided further , if any non-compensatory option is outstanding, Gross Asset Values shall be adjusted in accordance with Treasury Regulation Sections 1.704-1(b)(2)(iv)(f)(1) and 1.704-1(b)(2)(iv)(h)(2);

(c) The Gross Asset Value of any Company asset distributed to a Member shall be the gross fair market value of such asset on the date of distribution as determined by the Board

(d) The Gross Asset Values of Company assets shall be increased (or decreased) to reflect any adjustments to the adjusted basis of such assets pursuant to Code Section 734(b) or Code Section 743(b), but only to the extent that such adjustments are taken into account in determining Capital Accounts pursuant to Regulations Section 1.704-1(b)(2)(iv)(m); provided , however , that Gross Asset Values shall not be adjusted pursuant to this subparagraph (d) to the extent that an adjustment pursuant to subparagraph (b) above is made in connection with a transaction that would otherwise result in an adjustment pursuant to this subparagraph (d).

(e) If the Gross Asset Value of a Company asset has been determined or adjusted pursuant to subparagraph (a), subparagraph (b) or subparagraph (d) above, such Gross Asset Value shall thereafter be adjusted by the Depreciation taken into account with respect to such Company asset for purposes of computing Net Profits and Net Losses.

" Indebtedness " means indebtedness or long term debt or similar instruments as those terms are calculated or determined by IURC.

" Investor Call Trigger " means (i) either Investor Member fails to fund all or any portion of its share of a Mandatory Capital Contribution or any Additional Funding Requirement (other than a Mandatory Capital Contribution) in respect of two (2) events if either Investor Member indicated it would do so in its Response to Capital Call but failed to do so within the time period specified in Section 5.1 ; provided , that the NiSource Member shall be required to provide notice to the BIP Investor Member immediately upon any Investor Member's first event of failure to fund that would trigger this right, (ii) the Investor Members' aggregate Percentage Interest is equal to or less than five percent (5%), or (iii) the NiSource Member elects to pursue a spin off, split off or similar transaction of the Company, NIPSCO or an Affiliate; provided , in the case of this clause (iii) , the NiSource Member may not exercise its Call Right unless the Spin Return Threshold would be satisfied in the event such contemplated transaction is consummated.

" Investor Consent Threshold " means a Percentage Interest equal to or greater than 19.9%; provided , that, solely in the event the Investor Members' aggregate Percentage Interest is reduced in

connection with issuances of Membership Interests in compliance with Sections 5.1 or 7.1 , such reference to "19.9%" shall be replaced by "17.5%".

" IRR " means, at any time of determination, the actual annual rate of return of the Investor Members (specified as a percentage) taking into account only the following, on a cash-in, cash-out basis: (a) all capital contributions actually made to the Company by or on behalf of the Investor Members or any of its Permitted Transferees with respect to their Membership Interests on or before such date, and (b) all cash distributions to the Investor Members or any of their respective Permitted Transferees on or before such date. For the avoidance of doubt, the IRR calculation would not include any tax payments at the Investor Members level. The IRR will be calculated using the XIRR function in the most recent version of Microsoft Excel (or if such program is no longer available, such other software program for calculating the IRR as is reasonably determined by the Board), and will be based on the actual dates of funding of such capital contributions and the actual dates of receipt of such cash distributions and proceeds.

" IURC " means the Indiana Utility Regulatory Commission.

" Law " means any law (statutory, common or otherwise), rule, regulation, code or ordinance enacted, adopted, promulgated or applied by any Governmental Body, including all regulatory requirements emanating from state and federal regulators of the Company Group's businesses and operations.

" Liens " means all liens, encumbrances, mortgages, deeds of trust, pledges, security interests, charges, claims, proxy, voting trust or transfer restrictions, under any stockholder or similar agreement or Organizational Document.

" Maximum Investor Commitment " has the meaning set forth in the definition of "Equity Commitment Letter".

" Member " means each of the NiSource Member and the Investor Members, and any Person admitted as an additional member of the Company or a substitute member of the Company pursuant to the provisions of this Agreement, each in its capacity as a member of the Company.

" Member Nonrecourse Debt " has the meaning of "partner nonrecourse debt" as set forth in Treasury Regulations Section 1.704-2(b)(4).

" Member Nonrecourse Debt Minimum Gain " means an amount, with respect to each Member Nonrecourse Debt, equal to the Company Minimum Gain that would result if such Member Nonrecourse Debt were treated as a Nonrecourse Liability, determined in accordance with Treasury Regulation Section 1.704-2(i)(3).

" Member Nonrecourse Deductions " has the meaning of "partner nonrecourse deductions" set forth in Treasury Regulations Section 1.704-2(i)(1) and 1.704-2(i)(2).

" Membership Interests " means membership interests of the Company.

" MOIC " means, as of any measurement time, with respect to any holder of Membership Interests, the number resulting from the quotient of (i) the cumulative amount of distributions received by such holder (or its predecessors in interest) in respect of such Membership Interests divided by (ii) the cumulative amount of all capital contributions made to the Company by such holder (or its predecessors in interest) in respect of such Membership Interests prior to such time or, in the case of the Investor Members, the cumulative amount of the Purchase Price (as defined in the PSA) under the PSA paid by the Investor Members to the Parent (as defined therein); provided that, for the purpose of foregoing calculation, the Investor Members shall be aggregated and treated as a single holder.

" Net Income " means the Net Income attributable to the applicable entity in its consolidated GAAP income statement adjusted to (i) reflect non-GAAP adjustments included in the Parent's consolidated non-GAAP reporting associated with the applicable entity and recorded in accordance with

the Parent's non-GAAP policy in effect as of the date of the income statement, and (ii) add post-tax Pension & OPEB Non-Service Cost if it is an expense and subtract post-tax Pension & OPEB Non-Service Cost in cases when this item is income. For reference, the Parent's non-GAAP policy is to that certain non-GAAP policy in effect as of the Investment Closing Date.

" New Securities " means any Membership Interests or other equity interests in the Company, other than any Excluded Membership Interests.

" NiSource Leadership Team " means any individual serving as an officer at any Company Group.

" Nonrecourse Deductions " has the meaning set forth in Treasury Regulations Sections 1.704-2(b)(1) and 1.704-2(c).

" Nonrecourse Liability " has the meaning set forth in Treasury Regulations Sections 1.704-2(b)(3) and 1.752-1(a)(2).

" OFAC " means the U.S. Office of Foreign Assets Control.

" Order " means any order, ruling, decision, verdict, decree, writ, award, judgment, injunction, or other similar determination or finding of any Governmental Body.

" Organizational Documents " means, with respect to any corporation, its articles or certificate of incorporation, memorandum or articles of association and by-laws or documents of similar substance; with respect to any limited liability company, its articles of association, articles of organization or certificate of organization, formation or association and its operating agreement or limited liability company agreement or documents of similar substance; with respect to any limited partnership, its certificate of limited partnership and partnership agreement or documents of similar substance; and with respect to any other entity, documents of similar substance to any of the foregoing.

" Outside Group " means the Parent and its Subsidiaries, other than the Company and its Subsidiaries.

" Partnership Audit Rules " means Sections 6221 through 6241 of the Code, as enacted in Public Law 114-74, as may be amended, including any final or temporary Regulations, other administrative guidance or case law interpreting Sections 6221 through 6241 of the Code (and any analogous provision of state or local tax law).

" Partnership Representative " means, with respect to any Allocation Year, the Person designated for such year as the partnership representative for the Company pursuant to section 6223(a) of the Code or with respect to the tax law of any state or foreign jurisdiction, as a representative pursuant to a provision of law of such state or foreign jurisdiction corresponding to Section 6223(a) of the Code and shall also include the Person through whom a Partnership Representative acts.

" Percentage Interest " means, in respect of any Member, their relative ownership in the Membership Interests, expressed as a percentage, which shall be deemed to be equal to the number of Membership Interests that such Member owns divided by the total number of Membership Interests then outstanding.

" Permitted Transferee " means, with respect to the NiSource Member or either Investor Member, (a) a directly or indirectly wholly owned Subsidiary of such Member, (b) an Affiliate of such Member of which such Member is, directly or indirectly, a wholly owned Subsidiary (an " Affiliate Parent "), or (c) an Affiliate of such Member that is a wholly owned Subsidiary of an Affiliate Parent.

" Persons " means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization or a Governmental Body.

" Preemptive Right Share " means a ratio of (a) the number of Membership Interests held by such Member with Preemptive Rights, to (b) the total number of Membership Interests then outstanding immediately prior to the issuance of New Securities giving rise to the Preemptive Rights.

" President " means the President of NIPSCO.

" Profits " and " Losses " mean, for each Allocation Year, an amount equal to the Company's taxable income or loss for such Allocation Year, determined in accordance with Code Section 703(a) (for this purpose, all items of income, gain, loss, or deduction required to be stated separately pursuant to Code Section 703(a)(1) shall be included in taxable income or loss), with the following adjustments (without duplication):

(a) Any income of the Company that is exempt from federal income tax and not otherwise taken into account in computing Profits or Losses pursuant to this definition of "Profits" and "Losses" shall be added to such taxable income or loss;

(b) Any expenditures of the Company described in Code Section 705(a)(2)(B) or treated as Code Section 705(a)(2)(B) expenditures pursuant to Treasury Regulations Section 1.704-1(b)(2)(iv)(i), and not otherwise taken into account in computing Profits or Losses pursuant to this definition of "Profits" and "Losses," shall be subtracted from such taxable income or loss;

(c) In the event the Gross Asset Value of any Company asset is adjusted pursuant to clause (b) or clause (c) of the definition of "Gross Asset Value," the amount of such adjustment shall be treated as an item of gain (if the adjustment increases the Gross Asset Value of the asset) or an item of loss (if the adjustment decreases the Gross Asset Value of the asset) from the disposition of such asset and shall be taken into account for purposes of computing Profits or Losses;

(d) In lieu of the depreciation, amortization, and other cost recovery deductions taken into account in computing such taxable income or loss, there shall be taken into account Depreciation for such Allocation Year, computed in accordance with the definition of Depreciation;

(e) Gain or loss resulting from any disposition of Property with respect to which gain or loss is recognized for federal income tax purposes shall be computed by reference to the Gross Asset Value of the Property disposed of, notwithstanding that the adjusted tax basis of such Property differs from its Gross Asset Value;

(f) To the extent an adjustment to the adjusted tax basis of any Company asset pursuant to Code Section 734(b) or Section 743(b) is required, pursuant to Treasury Regulations Section 1.704-1(b)(2)(iv)(m)(4), to be taken into account in determining Capital Accounts as a result of a distribution other than in liquidation of a Member's interest in the Company, the amount of such adjustment shall be treated as an item of gain (if the adjustment increases the basis of the asset) or loss (if the adjustment decreases such basis) from the disposition of such asset and shall be taken into account for purposes of computing Profits or Losses; and

(g) Notwithstanding any other provision of this definition, any items that are specially allocated pursuant to Section 5.7 or Section 5.8 shall not be taken into account in computing Profits or Losses.

The amounts of the items of Company income, gain, loss, or deduction available to be specially allocated pursuant to Section 5.7 and Section 5.8 shall be determined by applying rules analogous to those set forth in clause (a) through clause (f) of this definition

" Prohibited Competitor " means (i) any Competitor listed on Appendix (A) hereto, as may be updated from time to time in accordance with Section 6.3(b) and (ii) any person owned or controlled by an entity existing under the laws of a country or territory that is subject to, or a target of, any Sanctions.

" PSA " means the Purchase and Sale Agreement, dated June 17, 2023, as amended by that certain Amendment No. 1 to Purchase and Sale Agreement, dated July 6, 2023, in each case, by and among the Company, the NiSource Member and the BIP Investor Member.

" Qualified Designee " means (i) with respect to NiSource Member, an employee of Parent or its Affiliates that is an officer of any such entity and (ii) with respect to BIP Investor Member, an employee of the BIP Investor Member or its parent company that is an officer or comparable position of such entity or is otherwise affiliated with such entity; provided , that a "Qualified Designee" shall not include any Person so long as such Person is (a) a director, officer, employee, or other Person affiliated with a Prohibited Competitor or (b) any Person convicted by a court or equivalent tribunal of any felony (or equivalent crime in the applicable jurisdiction) or of any misdemeanor (or equivalent crime in the applicable jurisdiction) that involves financial dishonesty or moral turpitude, or (c) any Person that would create a material reputational risk to the Company based on a good faith determination by the Board.

" Qualified Transferee " means any Person so long as such Person is (i) an asset manager with "assets under management" (as such term is commonly defined in the private equity industry) of at least $5,000,000,000, (ii) a Person with its equity interests listed on a nationally recognized stock exchange which has a market capitalization of at least $5,000,000,000 or (iii) a Person that based on its most recent audited balance sheet has at least $5,000,000,000 of assets, and/or in all cases, is in the good faith determination of the Board of being financially capable of carrying out the obligations and promptly paying all liabilities as they become due and payable under and in accordance with this Agreement and such Person is not a Prohibited Competitor; provided , that a Person that consummated a foreclosure pursuant to Section 6.2(b) shall be deemed a Qualified Transferee.

" Qualifying Core Assets " means assets utilized in connection with the conduct of the Company's and its Subsidiaries' business on which the Company reasonably expects (a) that it or its Subsidiaries will be eligible to include in the applicable rate base, and (b) to earn a return through rates approved by FERC (or such other Governmental Body that may then be applicable) that are commercially reasonable (to be determined by the Board in good faith) and are not otherwise inconsistent with applicable FERC (or such other Governmental Body, as the case may be) rate precedent. For the avoidance of doubt, "Qualifying Core Assets" shall also include necessary or ancillary expenses to support such assets (including working capital).

" Rate Base Amount " means an amount equal to the net utility plant of the Company and its Subsidiaries, taken as a whole, as determined based on the most recently filed FERC Form 1s for the Company and each of its Subsidiaries.

" Representatives " means the directors, officers, employees, agents and Advisors of a Party.

" Sanctioned Country " means a country or territory that is the target of comprehensive Sanctions (currently, Cuba, Iran, North Korea, Syria, the Crimea region of Ukraine, and the so-called Donetsk and Luhansk People's Republics in eastern Ukraine).

" Sanctioned Person " means, (a) any Person listed in any Sanctions-related list of designated Persons maintained by a Governmental Body described in the definition of "Sanctions," (b) any Person operating, organized, domiciled or resident in a Sanctioned Country, (c) the government of, or a Governmental Body or government official of, any Sanctioned Country or of Venezuela, or (d) any Person directly or indirectly owned or otherwise controlled by, acting for or on behalf of, or acting at the direction of, any such Person described in clauses (a) , (b) , or (c) .

" Sanctions " means any trade or economic sanctions imposed, administered or enforced from time to time by OFAC, the U.S. Department of State, His Majesty's Treasury, the United Nations, the European Union or any agency or subdivision of any of the foregoing, including any regulations, rules and executive orders issued in connection therewith.

" Securities Act " has the meaning set forth in the definition of "Excluded Membership Interests".

" Senior Officers " means with respect to the NiSource Member, the Chief Executive Officer of the Parent, and with respect to the Investor Members, the Global Head of Infrastructure of Blackstone Inc.

" Spin Return Threshold " means the Investor Return Threshold and the MOIC Return Threshold.

" Subsidiary " means, with respect to any Person, any entity of which a majority of the total voting power of shares of stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of such Person or a combination thereof or any partnership, association or other entity of which a majority of the partnership or other similar ownership interest is at the time owned or controlled, directly or indirectly, by such Person or one or more Subsidiaries of such Person or a combination thereof. For purposes of this definition, a Person is deemed to have a majority ownership interest in a partnership, limited liability company, association or other business entity if such Person is allocated a majority of the gains or losses of such partnership, limited liability company, association or other entity or is or controls the managing director or general partner of such partnership, limited liability company, association or other business entity.

" Tag Portion " means an amount of Membership Interests equal to the specified quantity of Tag-Along Offered Membership Interests multiplied by the applicable Investor Member's Percentage Interest.

" Target Performance Management Net Income " means the financial model output reflected in the "Net Income – Controlling Interests – GAAP" row of the .PDF labeled "Project Blue – Seller Model and Non-GAAP Policy.pdf" and attached to an email from the BIP Investor Member's counsel to the NiSource Member's counsel copying Representatives of the BIP Investor Member and the NiSource Member on December 28, 2023 at 4:16 p.m. Eastern Standard Time.

" Tax " or " Taxes " means any federal, state, local or foreign taxes, including income, gross receipts, capital stock, capital gains, franchise, profits, license, withholding, payroll, social security, unemployment, disability, real property, ad valorem/personal property, stamp, excise, occupation, sales, use, excise, transfer, value added, import, export, alternative minimum, estimated or other tax, duty, assessment or governmental charge in the nature of a tax, including any interest, penalty or addition thereto.

" Tax Return " means any return, claim for refund, report, election, form, statement or information return relating to Taxes, including any schedule or attachment thereto, and including any amendments thereof.

" Third Party " means, with respect to a Member, another Person that is not another Member or an Affiliate of a Member.

" Transfer " shall mean, with respect to the legal or beneficial ownership of any of a Member's Membership Interests, any sale, assignment, transfer, pledge, encumbrance, hypothecation or other similar arrangement or disposal, directly or indirectly, whether voluntarily, involuntarily or by operation of applicable Law (through a Change in Control or otherwise) including by the entry into any contract, option or other arrangement, or the granting or imposition of any Lien, that gives any Person other than the Member, whether or not upon the occurrence or nonoccurrence of an event, the right to acquire any Membership Interests or any interest therein, to vote any Membership Interest, or to require that any Membership Interests be transferred, directly or indirectly, whether voluntarily, involuntarily or by operation of applicable Law. For the avoidance of doubt and notwithstanding the foregoing, none of the following shall constitute a Transfer: (i) a sale, assignment, transfer, or other disposition of equity interests in any Member or any direct or indirect parent of such Member in which such Member represents less than 50% of the Fair Market Value of all of the assets directly or indirectly held by such Member or direct or indirect parent the equity interests of which are being disposed, except in any such case as expressly set forth in Section 6.2(b) , (ii) a Change in Control of the NiSource Member or indirect transfers of Membership Interests resulting solely from acquisitions and dispositions of equity interests of Blackstone Inc., Parent or their respective Affiliates on the New York Stock Exchange, (iii) any direct or indirect transfer of equity interests in either Investor Member that does not result in a Change in Control of such Investor Member, and (iv) as permitted under Section 6.2(b) .

Section 1.17 Terms Defined Elsewhere in this Agreement . As used in this Agreement, the following terms shall have the meanings ascribed to them in the sections indicated:

Term	Section
AAA	Section 13.13(a)
Affiliate Agreements	Section 2.14(a)
Affiliate Agreement Default	Section 2.14(c)
Affiliate Agreement Default Notice	Section 2.14(c)
Agreement	Preamble
BIP Investor Member	Preamble
Blocker Seller	Section 6.7
Board	Section 2.1
Board Observer	Section 2.13
Call Consummation Period	Section 5.1(e)
Call Exercise Price	Section 5.1(e)
Call Notice	Section 5.1(e)
Call Right	Section 5.1(e)
Capital Request Funding Date	Section 5.1(a)
Capital Request Notice	Section 5.1(a)
Company	Preamble
Company Business	Section 1.3(a)
Confidential Information	Section 9.6(a)
Contributing Member	Section 5.1(b)(ii)
Contribution Unfunded Amount Notice	Section 5.1(b)
Corporate Opportunity	Section 9.3(b)
Cure Period	Section 5.1(e)
Default Notice	Section 2.14(c)
Defaulting Member	Section 4.2
Designated Alternate	Section 2.2(e)
Directors	Section 2.1
Drag-Along Buyer	Section 6.5(a)
Drag-Along Notice	Section 6.5(b)
Drag-Along Right	Section 6.5(a)
Drag-Along Sale	Section 6.5(a)
Event of Default	Section 4.1
Event of Dissolution	Section 4.3(a)
Excess Contribution	Section 5.1(b)(i)
Fund Indemnitees	Section 11.7
Fund Indemnitors	Section 11.7
Independent Evaluator	Section 13.15
Investment Closing Date	Recitals
Investor Directors	Section 2.2(b)
Investor Members	Preamble
Investor Return Thresholds	Section 6.5(h)
Lock-Up Period	Section 6.1(b)
Mandatory Capital Contribution	Section 5.1(a)

Measurement Period	Schedule 2
MOIC Return Threshold	Section 6.5(h)
NIPSCO	Section 2.14(b)
NiSource Directors	Section 2.2(d)
NiSource Member	Preamble
NiSource Notes	Section 2.14(b)
Non-Transferring Member	Section 6.3(a)
Over-Contributing Member	Section 5.1(b)(i)
Parent	Preamble
Partnership Representative	Section 10.2
Party	Preamble
Preemptive Right	Section 7.1
Preemptive Right Notice Period	Section 7.1
Preemptive Right Participation Notice	Section 7.1
Pro Rata Request Amount	Section 5.1(a)
Regulatory Allocations	Section 5.7(h)
Response To Capital Call	Section 5.1(a)
Sale Notice	Section 6.3(a)(i)
Sale Period	Section 6.3(a)(ii)
Seller Model	Schedule 2
Senior Management Termination Event	Schedule 2
Senior Management Member	Schedule 2
Subject Membership Interests	Section 6.3(a)
Tag-Along Buyer	Section 6.4(a)
Tag-Along Notice	Section 6.4(a)
Tag-Along Offered Membership Interests	Section 6.4(a)
Tag-Along Sale	Section 6.4(a)
Total Number of Directors	Section 2.2(a)
Transferring Member	Section 6.3(a)
Unfunded Amount	Section 5.1(b)
Unfunded Amount Loan	Section 5.1(b)(ii)(A)
VCOC Investor Member	Preamble

Section 1.18 Other Definitional Provisions . The following shall apply to this Agreement:

(a) Accounting terms which are not otherwise defined in this Agreement have the meanings given to them under GAAP. To the extent that the definition of an accounting term defined in this Agreement is inconsistent with the meaning of such term under GAAP, the definition set forth in this Agreement shall control.

(b) The terms “hereof,” “herein” and “hereunder” and terms of similar import are references to this

Agreement as a whole and not to any particular provision of this Agreement. Section, clause, schedule and exhibit references contained in this Agreement are references to sections, clauses, schedules and exhibits in or to this Agreement, unless otherwise specified.

(c) Whenever the words “include,” “includes” or “including” are used in this Agreement, they shall be deemed to be followed by the words “without limitation.” Where the context permits, the use of the term “or” shall be equivalent to the use of the term “and/or.”

(d) When calculating the period of time before which, within which or following which any act is to be done or step taken pursuant to this Agreement, the date that is the reference date in calculating such period shall be excluded. If the last day of such period is a day other than a Business Day, the period in question shall end on the next succeeding Business Day. In addition, notwithstanding any deadline for payment, performance, notice or election under this Agreement, if such deadline falls on a date that is not a Business Day, then the deadline for such payment, performance, notice or election will be extended to the next succeeding Business Day.

(e) Words denoting any gender shall include all genders, including the neutral gender. Where a word is defined herein, references to the singular shall include references to the plural and vice versa.

(f) The word "will" will be construed to have the same meaning and effect as the word "shall". The words "shall," "will," or "agree(s)" are mandatory, and "may" is permissive.

(g) All references to "$" and dollars shall be deemed to refer to United States currency unless otherwise specifically provided.

(h) All references to a day or days shall be deemed to refer to a calendar day or calendar days, as applicable, unless otherwise specifically provided.

(i) Any reference to any Contract shall be a reference to such agreement or Contract, as amended, amended and restated, modified, supplemented or waived.

(j) Any reference to any particular Code section or any Law shall be interpreted to include any amendment to, revision of or successor to that section or Law regardless of how it is numbered or classified; provided , that, for the purposes of the representations and warranties contained herein, with respect to any violation of or non-compliance with, or alleged violation of or non-compliance, with any Code section or Law, the reference to such Code section or Law means such Code section or Law as in effect at the time of such violation or non-compliance or alleged violation or non-compliance.

(k) For all purposes of this Agreement (including the determination of a Member's Percentage Interest and its entitlement, if applicable, to designate one or more Directors), such Member and its Permitted Transferees shall be deemed to be, and shall be treated as, one and the same Member.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of the date first written above.

The Company:

NIPSCO Holdings II LLC

By: /s/ Shawn Anderson
Name: Shawn Anderson
Title: President and Chief Financial Officer

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of the date first written above.

NiSource Member:

NIPSCO Holdings I LLC

By: /s/ Shawn Anderson
Name: Shawn Anderson
Title: President and Chief Financial Officer

Solely with respect to Article VI :

Parent:

NiSource Inc.

By: /s/ Shawn Anderson
Name: Shawn Anderson
Title: Executive Vice President and Chief Financial Officer

IN WITNESS WHEREOF, the undersigned has duly executed this Agreement as of the date first written above.

BIP Investor Member:

BIP Blue Buyer L.L.C.

By: BIP Holdings Manager L.L.C., its managing member

By: /s/ Sebastian Sherman
Name: Sebastian Sherman
Title: Senior Managing Director

VCOC Investor Member:

BIP Blue Buyer VCOC L.L.C.

By: BIP Holdings Manager L.L.C., its managing member

By: /s/ Sebastian Sherman
Name: Sebastian Sherman
Title: Senior Managing Director

Schedule 1
Schedule of Members

Name	Address	Percentage Interest	Capital Accounts
NIPSCO Holdings I LLC	NIPSCO Holdings I LLC c/o NiSource Inc. 135 North Pennsylvania Street Suite 1610 Indianapolis, IN 46204	80.1%	
BIP Blue Buyer L.L.C.	BIP Blue Buyer L.L.C. 345 Park Avenue New York, NY 10154	15.3841%	
BIP Blue Buyer VCOC L.L.C.	BIP Blue Buyer VCOC L.L.C. 345 Park Avenue New York, NY 10154	4.5159%	

[Schedule of Members]

Schedule 2
Senior Management Termination Event

Appendix A
PROHIBITED COMPETITORS

Exhibit 10.48

NiSource Inc.

2020 Omnibus Incentive Plan

202[ ] Performance Share Unit Award Agreement

This Performance Share Unit Award Agreement (the "Agreement") is made and entered into as of [DATE] (the "Grant Date"), by and between NiSource Inc., a Delaware corporation (the "Company"), and [NAME], an Employee of the Company or an Affiliate (the "Grantee"), pursuant to the terms of the NiSource Inc. 2020 Omnibus Incentive Plan, as amended (the "Plan"). Any term capitalized but not defined in this Agreement shall have the meaning set forth in the Plan. In the event of any conflict between the Plan and this Agreement, the Plan shall control.

Section 1. Performance Share Unit Award. The Company hereby grants to the Grantee, on the terms and conditions hereinafter set forth, a target award of [insert number of units] Performance Share Units (the "Target Total Award" or "TTA"). The Performance Share Units shall be represented by a bookkeeping entry with respect to the Grantee (the "PSU Account"), and each Performance Share Unit shall be settled in one Share, to the extent provided under this Agreement and the Plan. This Agreement and the award shall be null and void unless the Grantee accepts this Agreement electronically within the Grantee's stock plan account with the Company's stock plan administrator according to the procedures then in effect.

Section 2. Performance-Based Vesting Conditions .

(a) General. Subject to the remainder of this Agreement, the TTA shall vest pursuant to the terms of this Agreement and the Plan based on the achievement of the performance goals set forth in this Section 2 over the performance period [insert three year performance period] (the "Performance Period"), provided that the Grantee remains in continuous Service through [insert date after three year performance period] (the "Vesting Date"). Attainment of the performance goals shall be determined and certified by the Compensation and Human Capital Committee of the Board of Directors of the Company (the "Committee") prior to the settlement of the TTA.

(b) [insert metric] Performance Goal . Subject to the terms of this Agreement and the Plan, [insert number of performance share units for this metric] (_____% of the TTA) shall be eligible to vest based on the Company's achievement of [_____] during the Performance Period, as follows:

Performance Level(1)	[Insert metric]	Percentage of the [_____] TTA Eligible for Vesting
Trigger	[ ]	[ ]
Target	[ ]	[ ]
Stretch	[ ]	[ ]

(1) The vesting percentage for performance between performance levels shall be determined based on linear interpolation.

(c) [insert metric] Performance Goals .

(1) Subject to the terms of this Agreement and the Plan, [insert number of performance share units for this metric] (_____% of the TTA) shall be eligible to vest based on the

Company's achievement of [_____] goals during the Performance Period, as follows:

LTI Metrics-Measure	TTA Weighting	Trigger	Target	Stretch
[insert metrics]				

(2) The total of the weighted levels of achievement for the performance measures described in Section 2(c)(1) above shall be aggregated and the percentage of Performance Share Units eligible to vest under Section 2(c) shall vest in the respective percentages set forth below, as applicable.

Performance Levels(1)	Percentage of the TTA Vesting Based on Achievement
Trigger	[ ]
Target	[ ]
Stretch	[ ]

(1) The vesting percentage for performance between performance levels shall be determined based on linear interpolation.

(d) Definitions .

[insert metric definitions.]

Section 3. Termination of Employment .

(a) Termination of Service Prior to Vesting Date . Except as set forth below, if the Grantee's Service is terminated for any reason prior to the Vesting Date, then the Grantee shall forfeit the Performance Share Units credited to the Grantee's PSU Account.

(b) Retirement, Disability or Death .

(1) Notwithstanding the foregoing, in the event that the Grantee's Service terminates prior to the Vesting Date as a result of the Grantee's (i) Retirement, (ii) Disability, or (iii) death and such death occurs with less than or equal to twelve months remaining in the Performance Period, then the Grantee (or the Grantee's beneficiary or estate in the case of the Grantee's death) shall vest in a *pro rata* portion of the Performance Share Units, based on the actual performance results for the Performance Period. Such *pro rata* portion of the Performance Share Units shall be determined by multiplying the number of Performance Share Units earned based on actual performance by a fraction, where the numerator shall

equal the number of calendar months (including partial calendar months) that have elapsed from the Grant Date through the date of the Grantee's termination of Service, and the denominator shall be the number of calendar months (including partial calendar months) that have elapsed between the Grant Date and the Vesting Date.

(2) If the Grantee terminates Service due to death prior to the Vesting Date and with more than 12 months remaining in the Performance Period, then the Grantee's beneficiary or estate shall vest, on the date of termination, in a *pro rata* portion of the target Performance Share Units. Such *pro rata* portion of the Performance Share Units shall be determined by multiplying the number of target Performance Share Units by a fraction, where the numerator shall equal the number of calendar months (including partial calendar months) that have elapsed from the Grant Date through the date of the Grantee's termination of Service, and the denominator shall be the number of calendar months (including partial calendar months) that have elapsed between the Grant Date and the Vesting Date.

(3) " Retirement " means the Grantee's termination from Service at or after attainment of age 55 and completion of at least 10 years of continuous Service measured from the Grantee's most recent date of hire with the Company or an Affiliate.

(c) Change in Control; Good Reason . Notwithstanding the foregoing provisions, in the event of a Change in Control, the Performance Share Units under this Agreement shall be subject to the Change in Control provisions set forth in the Plan. Notwithstanding any other agreement between the Company and the Grantee, the "Good Reason" definition set forth in the Plan shall govern this award.

Section 4. Delivery of Shares . Subject to the terms of this Agreement and except as otherwise provided for herein, the Company shall convert the Performance Share Units in the Grantee's PSU Account into Shares and issue or deliver the total number of Shares due to the Grantee within 60 days following the Vesting Date (but in any event no later than the March 15th immediately following the year in which the substantial risk of forfeiture with respect to the Performance Share Units lapses) or, if earlier, within 30 days following (a) the Grantee's death in accordance with Section 3(b)(2) , (b) Grantee's termination of Service without Cause or due to Good Reason in accordance with the Change in Control provisions of the Plan or (c) a Change in Control in the event the Performance Share Units do not become Alternative Awards under the Plan. The delivery of the Shares shall be subject to payment of the applicable withholding tax liability and the forfeiture provisions of this Agreement. If the Grantee dies before the Company has issued or distributed the vested Performance Share Units, the Company shall transfer any Shares with respect to the vested Performance Share Units in accordance with the Grantee's written beneficiary designation or to the Grantee's estate if no written beneficiary designation is provided. The issuance or delivery of the Shares hereunder shall be evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company. The Company shall pay all original issue or transfer taxes and all fees and expenses incident to such issuance or delivery, except as otherwise provided in Section 5 .

Section 5. Withholding of Taxes . As a condition precedent to the delivery to Grantee of any Shares upon vesting of the Performance Share Units, Grantee shall, upon request by the Company, pay to the Company such amount of cash as the Company may be required, under all applicable federal, state, local or other laws or regulations, to withhold and pay over as income or other withholding taxes (the " Required Tax Payments ") with respect to the Performance Share Units. If Grantee shall fail to advance the Required Tax Payments after request by the Company, the Company may, in its discretion, deduct any Required Tax Payments from any amount then or thereafter payable by the Company to Grantee or withhold Shares. Grantee may elect to satisfy his or her obligation to advance the Required Tax Payments by any of the following means: (a) a cash payment to the Company; (b) delivery to the Company (either actual delivery or by attestation procedures established by the Company) of previously owned whole Shares having a Fair Market Value, determined as of the date the obligation to withhold or pay taxes first arises in connection with the Performance Share Units

(the " Tax Date "), equal to the Required Tax Payments; (c) authorizing the Company to withhold from the Shares otherwise to be delivered to Grantee upon the vesting of the Performance Share Units, a number of whole Shares having a Fair Market Value, determined as of the Tax Date, equal to the Required Tax Payments; or (d) any combination of (a), (b) and (c). Shares to be delivered or withheld may not have a Fair Market Value in excess of the minimum amount of the Required Tax Payments. Any fraction of a Share which would be required to satisfy such an obligation shall be disregarded and the remaining amount due shall be paid in cash by Grantee. No Shares shall be delivered until the Required Tax Payments have been satisfied in full.

Section 6. Compliance with Applicable Law . Notwithstanding anything contained herein to the contrary, the Company's obligation to issue or deliver certificates evidencing the Performance Share Units shall be subject to all applicable laws, rules and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required. The delivery of all or any Shares that relate to the Performance Share Units shall be effective only at such time that the issuance of such Shares shall not violate any state or federal securities or other laws. The Company is under no obligation to effect any registration of Shares under the Securities Act of 1933 or to effect any state registration or qualification of the Shares that may be issued under this Agreement. Subject to Code Section 409A, the Company may, in its sole discretion, delay the delivery of Shares or place restrictive legends on Shares in order to ensure that the issuance of any Shares shall be in compliance with federal or state securities laws and the rules of any exchange upon which the Company's Shares are traded. If the Company delays the delivery of Shares in order to ensure compliance with any state or federal securities or other laws, the Company shall deliver the Shares at the earliest date at which the Company reasonably believes that such delivery shall not cause such violation, or at such later date that may be permitted under Code Section 409A.

Section 7. Restriction on Transferability . Except as otherwise provided under the Plan, until the Performance Share Units have vested under this Agreement, the Performance Share Units granted herein and the rights and privileges conferred hereby may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated (by operation of law or otherwise), other than by will or the laws of descent and distribution. Any attempted transfer in violation of the provisions of this paragraph shall be void, and the purported transferee shall obtain no rights with respect to such Performance Share Units.

Section 8. Grantee's Rights Unsecured . The right of the Grantee or his or her beneficiary to receive a distribution hereunder shall be an unsecured claim against the general assets of the Company, and neither the Grantee nor his or her beneficiary shall have any rights in or against any amounts credited to the Grantee's PSU Account, any Shares or any other specific assets of the Company. All amounts credited to the Grantee's PSU Account shall constitute general assets of the Company and may be disposed of by the Company at such time and for such purposes as it may deem appropriate.

Section 9. No Rights as Stockholder or Employee; Dividend Equivalent Rights .

(a) Unless and until Shares have been issued to the Grantee, the Grantee shall not have any privileges of a stockholder of the Company with respect to any Performance Share Units subject to this Agreement, nor shall the Company have any obligation to issue any dividend or otherwise afford any rights to which Shares are entitled with respect to any such Performance Share Units. Notwithstanding the foregoing, in the event that the Company declares a cash dividend or distribution on Shares, the Grantee will be credited with Dividend Equivalent Rights equal to the amount of the cash dividend or distribution per Share multiplied by the number of Performance Share Units granted by this Agreement and held by the Grantee on the dividend's or distribution's record date (as adjusted for any proration due to the Grantee's retirement, death or disability). The Dividend Equivalent Rights credited to the Grantee under the preceding sentence will be deemed to be reinvested in additional Performance Share Units, which will be subject to the

same terms regarding vesting, forfeiture, and Dividend Equivalent Rights as Performance Share Units awarded to the Grantee under this Agreement. Following the Performance Period, the Grantee will be entitled to receive a cash payment equal to the value of the accrued Dividend Equivalent Rights multiplied by the vested percentage of the TTA determined under Sections 2(b), 2(c) and 2(d) above.

(b) Nothing in this Agreement or the Award shall confer upon the Grantee any right to continue as an Employee of the Company or any Affiliate or to interfere in any way with the right of the Company or any Affiliate to terminate the Grantee's Service at any time.

Section 10. Adjustments . If at any time while the Award is outstanding, the number of outstanding Performance Share Units is changed by reason of a reorganization, recapitalization, stock split or any of the other events described in the Plan (in each case as determined by the Committee), the number and kind of Performance Share Units and the performance goals, as applicable, shall be adjusted in accordance with the provisions of the Plan. In the event of certain corporate events specified in the Change in Control provisions of the Plan, any Performance Share Units may be replaced by Alternative Awards or forfeited in exchange for payment of cash in accordance with the Change in Control procedures and provisions of the Plan, as determined by the Committee.

Section 11. Notices . Any notice hereunder by the Grantee shall be given to the Company in writing, and such notice shall be deemed duly given only upon receipt thereof at the following address: Corporate Secretary, NiSource Inc., 801 East 86th Avenue, Merrillville, IN 46410-6271 (or at such other address as the Company may designate by notice to the Grantee). Any notice hereunder by the Company shall be given to the Grantee in writing, and such notice shall be deemed duly given only upon receipt thereof at such address as the Grantee may have on file with the Company.

Section 12. Administration . The administration of this Agreement, including the interpretation and amendment or termination of this Agreement, shall be performed in accordance with the Plan. All determinations and decisions made by the Committee, the Board, or any delegate of the Committee as to the provisions of this Agreement shall be conclusive, final, and binding on all persons. Notwithstanding the foregoing, if subsequent guidance is issued under Code Section 409A that would impose additional taxes, penalties, or interest to either the Company or the Grantee, the Company may administer this Agreement in accordance with such guidance and amend this Agreement without the consent of the Grantee to the extent such actions, in the reasonable judgment of the Company, are considered necessary to avoid the imposition of such additional taxes, penalties, or interest.

Section 13. Governing Law . This Agreement shall be construed and enforced in accordance with the laws of the State of Indiana, without giving effect to the choice of law principles thereof.

Section 14. Entire Agreement; Agreement Subject to Plan . This Agreement and the Plan contain all of the terms and conditions with respect to the subject matter hereof and supersede any previous agreements, written or oral, relating to the subject matter hereof. This Agreement is subject to the provisions of the Plan and shall be interpreted in accordance therewith. In the event that the provisions of this Agreement and the Plan conflict, the Plan shall control. The Grantee hereby acknowledges receipt of a copy of the Plan.

Section 15. Code Section 409A Compliance . This Agreement and the Performance Share Units granted hereunder are intended to be exempt from Code Section 409A to the maximum extent possible, and shall be interpreted and construed accordingly.

Section 16. Restrictive Covenant.

(a) The Grantee understands the nature of the Company's business and the significant time and expense the Company and its Affiliates (collectively referred to in this Section as "NiSource") have expended and continue to expend in attracting,

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developing, recruiting and training employees and that the loss of employees would cause significant and irreparable harm to NiSource. Accordingly, the Grantee agrees that the scope and duration of the restriction described in this Section 16 is reasonable and necessary to protect the legitimate business interests of NiSource. The Grantee agrees that during the period of the Grantee's Service and for a period of one (1) year following the Grantee's separation from Service, the Grantee shall not, without the express written approval of NiSource's Chief Human Resources Officer, directly or indirectly solicit, hire, recruit, or attempt to solicit, hire, or recruit, any then-current employee of NiSource or any employee who has been employed by NiSource in the six (6) months preceding such solicitation, hiring, or recruitment ("Covered Employee"). Soliciting, recruiting, or hiring Covered Employees with whom Grantee did not work or have direct contact while at NiSource to work as an employee, contractor, consultant or otherwise, shall not be considered a violation of this Section 16(a) , provided, however, that Grantee does not solicit, employ or hire such employee with an intent to compete with NiSource in violation of this Section 16(a). Notwithstanding the foregoing, nothing in this Section shall restrict or preclude the Grantee from soliciting or hiring any employee who responds to a general employment solicitation or advertisement or contact by a recruiter that is not specifically focused or targeted on employees or former employees of NiSource, provided that the Grantee has not encouraged or advised such.

(b) If the final judgment of a court of competent jurisdiction declares that any term or provision of this Section is invalid or unenforceable, the parties agree that (a) the court making the determination of invalidity or unenforceability shall have the power to reduce the scope, duration, or geographic area of the term or provision, to delete specific words or phrases, or to replace any invalid or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, (b) the parties shall request that the court exercise that power, and (c) this Agreement in its revised form shall be enforceable.

(c) Grantee agrees that in the event of a breach or threatened breach of the covenants contained in Section 16(a) , in addition to any other damages or restrictions that may apply under any employment agreement, state law, or otherwise, the Grantee shall forfeit, upon written notice to such effect from the Company, any and all Awards granted to the Grantee under this Agreement, including vested Awards and including any proceeds thereof. The forfeiture provisions of this Section shall continue to apply, in accordance with their terms, after the provisions of any employment or other agreement between the Company and the Grantee have lapsed. Grantee expressly acknowledges that any breach or threatened breach of any of the terms and/or conditions of this Section 16 may result in substantial, continuing, and irreparable injury to NiSource, and therefore agrees that, in addition to any other remedy that may be available to NiSource, NiSource shall be entitled to seek injunctive relief, specific performance, or other equitable relief (without the requirement to post bond) by a court of appropriate jurisdiction in the event of any breach or threatened breach of the terms of this Section 16 without the necessity of proving irreparable harm or injury as a result of such breach or threatened breach. Grantee expressly acknowledges that Grantee's violation of this Section 16 will entitle NiSource to other equitable and legal remedies, including damages, attorney's fees, and costs, as allowed by law. The provisions of this Section 16 shall continue to apply, in accordance with their terms, after the Grantee's Service has terminated and regardless of whether the provisions of any employment or other agreement between the Company and the Grantee have lapsed.

(d) In the event the Grantee is required to forfeit outstanding vested Shares as a result of breaching the Grantee's obligations under this Section 16 , the Grantee agrees to promptly execute such stock powers or other instruments of transfer in such forms as are acceptable to the Company without payment or other consideration therefor.

IN WITNESS WHEREOF, the Company has caused the Performance Share Units subject to this Agreement to be granted, and the Grantee has accepted the Performance Share Units subject to the terms of the Agreement, as of the date first above written.

NISOURCE INC.

_____
By: Melanie Berman
Its: Senior Vice President and Chief Human Resources Officer

Exhibit 21

SUBSIDIARIES OF NISOURCE

as of December 31, 2023

Segment/Subsidiary	
GAS DISTRIBUTION OPERATIONS	**State of Incorporation**
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	Massachusetts
Columbia Gas of Kentucky, Inc.	Kentucky
Columbia Gas of Maryland, Inc.	Delaware
Columbia Gas of Ohio, Inc.	Ohio
Columbia Gas of Pennsylvania, Inc.	Pennsylvania
Columbia Gas of Virginia, Inc.	Virginia
NiSource Gas Distribution Group, Inc.	Delaware
ELECTRIC OPERATIONS	
Northern Indiana Public Service Company LLC*	Indiana
RoseWater Wind Generation LLC	Indiana
RoseWater Wind Farm LLC	Delaware
Indiana Crossroads Wind Generation LLC	Indiana
Indiana Crossroads Wind Farm LLC	Delaware
Dunn's Bridge I Solar Generation LLC	Delaware
Dunn's Bridge II Solar Generation LLC	Delaware
Cavalry Solar Generation LLC	Delaware
Elliot Solar Generation LLC	Delaware
Fairbanks Solar Generation LLC	Delaware
Indiana Crossroads Solar Generation LLC	Delaware
Meadow Lake Solar Park LLC	Delaware
Dunns Bridge Solar Center, LLC	Delaware
Gibson Solar Generation LLC	Delaware
CORPORATE AND OTHER OPERATIONS	
Columbia Gas of Ohio Receivables Corporation	Delaware
Columbia Gas of Pennsylvania Receivables Corporation	Delaware
NIPSCO Accounts Receivable Corporation	Indiana
NiSource Corporate Group, LLC	Delaware
NiSource Corporate Services Company	Delaware
NiSource Development Company, Inc.	Indiana
NiSource Energy Technologies, Inc.	Indiana
NiSource Insurance Corporation, Inc.	Utah
Lake Erie Land Company	Indiana
EnergyUSA-TPC, Inc.	Indiana (Inactive)
NIPSCO Holdings I LLC	Delaware
NIPSCO Holdings II LLC	Delaware

* Reported under Gas Distribution Operations and Electric Operations.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-268084 on Form S-3, Registration Statement Nos. 333-107743, 333-166888, 333-228102, 333-233382, 333-238501, 333-248405, 333-260906 on Form S-8, and Registration Statement Nos. 333-228790 and 333-228791 on Form S-4 of our reports dated February 21, 2024, relating to the consolidated financial statements of NiSource Inc. and subsidiaries (the “Company”) and the effectiveness of the Company's internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2023.

/s/ DELOITTE & TOUCHE LLP
Columbus, Ohio
February 21, 2024

Exhibit 31.1

Certification Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Lloyd M. Yates, certify that:

1. I have reviewed this Annual Report on Form 10-K of NiSource Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2024

By: /s/ Lloyd M. Yates
Lloyd M. Yates
President and Chief Executive Officer

Exhibit 31.2

Certification Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Shawn Anderson, certify that:

1. I have reviewed this Annual Report on Form 10-K of NiSource Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2024

By: /s/ Shawn Anderson
Shawn Anderson
Executive Vice President and Chief Financial Officer

Exhibit 32.1

Certification Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of NiSource Inc. (the "Company") on Form 10-K for the year ending December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lloyd M. Yates, Chief Executive Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Lloyd M. Yates
Lloyd M. Yates
President and Chief Executive Officer

Date: February 21, 2024

Exhibit 32.2

Certification Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of NiSource Inc. (the "Company") on Form 10-K for the year ending December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Shawn Anderson, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Shawn Anderson
Shawn Anderson
Executive Vice President and Chief Financial Officer

Date: February 21, 2024

Exhibit 97.1

NISOURCE INC.

COMPENSATION RECOUPMENT POLICY

In the event of any required accounting restatement of the financial statements of NiSource Inc. (the "Company") due to the material noncompliance of the Company with any financial reporting requirement under the applicable U.S. federal securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (a "Restatement"), the Company shall recover reasonably promptly from any person, who is or was an "Executive Officer," as such term is defined in Rule 10D-1 adopted under the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Section 303A.14 of the NYSE's listing standards, of the Company (each, a "Covered Person") the amount of any "Erroneously Awarded Incentive-Based Compensation" (as defined below). This Policy shall be effective as of October 2, 2023, the effective date of Section 303A.14 of the NYSE's listing standards (the "Effective Date").

The amount of Incentive-Based Compensation (as defined below) that must be recovered from a Covered Person pursuant to the immediately preceding paragraph is the amount of "Recoverable Incentive-Based Compensation" (as defined below) received by a Covered Person that exceeds the amount of Recoverable Incentive-Based Compensation that otherwise would have been received had it been determined based on the restated amounts, computed without regard to any taxes paid (referred to as the "Erroneously Awarded Incentive-Based Compensation"). For Recoverable Incentive-Based Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Incentive-Based Compensation is not subject to mathematical recalculation directly from the information in a Restatement, the amount must be based on a reasonable estimate of the effect of the Restatement on the stock price or total shareholder return, as applicable, upon which the Recoverable Incentive-Based Compensation was received, and the Company must maintain documentation of that reasonable estimate and provide such documentation to the New York Stock Exchange (the "NYSE"). For the purposes of this Policy, Recoverable Incentive-Based Compensation will be deemed to be received in the fiscal period during which the financial reporting measure specified in the applicable Incentive-Based Compensation award is attained, even if the payment or grant occurs after the end of that period. The Compensation and Human Capital Committee (the "Committee") (if composed entirely of independent directors, or in the absence of such a committee, a majority of independent directors serving on the Board), shall determine the amount of Erroneously Awarded Incentive Based-Compensation.

For purposes of this Policy, "Incentive-Based Compensation" means any compensation that is granted, earned or vested based wholly or in part upon the attainment of a "financial reporting measure," which means a measure that is determined and presented in accordance with Generally Accepted Accounting Principles which are used in preparing the Company's financial statements, and any measure that is derived wholly or in part from such measures. Stock price and total shareholder return are also financial reporting measures for this purpose. For avoidance of doubt, a financial reporting measure need not be presented within the Company's financial statements or included in a filing with the Securities and Exchange Commission.

For purposes of this Policy, "Recoverable Incentive-Based Compensation" means all Incentive-Based Compensation received on or after the Effective Date of this Policy set forth above by a Covered Person: (i) after beginning service as an executive officer; (ii) who served as an Executive Officer at any time during the performance period for the Incentive-Based Compensation; (iii) while the Company has a class of securities listed on a national securities exchange or a national securities association; and (iv) during the three completed fiscal years immediately preceding the date that the Company is required to prepare a Restatement, including

any applicable transition period that results from a change in the Company's fiscal year within or immediately following those three completed fiscal years. For this purpose, the Company is deemed to be required to prepare a Restatement on the earlier of: (i) the date the Board of Directors of the Company (the "Board"), or the Company's officers authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Restatement; and (ii) the date a court, regulator or other legally authorized body directs the Company to prepare a Restatement. The Company's obligation to recover Erroneously Awarded Incentive-Based Compensation is not dependent on if or when the restated financial statements are filed with the Securities and Exchange Commission.

The Company shall recover the Erroneously Awarded Incentive-Based Compensation from Covered Persons unless the Compensation and Human Capital Committee of the Board of Directors (if composed entirely of independent directors, or in the absence of such a committee, a majority of independent directors serving on the Board) determines that recovery is impracticable because: (i) the direct expense to a third party to assist in enforcing this Policy would exceed the amount of Erroneously Awarded Incentive-Based Compensation; provided that, the Company must make a reasonable attempt to recover the Erroneously Awarded Incentive-Based Compensation before concluding that recovery is impracticable, document such reasonable attempt to recover the Erroneously Awarded Incentive- Based Compensation and provide such documentation to the NYSE; or (ii) recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the applicable requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

In no event will the Company indemnify any Covered Person for any amounts that are recovered under this Policy, including any payment or reimbursement for the cost of third-party insurance purchased by any Covered Person to fund potential clawback obligations under this Policy. This Policy is in addition to (and not in lieu of) any right of repayment, forfeiture or right of offset against any employees that is required pursuant to any statutory repayment requirement (regardless of whether implemented at any time prior to or following the adoption or amendment of this Policy), including Section 304 of the Sarbanes-Oxley Act of 2002. Any amounts paid to the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 shall be considered in determining any amounts recovered under this Policy.

The application and enforcement of this Policy does not preclude the Company from taking any other action to enforce a Covered Person's obligations to the Company, including termination of employment or institution of legal proceedings. Nothing in this Policy restricts the Company from seeking recoupment under any other compensation recoupment Policy or any applicable provisions in plans, agreements, awards or other arrangements that contemplate the recoupment of compensation from a Covered Person. If a Covered Person fails to repay Erroneously Awarded Incentive-Based Compensation that is owed to the Company under this Policy, the Company shall take all appropriate action to recover such Erroneously Awarded Incentive-Based Compensation from the Covered Person, and the Covered Person shall be required to reimburse the Company for all expenses (including legal expenses) incurred by the Company in recovering such Erroneously Awarded Incentive-Based Compensation.

The terms of this Policy shall be binding and enforceable against all Covered Persons subject to this Policy and their beneficiaries, heirs, executors, administrators or other legal representatives. If any provision of this Policy or the application of such provision to any Covered Person shall be adjudicated to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Policy, and the invalid, illegal or unenforceable provisions shall be deemed amended to the minimum extent necessary to render any such provision (or the application of such provision) valid, legal or enforceable.

Each Covered Person shall sign and return to the Company, within 30 calendar days following the later of (i) the Effective Date of this Policy first set forth above or (ii) the date the individual becomes a Covered Person, the Acknowledgement Form attached hereto as Exhibit A, pursuant

to which the Covered Person agrees to be bound by, and to comply with, the terms and conditions of this Policy. Notwithstanding, Covered Persons who are no longer employed with the Company at the time this Policy is implemented will be provided a copy of this Policy for their information and will not be required to sign and return an Acknowledgment Form.

This Policy shall be interpreted in a manner that is consistent with Rule 10D-1 under the Exchange Act, Section 303A.14 of the NYSE Listed Company Manual and any related rules or regulations adopted by the Securities and Exchange Commission or the NYSE (the "Applicable Rules") as well as any other applicable law. To the extent the Applicable Rules require recovery of incentive-based compensation in additional circumstances beyond those specified above, nothing in this Policy shall be deemed to limit or restrict the right or obligation of the Company to recover incentive-based compensation to the fullest extent required by the Applicable Rules.

This Policy shall be administered by the Committee, and any determinations made by the Committee shall be final, conclusive and binding on all persons, including the Company. The Committee is authorized to interpret and construe this Policy and to make all determinations necessary, appropriate or advisable for the administration of this Policy and for the Company's compliance with NYSE Rules, Section 10D, Rule 10D-1 and any other applicable law, regulation, rule or interpretation of the SEC or NYSE promulgated or issued in connection therewith. The Committee may amend this Policy from time to time as it deems necessary.

The Committee shall determine, in its sole discretion, the timing and method for reasonably promptly recouping Erroneously Awarded Incentive-Based Compensation, which may include without limitation a) seeking reimbursement of all or part of any cash or equity-based award, b) cancelling prior cash or equity-based awards, whether vested or unvested or paid or unpaid, c) cancelling or offsetting against any planned future cash or equity-based awards, d) forfeiture of deferred compensation, subject to compliance with Section 409A of the Internal Revenue Code and the regulations promulgated thereunder, e) any other method authorized by applicable law or contract. Subject to compliance with any applicable law, the Committee may affect recovery under this Policy from any amount otherwise payable to the Covered Person, including amounts payable to such individual under any otherwise applicable Company plan or program, including base salary, bonuses or commissions and compensation previously deferred.

Any members of the Committee, or members of the Board who assist in the administration of this Policy, shall not be personally liable for any action, determination or interpretation made with respect to this Policy and shall be fully indemnified by the Company to the fullest extent under applicable law and Company policy with respect to any such action, determination or interpretation.

EXHIBIT A

NiSource Inc.

COMPENSATION RECOUPMENT POLICY

ACKNOWLEDGEMENT FORM

By signing below, the undersigned acknowledges and confirms that the undersigned has received and reviewed a copy of the NiSource Inc. (the "Company") Compensation Recoupment Policy (the "Policy").

By signing this Acknowledgement Form, the undersigned acknowledges and agrees that the undersigned is and will continue to be subject to the Policy and that the Policy will apply both during and after the undersigned's employment with the Company. Further, by signing below, the undersigned agrees to abide by the terms of the Policy, including, without limitation, by returning any Erroneously Awarded Incentive-Based Compensation (as defined in the Policy) to the Company to the extent required by, and in a manner consistent with, the Policy.

COVERED PERSON

_____

Signature

_____

Print Name

_____

Date

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2023
OR
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to_____

Commission file number 1-38681

NW Natural HOLDINGS™

NORTHWEST NATURAL HOLDING COMPANY
(Exact name of registrant as specified in its charter)

Oregon	**82-4710680**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

250 S.W. Taylor Street	**Portland**	**Oregon**	**97204**
(Address of principal executive offices)			(Zip Code)

Registrant's telephone number, including area code: **(503) 226-4211**

Commission file number 1-15973

NW Natural®

NORTHWEST NATURAL GAS COMPANY
(Exact name of registrant as specified in its charter)

Oregon	**93-0256722**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

250 S.W. Taylor Street	**Portland**	**Oregon**	**97204**
(Address of principal executive offices)			(Zip Code)

Registrant's telephone number, including area code: **(503) 226-4211**

Securities registered pursuant to Section 12(b) of the Act:

Registrant	Title of each class	Trading Symbol	Name of each exchange on which registered
Northwest Natural Holding Company	Common Stock	NWN	New York Stock Exchange
Northwest Natural Gas Company	None	None	None

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
NORTHWEST NATURAL HOLDING COMPANY Yes ☒ No ☐ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
NORTHWEST NATURAL HOLDING COMPANY Yes ☐ No ☒ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
NORTHWEST NATURAL HOLDING COMPANY Yes ☒ No ☐ NORTHWEST NATURAL GAS COMPANY Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
NORTHWEST NATURAL HOLDING COMPANY Yes ☒ No ☐ NORTHWEST NATURAL GAS COMPANY Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

NORTHWEST NATURAL HOLDING COMPANY		NORTHWEST NATURAL GAS COMPANY	
Large Accelerated Filer	☒	Large Accelerated Filer	☐
Accelerated Filer	☐	Accelerated Filer	☐
Non-accelerated Filer	☐	Non-accelerated Filer	☒
Smaller Reporting Company	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐	Emerging Growth Company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.
NORTHWEST NATURAL HOLDING COMPANY Yes ☒ No ☐ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.
NORTHWEST NATURAL HOLDING COMPANY Yes ☐ No ☒ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).
NORTHWEST NATURAL HOLDING COMPANY Yes ☐ No ☒ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

Indicate by check mark w hether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

NORTHWEST NATURAL HOLDING COMPANY Yes ☐ No ☒ NORTHWEST NATURAL GAS COMPANY Yes ☐ No ☒

As of the end of the second quarter of 2023, the aggregate market value of the shares of Common Stock of Northw est Natural Holding Company (based upon the closing price of these shares on the New York Stock Exchange on June 30, 2023) held by non-affiliates w as $1,534,376,401.

At February 14, 2024, 37,676,740 shares of Northw est Natural Holding Company's Common Stock (the only class of Common Stock) w ere outstanding. All shares of Northw est Natural Gas Company's Common Stock (the only class of Common Stock) outstanding w ere held by Northw est Natural Holding Company.

This combined Form 10-K is separately filed by Northw est Natural Holding Company and Northw est Natural Gas Company. Information contained in this document relating to Northw est Natural Gas Company is filed by Northw est Natural Holding Company and separately by Northw est Natural Gas Company. Northw est Natural Gas Company makes no representation as to information relating to Northw est Natural Holding Company or its subsidiaries, except as it may relate to Northw est Natural Gas Company and its subsidiaries.

Northw est Natural Gas Company meets the conditions set forth in General Instruction (I)(1)(a) and (b) of Form 10-K and is therefore filing this report w ith the reduced disclosure format.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Northw est Natural Holding Company's Proxy Statement, to be filed in connection w ith the 2024 Annual Meeting of Shareholders, are incorporated by reference in Part III.

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GLOSSARY OF TERMS AND ABBREVIATIONS

ACC	Arizona Corporation Commission; the entity that regulates NW Holdings' regulated water and wastewater businesses in Arizona with respect to rates and terms of service, among other matters
AFUDC	Allowance for Funds Used During Construction
AOCI / AOCL	Accumulated Other Comprehensive Income (Loss)
ASC	Accounting Standards Codification
ASU	Accounting Standards Update as issued by the FASB
Average Weather	The 25-year average of heating degree days based on temperatures established in our last Oregon general rate case
Bcf	Billion cubic feet, a volumetric measure of natural gas, where one Bcf is roughly equal to 10 million therms
CAP	Compliance Assurance Process with the Internal Revenue Service
CCA	Climate Commitment Act enacted by the State of Washington
CNG	Compressed Natural Gas
CODM	Chief Operating Decision Maker, which for accounting purposes is defined as an individual or group of individuals responsible for the allocation of resources and assessing the performance of the entity's business units
Core NGD Customers	Residential, commercial, and industrial customers receiving firm service from the Natural Gas Distribution business
Cost of Gas	The delivered cost of natural gas sold to customers, including the cost of gas purchased, gas storage costs, gas reserves costs, gas commodity derivative contracts, pipeline demand costs, seasonal demand cost balancing adjustments, renewable natural gas and its attributes, including renewable thermal certificate costs, and regulatory gas cost deferrals
CPP	Climate Protection Program established by the Environmental Quality Commission of the Oregon Department of Environmental Quality
Decoupling	Anatural gas billing rate mechanism, also referred to as a conservation tariff, which is designed to allow a utility to encourage residential and small commercial customers to conserve energy
Degree Day	The number of degrees that the average outdoor temperature falls below or exceeds a base value in a given period of time
Demand Cost	Acomponent in NGD customer rates representing the cost of securing firm pipeline capacity, whether the capacity is used or not
ECRM	Environmental Cost Recovery Mechanism, a billing rate mechanism for recovering prudently incurred environmental site remediation costs allocable to Washington customers through NGD customer billings
Energy Corp	Northwest Energy Corporation, a wholly-owned subsidiary of Northwest Natural Gas Company
EPA	Environmental Protection Agency
EPS	Earnings per share
ESPP	Employee Stock Purchase Plan
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission; the entity regulating interstate storage services offered by the Mist gas storage facility
Firm Service	Natural gas service offered to customers under contracts or rate schedules that will not be disrupted to meet the needs of other customers
FMBs	First Mortgage Bonds
General Rate Case	Aperiodic filing with state or federal regulators to establish billing rates for utility customers
GHG	Greenhouse gases
Interruptible Service	Natural gas service offered to customers (usually large commercial or industrial users) under contracts or rate schedules that allow for interruptions when necessary to meet the needs of firm service customers
Interstate Storage Services	The portion of the Mist gas storage facility not used to serve NGD customers, instead serving utilities, third-party marketers, and electric generators
IPUC	Public Utility Commission of Idaho; the entity that regulates NW Holdings' regulated water businesses in Idaho with respect to rates and terms of service, among other matters
IRA	Inflation Reduction Act of 2022
IRP	Integrated Resource Plan
KB	Kelso-Beaver Pipeline, of which 10% is owned by KB Pipeline Company, a subsidiary of NNG Financial Corporation

LIBOR	London Interbank Offered Rate
LNG	Liquefied Natural Gas, the cryogenic liquid form of natural gas. To reach a liquid form at atmospheric pressure, natural gas must be cooled to approximately negative 260 degrees Fahrenheit
LTIP	Long Term Incentive Plan
Moody's	Moody's Investors Service, Inc., credit rating agency
NAV	Net Asset Value
NGD	Natural Gas Distribution, a segment of Northwest Natural Holding Company and Northwest Natural Gas Company that provides regulated natural gas distribution services to residential, commercial, and industrial customers in Oregon and Southwest Washington
NGD Margin	A financial measure used by NW Natural's CODM consisting of NGD operating revenues less the associated cost of gas, revenue taxes, and environmental recoveries
NNG Financial	NNG Financial Corporation, a wholly-owned subsidiary of NW Holdings
NW Holdings	Northwest Natural Holding Company
NW Natural	Northwest Natural Gas Company, a wholly-owned subsidiary of NW Holdings
NW Natural Renewables	NW Natural Renewables Holdings, LLC, a wholly-owned subsidiary of NW Holdings
NWN Energy	NW Natural Energy, LLC, a wholly-owned subsidiary of NW Holdings
NWN Gas Reserves	NWN Gas Reserves LLC, a wholly-owned subsidiary of Energy Corp
NWN Gas Storage	NW Natural Gas Storage, LLC, a wholly-owned subsidiary of NWN Energy
NWN Water	NW Natural Water Company, LLC, a wholly-owned subsidiary of NW Holdings
ODEQ	Oregon Department of Environmental Quality
OPEIU	Office and Professional Employees International Union Local No. 11, AFL-CIO, the Union which represents NW Natural's bargaining unit employees
OPUC	Public Utility Commission of Oregon; the entity that regulates our Oregon natural gas and regulated water businesses with respect to rates and terms of service, among other matters; the OPUC also regulates the Mist gas storage facility's intrastate storage services
PGA	Purchased Gas Adjustment, a regulatory mechanism primarily used to adjust natural gas customer rates to reflect changes in the forecasted cost of gas and differences between forecasted and actual gas costs from the prior year
PHMSA	U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration
PUCT	Public Utility Commission of Texas; the entity that regulates NW Holdings' regulated water and wastewater businesses in Texas with respect to rates and terms of service, among other matters
RNG	Renewable Natural Gas, a source of natural gas derived from organic materials which may be captured, refined, and distributed on natural gas pipeline systems
RNG Hold Co	NW Natural RNG Holding Company, LLC, a wholly-owned subsidiary of Northwest Natural Gas Company
ROE	Return on Equity, a measure of corporate profitability, calculated as net income or loss divided by average common equity. Authorized ROE refers to the equity rate approved by a regulatory agency for use in determining utility revenue requirements
ROR	Rate of Return, a measure of return on utility rate base. Authorized ROR refers to the rate of return approved by a regulatory agency and is generally discussed in the context of ROE and capital structure
RSU	Restricted Stock Unit
RTC	Renewable Thermal Certificate
S&P	Standard & Poor's Financial Services LLC, a credit rating agency and a subsidiary of S&P Global Inc.
Sales Service	Service provided whereby a customer purchases both natural gas commodity supply and transportation from the NGD business
SEC	U.S. Securities and Exchange Commission
SOFR	Secured Overnight Financing Rate
SRRM	Site Remediation and Recovery Mechanism, a billing rate mechanism for recovering prudently incurred environmental site remediation costs allocable to Oregon through NGD customer billings, subject to an earnings test
Therm	The basic unit of natural gas measurement, equal to one hundred thousand British thermal units
Transportation Service	Service provided whereby a customer purchases natural gas directly from a supplier but pays the utility to transport the gas over its distribution system to the customer’s facility
TSA	Transportation Security Administration
U.S. GAAP	Accounting principles generally accepted in the United States of America

WARM	An Oregon billing rate mechanism applied to natural gas residential and commercial customers to adjust for temperature variances from average weather
WUTC	Washington Utilities and Transportation Commission, the entity that regulates our Washington natural gas and regulated water businesses with respect to rates and terms of service, among other matters

FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to the safe harbors created by such Act. Forward-looking statements can be identified by words such as anticipates, assumes, may, intends, plans, projects, seeks, should, believes, estimates, expects, will, could, and similar references (including the negatives thereof) to future periods, although not all forward-looking statements contain these words. Examples of forward-looking statements include, but are not limited to, statements regarding the following:

- plans, projections and predictions;
- objectives, goals, visions or strategies;
- assumptions, generalizations and estimates;
- ongoing continuation of past practices or patterns;
- future events or performance;
- trends;
- risks;
- uncertainties;
- timing and cyclicality;
- economic conditions, including impacts of inflation and interest rates, bank failure, recessionary risk, and general economic uncertainty;
- earnings and dividends;
- capital expenditures and allocation;
- capital markets or access to capital;
- capital or organizational structure;
- matters related to climate change and our role in decarbonization or a low-carbon future;
- renewable natural gas, environmental attributes related thereto, and hydrogen;
- our strategy to reduce greenhouse gas emissions and the efficacy of communicating that strategy to shareholders, investors, stakeholders and communities;
- the policies and priorities of the current presidential administration and U.S. Congress;
- the policies and priorities of the officials elected in the 2024 presidential and congressional elections;
- growth;
- customer rates;
- pandemic and related illness or quarantine and economic conditions related thereto or resulting therefrom;
- labor relations and workforce succession;
- commodity costs;
- desirability and cost competitiveness of natural gas;
- gas reserves;
- operational performance and costs;
- energy policy, infrastructure and preferences;
- public policy approach and involvement;
- efficacy of derivatives and hedges;
- liquidity, financial positions, and planned securities issuances;
- valuations;
- project and program development, expansion, or investment;
- business development efforts, including new business lines such as unregulated renewable natural gas, and acquisitions and integration thereof;
- implementation and execution of our water strategy;
- pipeline capacity, demand, location, and reliability;
- adequacy of property rights and operations center development;
- technology implementation and cybersecurity practices;
- competition;
- procurement and development of gas (including renewable natural gas) and water supplies;
- estimated expenditures, supply chain and third party availability and impairment;
- supply chain disruptions;
- costs of compliance, and our ability to include those costs in rates;
- customers bypassing our infrastructure;
- credit exposures and credit ratings or changes in credit ratings;
- uncollectible account amounts;
- rate or regulatory outcomes, recovery or refunds, and the availability of public utility commissions to take action;

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- impacts or changes of executive orders, laws, rules and regulations, or legal challenges related thereto, including the Inflation Reduction Act or other energy climate related legislation;
- tax liabilities or refunds, including effects of tax legislation;
- levels and pricing of gas storage contracts and gas storage markets;
- outcomes, timing and effects of potential claims, litigation, regulatory actions, and other administrative matters;
- projected obligations, expectations and treatment with respect to, and the impact of new legislation on, retirement plans;
- international, federal, state, and local efforts to regulate, in a variety of ways, greenhouse gas emissions, and the effects of those efforts;
- geopolitical factors, including the ongoing conflicts in Europe and the Middle East;
- availability, adequacy, and shift in mix, of gas and water supplies;
- effects of new or anticipated changes in critical accounting policies or estimates;
- approval and adequacy of regulatory deferrals;
- effects and efficacy of regulatory mechanisms; and
- environmental, regulatory, litigation and insurance costs and recoveries, and timing thereof.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy, and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking statements. We therefore caution you against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements are discussed at Item 1A "*Risk Factors*" of Part I and Item 7 and Item 7A, "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" and "*Quantitative and Qualitative Disclosures about Market Risk*", respectively, of Part II of this report.

Any forward-looking statement made in this report speaks only as of the date on which it is made. Factors or events that could cause actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

PART I

FILING FORMAT

This annual report on Form 10-K is a combined report being filed by two separate registrants: Northwest Natural Holding Company (NW Holdings), and Northwest Natural Gas Company (NW Natural). Except where the content clearly indicates otherwise, any reference in the report to "we," "us" or "our" is to the consolidated entity of NW Holdings and all of its subsidiaries, including NW Natural, which is a distinct SEC registrant that is a wholly-owned subsidiary of NW Holdings. Each of NW Holdings' subsidiaries is a separate legal entity with its own assets and liabilities. Information contained herein relating to any individual registrant or its subsidiaries is filed by such registrant on its own behalf. Each registrant makes representations only as to itself and its subsidiaries and makes no other representation whatsoever as to any other company.

Item 8 in this Annual Report on Form 10-K includes separate financial statements (i.e. balance sheets, statements of comprehensive income, statements of cash flows, and statements of equity) for NW Holdings and NW Natural, in that order. References in this discussion to the "Notes" are to the Notes to the Consolidated Financial Statements in Item 8 of this report. The Notes to the Consolidated Financial Statements are presented on a combined basis for both entities except where expressly noted otherwise. All Items other than Item 8 are combined for the reporting companies.

ITEM 1. BUSINESS

OVERVIEW

NW Holdings is a holding company headquartered in Portland, Oregon and owns NW Natural, NW Natural Water Company, LLC (NWN Water), NW Natural Renewables Holdings, LLC, a non-regulated subsidiary established to pursue non-regulated renewable natural gas activities, and other businesses and activities. NW Natural is NW Holdings' largest subsidiary.

NW Natural distributes natural gas to residential, commercial, and industrial customers in Oregon and southwest Washington. NW Natural and its predecessors have supplied gas service to the public since 1859, was incorporated in Oregon in 1910, and began doing business as NW Natural in 1997. NW Natural's natural gas distribution activities are reported in the natural gas distribution (NGD) segment. All other business activities, including certain gas storage activities, water and wastewater businesses, non-regulated renewable natural gas activities and other investments and activities are aggregated and reported as "other" at their respective registrant.

Our mission is to provide safe, reliable and affordable utility services and renewable energy in a sustainable way to better the lives of the communities we serve. We support our mission by following our core values of service ethic, integrity, safety, caring, and environmental stewardship.

NATURAL GAS DISTRIBUTION (NGD) SEGMENT

Both NW Holdings and NW Natural have one reportable segment, the NGD segment, which is operated by NW Natural. NGD provides natural gas service through approximately 799,000 meters in Oregon and southwest Washington. Approximately 88% of customers are located in Oregon and 12% are located in southwest Washington.

NW Natural has been allocated an exclusive service territory by the Oregon Public Utility Commission (OPUC) and Washington Utilities and Transportation Commission (WUTC), which includes the major population centers in western Oregon, including the Portland metropolitan area, most of the Willamette Valley, the Coastal area from Astoria to Coos Bay, and portions of Washington along the Columbia River. Major businesses located in NW Natural's service territory include retail, manufacturing, and high-technology industries.

Customers

The NGD business serves residential, commercial, and industrial customers with no individual customer accounting for more than 10% of NW Natural's or NW Holdings' revenues. On an annual basis, residential and commercial customers typically account for approximately 60% of NGD volumes delivered and approximately 90% of NGD margin. Industrial and other customers largely account for the remaining volumes and margin.

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The following table presents summary meter information for the NGD segment as of December 31, 2023:

	Number of Meters	% of Volumes	% of Margin
Residential	728,915	38 %	65 %
Commercial	69,273	23 %	24 %
Industrial	1,062	39 %	6 %
Other[(1)]	N/A	N/A	5 %
Total	799,250	100 %	100 %

(1) NGD margin is also affected by other items, including miscellaneous revenues, gains or losses from NW Natural's gas cost incentive sharing mechanism, other margin adjustments, and other regulated services.

Generally, residential and commercial customers purchase both their natural gas commodity (gas sales) and natural gas delivery services from the NGD business. Industrial and some large commercial customers also purchase transportation, but may buy the gas commodity either from NW Natural or directly from a third-party gas marketer or supplier. Gas commodity cost is primarily a pass-through cost to customers; therefore, profit margins are not significantly affected by an industrial customer's decision to purchase gas from NW Natural or from third parties. Industrial and large commercial customers may also select between firm and interruptible service levels, with firm services generally providing higher profit margins compared to interruptible services.

To help manage gas supplies, tariffs are designed to provide some certainty regarding industrial and commercial customers' volumes by requiring an annual service election, special rates or possible restrictions for changes between elections.

We estimate natural gas was in approximately 63% of single-family residential homes in NW Natural's service territory in 2023. Customer growth in our region comes mainly from the following sources: single-family housing, both new construction and conversions; multifamily housing new construction; and commercial buildings, both new construction and conversions. Single-family new construction has consistently been our largest source of growth. Continued customer growth is closely tied to consumer preference for natural gas, the comparative price of natural gas to electricity and fuel oil, regulations and building codes permitting the use of natural gas in new construction and conversions, and the economic health of our service territory.

Competitive Conditions

In its service areas, the NGD business has no direct competition from other natural gas distributors. However, it competes with other forms of energy in each customer class. This competition among energy suppliers is based on price, efficiency, reliability, performance, preference, perceptions, market conditions, building codes, technology, federal, state, and local energy policy, and environmental impacts.

For residential and small to mid-size commercial customers, the NGD business competes primarily with providers of electricity, fuel oil, and propane.

In the industrial and large commercial markets, the NGD business competes with all forms of energy, including competition from wholesale natural gas marketers. In addition, large industrial customers could bypass NW Natural's natural gas distribution system by installing their own direct pipeline connection to the interstate pipeline system. NW Natural has designed custom transportation service agreements with several large industrial customers to provide transportation service rates that are competitive with the customer’s costs of installing their own pipeline.

Seasonality of Business

The NGD business is seasonal in nature due to higher gas usage by residential and commercial customers during the cold winter heating months. Other categories of customers experience similar seasonality in their usage but to a lesser extent.

Regulation and Rates

The NGD business is subject to regulation by the OPUC and WUTC. These regulatory agencies authorize rates and allow recovery mechanisms to provide the opportunity to recover prudently incurred capital and operating costs from customers, while also earning a reasonable return on investment for investors. In addition, the OPUC and WUTC also regulate the system of accounts and issuance of securities by NW Natural.

NW Natural files general rate cases and rate tariff requests periodically with the OPUC and WUTC to establish approved rates, an authorized return on equity (ROE), an overall rate of return (ROR) on rate base, an authorized capital structure, and other revenue/cost deferral and recovery mechanisms.

NW Natural is also regulated by the Federal Energy Regulatory Commission (FERC). Under NW Natural's Mist interstate storage certificate with FERC, NW Natural is required to file either a petition for rate approval or a cost and revenue study every five years to change or justify maintaining the existing rates for the interstate storage service.

For further discussion on our most recent general rate cases, see Part II, Item 7, "Results of Operations—Regulatory Matters—*Regulation and Rates*."

Gas Supply

NW Natural strives to secure sufficient, reliable supplies of natural gas to meet the needs of customers at the lowest reasonable cost, while maintaining price stability, managing gas purchase costs prudently and supporting our core value of environmental stewardship. This is accomplished through a comprehensive strategy focused on the following items:

- **Reliability** - ensuring gas resource portfolios are sufficient to satisfy customer requirements under extreme cold weather conditions;
- **Diverse Supply** - providing diversity of supply sources;
- **Diverse Contracts** - maintaining a variety of contract durations, types, and counterparties;
- **Cost Management and Recovery** - employing prudent gas cost management strategies; and
- **Environmental Stewardship** - striving to reduce the carbon content and environmental impacts of the energy we deliver.

Reliability

To support system reliability, the NGD business has developed a risk-based methodology in which it uses a planning standard to serve the highest firm sales demand day in any year with 99% certainty.

The projected maximum design day firm NGD customer sales is approximately 10 million therms. Of this total, the NGD business is currently capable of meeting approximately 50% of the requirements with gas from storage located within or adjacent to its service territory, while the remaining supply requirements would come from gas purchases under firm gas purchase contracts and recall agreements.

NW Natural segments transportation capacity, which is a natural gas transportation mechanism under which a shipper can leverage its firm pipeline transportation capacity by separating it into multiple segments with alternate delivery routes. The reliability of service on these alternate routes will vary depending on the constraints of the pipeline system. For those segments with acceptable reliability, segmentation provides a shipper with increased flexibility and potential cost savings compared to traditional pipeline service. The NGD business relies on segmentation of firm pipeline transportation capacity that flows from Stanfield, Oregon to various points south of Molalla, Oregon.

We believe gas supplies would be sufficient to meet existing NGD firm customer demand in the event of maximum design day weather conditions.

The following table shows the sources of supply projected to be used to satisfy the design day sales for the 2023-24 winter heating season:

Therms in millions	Therms	Percent
Sources of NGD supply:		
Firm supply purchases	3.4	34 %
Mist underground storage (NGD only)	3.1	30 %
Company-owned LNG storage	1.9	19 %
Off-system storage contract	0.5	5 %
Pipeline segmentation capacity	0.6	6 %
Recall agreements	0.4	4 %
Peak day citygate deliveries	0.2	2 %
Total	10.1	100 %

The OPUC and WUTC have Integrated Resource Planning (IRP) processes in which utilities define different future scenarios and corresponding resource and compliance strategies in an effort to evaluate supply and demand resource and compliance requirements, consider uncertainties in the planning process and the need for flexibility to respond to changes, and establish a plan for providing reliable service while meeting carbon compliance obligations within frameworks that emphasize least cost and risk.

NW Natural generally files a full IRP biennially for Oregon and Washington with the OPUC and the WUTC, respectively, and files updates in Oregon between filings. The OPUC acknowledges NW Natural's action plan, whereas the WUTC provides notice that the IRP has met the requirements of the Washington Administrative Code. OPUC acknowledgment of the IRP does not constitute ratemaking approval of any specific resource acquisition strategy or expenditure. For additional information see Part II, Item 7, "Results of Operations—*Regulatory Matters*."

Diversity of Supply Sources

NW Natural purchases gas supplies primarily from the Alberta and British Columbia provinces of Canada and multiple receipt points in the U.S. Rocky Mountains to protect against regional supply disruptions and to take advantage of price differentials. For 2023, 59% of gas supply came from Canada, with the balance primarily coming from the U.S. Rocky Mountain region. The extraction of shale gas

has increased the availability of gas supplies throughout North America. We believe gas supplies available in the western United States and Canada are adequate to serve NGD customer requirements for the foreseeable

future. NW Natural continues to evaluate the long-term supply mix based on projections of gas production and pricing in the U.S. Rocky Mountain region as well as other regions in North America.

NW Natural supplements firm gas supply purchases with gas withdrawals from gas storage facilities, including underground reservoirs and LNG storage facilities. Storage facilities are generally injected with natural gas during the off-peak months in the spring and summer, and the gas is withdrawn for use during peak demand months in the winter.

The following table presents the storage facilities available for NGD business supply:

	Maximum Daily Deliverability (therms in millions)	Designed Storage Capacity (Bcf)
Gas Storage Facilities		
Owned Facility		
Mist, Oregon (Mist Facility)[1]	3.1	11.7
Mist, Oregon (North Mist Facility)[2]	1.3	4.1
Contracted Facility		
Jackson Prairie, Washington[3]	0.5	1.1
LNG Facilities		
Owned Facilities		
Newport, Oregon	0.6	1.0
Portland, Oregon	1.3	0.6
Total	6.8	18.5

(1) The Mist gas storage facility has a total maximum daily deliverability of 5.1 million therms and a total designed storage capacity of about 17.5 Bcf, of which 3.1 million therms of daily deliverability and 11.7 Bcf of storage capacity are reserved for NGD business customers.
(2) The North Mist facility is contracted to exclusively serve Portland General Electric, a local electric utility, and may not be used to serve other NGD customers. See "*North Mist Gas Storage Facility*" below for more information.
(3) The storage facility is located near Chehalis, Washington and is contracted from Northwest Pipeline, a subsidiary of The Williams Companies.

The Mist facility serves NGD segment customers and is also used for non-NGD purposes, primarily for contracts with gas storage customers, including utilities, third-party marketers, and electric generators. Under regulatory agreements with the OPUC and WUTC, gas storage at Mist can be developed in advance of NGD customer needs but is subject to recall when needed to serve such customers as their demand increases. When storage capacity is recalled for NGD purposes it becomes part of the NGD segment. In 2023, the NGD business did not recall additional deliverability or associated storage capacity to serve customer needs. The North Mist facility is contracted for the exclusive use of Portland General Electric, a local electric utility, and may not be used to serve other NGD customers. See "*North Mist Gas Storage Facility*" below.

Diverse Contract Durations and Types

NW Natural has a diverse portfolio of short-, medium-, and long-term firm gas supply contracts and a variety of contract types including firm and interruptible supplies as well as supplemental supplies from gas storage facilities.

The majority of our gas supply contracts include year-round, winter-only, summer-only, and monthly baseload supplies, and daily spot purchases. We also maintain options to call on additional daily supplies during the winter heating season.

During 2023, a total of 875 million therms were purchased under contracts with durations as follows:

Contract Duration (primary term)	Percent of Purchases
Long-term (one year or longer)	24 %
Short-term (more than one month, less than one year)	51
Spot (one month or less)	25
Total	100 %

During 2023, there was one supplier that provided 10% or more of the NGD business gas supply requirements. No other individual supplier provided 10% or more of the NGD business gas supply requirements.

Gas Cost Management

The cost of gas sold to NGD customers primarily consists of the following items, which are included in annual Purchased Gas Adjustment (PGA) rates: gas purchases from suppliers; charges from pipeline companies to transport gas to our distribution system; gas storage costs; gas reserves costs; gas commodity derivative contracts; and renewable natural gas and its attributes,

including renewable thermal certificates. We expect that costs to comply with Washington's Climate Commitment Act (CCA) and any similar program that may be enacted in our service territory will be included in the cost of gas.

The NGD business employs a number of strategies to mitigate the cost of gas sold to customers. The primary strategies for managing gas commodity price risk include:

- negotiating fixed prices directly with gas suppliers;
- negotiating financial derivative contracts that: (1) effectively convert floating index prices in physical gas supply contracts to fixed prices (referred to as commodity price swaps); or (2) effectively set a ceiling or floor price, or both, on floating index priced physical supply contracts (referred to as commodity price options such as calls, puts, and collars);
- buying physical gas supplies at a set price and injecting the gas into storage for price stability and to minimize pipeline capacity demand costs; and
- investing in gas reserves for longer term price stability. See Note 13 for additional information about our gas reserves.

NW Natural also contracts with an independent energy marketing company to capture opportunities regarding storage and pipeline capacity when those assets are not serving the needs of NGD business customers. Asset management activities provide opportunities for cost of gas savings for customers and incremental revenues for NW Natural through regulatory incentive-sharing mechanisms. These activities, net of the amount shared, are included in other for segment reporting purposes.

Gas Cost Recovery

Mechanisms for gas cost recovery are designed to be fair and reasonable, with an appropriate balance between the interests of customers and NW Natural. In general, natural gas distribution rates are designed to recover the costs of, but not to earn a return on, the gas commodity sold. Risks associated with gas cost recovery are minimized by resetting customer rates annually through the PGA and aligning customer and shareholder interests through the use of sharing, weather normalization, and conservation mechanisms in Oregon. See Part II, Item 7, "Results of Operations—*Regulatory Matters*" and "Results of Operations—Business Segment—Natural Gas Distribution Operations—*Cost of Gas*".

Environmental Stewardship

Part of our gas supply strategy is working to reduce the carbon content and the environmental impacts of the energy we deliver. To that end, NW Natural developed and implemented an emissions screening tool that uses Environmental Protection Agency (EPA) data to calculate the relative emissions intensity of gas producer operations and prioritize purchases from lower emitting producers. In 2019, we began using this emissions intensity screening tool alongside other purchasing criteria such as price, credit worthiness and geographic diversity. We view this as a cost-neutral way to reduce carbon emissions associated with our natural gas supply.

NW Natural is focused on taking steps to lower its emissions on behalf of customers by purchasing environmental attributes that are generated by the production of renewable natural gas (RNG). Under Oregon Senate Bill 98, NW Natural can purchase RNG or invest in RNG facilities, which generate these environmental attributes known as Renewable Thermal Certificates (RTCs). In 2019, the Washington State legislature also passed a bill supporting RNG procurement, House Bill 1257. The RTCs work like renewable energy certificates, or RECs, used in electricity markets. RTCs are verified and certified by the Midwest Renewable Energy Tracking System (M-RETS). The M-RETS Renewable Thermal Tracking System issues one RTC for every dekatherm of RNG injected into the gas system. NW Natural enters into contracts for the purchase of RNG and RTCs either through periodic request for proposals or through formal offerings or informal requests. See Part II, Item 7, "Results of Operations—*Regulatory Matters*".

In addition to purchases of RNG, NW Natural is currently piloting a hydrogen blend in pipelines serving its Sherwood Operations and Training Center. NW Natural has tested a blend of 15% hydrogen and is now testing a blend of 20% hydrogen at that location. Additionally, NW Natural is focused on developing several hydrogen pilots for industrial and commercial customers to support their decarbonization goals.

NW Natural is subject to the requirements of the Washington CCA cap-and-invest program, and could be subject to additional programs currently under consideration in Oregon. NW Natural has modeled pathways to compliance with the CCA in its most recent IRP. While costs associated with each possible compliance pathway differ, we intend to pursue recovery of the costs associated with these programs in rates.

Transportation of Gas Supplies

NW Natural's gas distribution system is reliant on a single, bi-directional interstate transmission pipeline to bring gas supplies into the natural gas distribution system. Although dependent on a single pipeline, the pipeline’s gas flows into the Portland metropolitan market from two directions: (1) the north, which brings supplies from the British Columbia and Alberta supply basins; and (2) the east, which brings supplies from Alberta as well as the U.S. Rocky Mountain supply basins.

NW Natural incurs monthly demand charges related to firm pipeline transportation contracts. These contracts have expiration dates ranging from 2024 to 2061. The largest pipeline agreements are with Northwest Pipeline. NW Natural actively works with

Northwest Pipeline and others to renew contracts in advance of expiration to ensure gas transportation capacity is sufficient to meet customer needs.

Rates for interstate pipeline transportation services are established by FERC within the U.S. and by Canadian authorities for services on Canadian pipelines.

Gas Distribution

Safety and the protection of employees, customers, and our communities are, and will remain, top priorities. NW Natural constructs, operates, and maintains its pipeline distribution system and storage operations with the goal of ensuring natural gas is delivered and stored safely, reliably, and efficiently.

NW Natural has one of the most modern distribution systems in the country with no identified cast iron pipe or bare steel main. Since the 1980s, NW Natural has taken a proactive approach to replacement programs and partnered with the OPUC and WUTC on progressive regulation to further safety and reliability efforts for the distribution system. In the past, NW Natural had a cost recovery program in Oregon that encompassed programs for cast iron replacement, bare steel replacement, transmission integrity management, and distribution integrity management programs as appropriate.

Natural gas distribution businesses are likely to be subject to greater federal and state regulation in the future. Additional operating and safety regulations from the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) are currently under development. In May 2023, PHMSA issued a notice of proposed rulemaking: Gas Pipeline Leak Detection and Repair. The proposed rulemaking includes congressional mandates from the PIPES (Protecting our Infrastructure of Pipelines and Enhancing Safety) Act of 2020 to reduce methane emissions from new and existing gas transmission, distribution, gathering, underground storage, and LNG facilities. In September 2023, PHMSA issued a notice of proposed rulemaking: Safety of Gas Distribution Pipelines and Other Pipeline Safety Initiatives. The proposed rulemaking requires operators to update distribution integrity management programs, emergency response plans, operations and maintenance manuals, and other safety practices.

North Mist Gas Storage Facility

The North Mist gas storage facility began operations in 2019. The North Mist facility provides long-term, no-notice underground gas storage service and is dedicated solely to Portland General Electric (PGE) under a 30-year contract with options to extend up to an additional 50 years upon mutual agreement of the parties. PGE uses the facility to fuel its gas-fired electric power generation facilities.

North Mist includes a reservoir providing 4.1 Bcf of available storage, a compressor station with a contractual capacity of 120,000 dekatherms of gas deliverability per day, no-notice service that can be drawn on rapidly, and a 13-mile pipeline to connect to PGE's Port Westward gas plants in Clatskanie, Oregon.

The facility is included in rate base under an established tariff schedule with revenues recognized consistent with the schedule. Billing rates are updated annually to the forecasted depreciable asset level and forecasted operating expenses.

While there are additional expansion opportunities in the Mist storage field, any expansion would be based on market demand, cost effectiveness, available financing, receipt of future permits, and other rights.

OTHER

Certain businesses and activities of NW Holdings and NW Natural are aggregated and reported as other for segment reporting purposes.

NW Natural

The following businesses and activities are aggregated and reported as other under NW Natural, a wholly-owned subsidiary of NW Holdings:

- 5.8 Bcf of the Mist gas storage facility contracted to other utilities, third-party marketers, and electric generators;
- natural gas asset management activities; and
- appliance retail center operations.

Mist Gas Storage

The Mist gas storage facility began operations in 1989. It is a 17.5 Bcf facility with 11.7 Bcf used to provide gas storage for the NGD business. The remaining 5.8 Bcf of the facility is contracted with other utilities, third-party marketers, and electric generators with these results reported in other.

The overall facility consists of seven depleted natural gas reservoirs, 21 injection and withdrawal wells, a compressor station, dehydration and control equipment, gathering lines, and other related facilities. The capacity at Mist provides multi-cycle gas storage services to customers in the interstate and intrastate markets. The interstate storage services are offered under a limited jurisdiction blanket certificate issued by FERC. Under NW Natural's interstate storage certificate with FERC, NW Natural is

required to file either a petition for rate approval or a cost and revenue study every five years to change or justify maintaining the existing rates for the interstate storage service. Intrastate firm storage services in Oregon are offered under an OPUC-approved rate schedule as an optional service to certain eligible customers. Gas storage revenues from the 5.8 Bcf are derived primarily from firm service customers who provide energy-related services, including natural gas distribution, electric generation, and energy marketing. The Mist facility benefits from limited competition as there are few storage facilities in the Pacific Northwest region. Therefore, NW Natural has the ability to acquire high-value, multi-year contracts.

Asset Management Activities

NW Natural contracts with an independent energy marketing company to provide asset management services, primarily through the use of natural gas commodity exchange agreements and natural gas pipeline capacity release transactions. The results of these activities are included in other, except for the asset management revenues allocated to NGD business customers pursuant to regulatory agreements, which are reported in the NGD segment.

NW Holdings

These include the following businesses and activities aggregated under NW Holdings:

- NW Natural Water Company, LLC (NWN Water) and its water and wastewater utility operations and water services business;
- NWN Water's equity investment in Avion Water Company, Inc.;
- NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities;
- a minority interest in the Kelso-Beaver Pipeline held by our wholly-owned subsidiary NNG Financial Corporation (NNG Financial); and
- holding company and corporate activities, including business development activities, as well as adjustments made in consolidation.

NW Natural Water

NWN Water currently serves an estimated 180,000 people through approximately 73,000 water and wastewater connections across five states. NWN Water continues to grow though customer additions within or near its service territories, and continues to pursue acquisitions. See further discussion about the status of water general rate cases in Part II, Item 7, "Results of Operations—Regulatory Matters—*Water and Wastewater Utilities*."

The water and wastewater utilities primarily serve residential and commercial customers. Water distribution operations are seasonal in nature with peak demand generally during warmer summer months, while wastewater is less seasonally affected. Entities generally operate in exclusive service territories with no direct competitors. Water distribution customer rates are regulated by state utility commissions while the wastewater businesses we own consist of some state regulated systems and some systems that are not rate regulated by utility commissions.

NWN Water launched its services business in April 2023. This business provides operations and maintenance services to water and wastewater system owners and works to create value by leveraging shared personnel, technology and expertise to support delivery of clean, reliable water at a reasonable cost. Today, NWN Water provides operations and maintenance services to nearly 20,000 connections.

NW Natural Renewables

NW Natural Renewables is an unregulated subsidiary of NW Natural Holdings established to pursue unregulated renewable natural gas activities. In September 2021, a subsidiary of NW Natural Renewables, NW Natural Ohio Renewable Energy, LLC (Ohio Renewables) and a subsidiary of EDL, a global producer of sustainable distributed energy, executed agreements to partially fund two production facilities that are designed to convert landfill waste gases to RNG (EDL Facilities). The EDL Facilities have been constructed, and testing and commissioning of these facilities is underway, but has been delayed. Upon each EDL Facility achieving full commercial operations, Ohio Renewables is committed to make cash payments of approximately $25 million for each facility to partially fund the infrastructure required to condition biogas. Alongside these development agreements, Ohio Renewables and a subsidiary of EDL executed agreements for Ohio Renewables to purchase up to an annual specified amount of RNG produced by the EDL Facilities over a 20-year period. The agreements provide that either party may terminate the agreements and related transactions with respect to the subject facility if it does not reach commercial operations and the funding does not close by December 31, 2023, provided the terminating party has not failed to fulfill its obligations under such agreements, including with respect to achieving commercial operations.

Ohio Renewables has contracted to sell RNG produced by the EDL Facilities up to certain specified volumes in each of calendar years 2024 through 2026 to an investment-grade counterparty. Ohio Renewables additionally has contracted to sell a fixed-volume amount of RNG under a long-term agreement with an investment-grade utility beginning in 2025 and extending through 2042.

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ENVIRONMENTAL MATTERS

Properties and Facilities

NW Natural owns, or previously owned, properties and facilities that are currently being investigated that may require environmental remediation and are subject to federal, state, and local laws and regulations related to environmental matters. These laws and regulations may require expenditures over a long time frame to address certain environmental impacts. Estimates of liabilities for environmental costs are difficult to determine with precision because of the various factors that can affect their ultimate disposition. These factors include, but are not limited to, the following:

- the complexity of the site;
- changes in environmental laws and regulations at the federal, state, and local levels;
- the number of regulatory agencies or other parties involved;
- new technology that renders previous technology obsolete, or experience with existing technology that proves ineffective;
- the level of remediation required;
- variations between the estimated and actual period of time that must be dedicated to respond to an environmentally-contaminated site; and
- the application of environmental laws that impose joint and several liabilities on all potentially responsible parties.

NW Natural has received recovery of a portion of such environmental costs through insurance proceeds, seeks the remainder of such costs through customer rates, and believes recovery of these costs is probable. In both Oregon and Washington, NW Natural has mechanisms to recover expenses. Oregon recoveries are subject to an earnings test. See Part II, Item 7, "Results of Operations—Regulatory Matters—Rate Mechanisms—*Environmental Cost Deferral and Recovery*", and Note 2 and Note 17 of the Consolidated Financial Statements in Item 8 of this report for more information.

Greenhouse Gas Matters

For information concerning greenhouse gas matters, see Part II, Item 7, “Results of Operations—Environmental Regulation and Legislation Matters.”

HUMAN CAPITAL

Our core values of integrity, safety, caring, service ethic, and environmental stewardship guide how we engage with customers, stakeholders, shareholders, and communities. We actively work to foster these values in our employee culture and to nurture an inclusive and equitable environment that provides opportunities, prioritizes health and safety, encourages respect and trust, and supports growth and learning. We aim to recruit and retain employees who share our core values and reflect our communities.

Employees

At December 31, 2023, our workforce consisted of the following:

NW Natural:	
Unionized employees[(1)]	614
Non-unionized employees	600
Total NW Natural	1,214
Other Entities:	
Water and wastewater company employees	161
Other	5
Total other entities	166
Total Employees	1,380

(1) Members of the Office and Professional Employees International Union (OPEIU) Local No. 11, AFL-CIO.

NW Natural's labor agreement with members of OPEIU covers wages, benefits, and working conditions. In November 2019, NW Natural's unionized employees ratified a collective bargaining agreement that took effect on December 1, 2019 and extends to May 31, 2024, and thereafter from year to year unless either party serves notice of its intent to negotiate modifications to the collective bargaining agreement. In September 2023, OPEIU provided a notice of intent to negotiate, and negotiations are currently underway. During calendar year 2023, NW Natural did not incur any work stoppages (strikes or lockouts), and therefore, experienced zero idle days for the year.

Certain subsidiaries may receive services from employees of other subsidiaries. Those services are generally charged to the entity receiving those services. When such services involve regulated entities, those entities receiving services are generally charged rates pursuant to shared services agreements that are filed with the applicable state regulatory commission, as applicable.

Safety

Safety is one of our greatest responsibilities to employees. In managing the business, we strive to foster a safety culture focused on prevention, open communication, collaboration, and a strong service and safety ethic. We believe employee safety is critical to our success. A portion of executives' compensation is tied to achieving our identified safety metrics, and our Board of Directors regularly reviews company safety metrics and receives reports on matters of health and safety. NW Natural's health and safety policies and procedures are designed to comply with all applicable regulations, but we also work to go beyond compliance by striving to incorporate information we learn from benchmarking, peer reviews, and industry best practices.

As part of our commitment to employee health and safety, we maintain regular training programs, emergency preparedness procedures, and training and procedures to identify hazards and handle high-risk emergency situations. Employees complete classroom instruction and hands-on, scenario-based training at our training town facility in Oregon that allows employees to experience realistic situations in a controlled environment. We also host natural gas safety training events for first responders, which are designed to prepare those first responders and NW Natural field employees to deliver an integrated, seamless response in the event of an emergency that involves or affects the natural gas system. We also implemented a new learning management system that went live in early 2021 and provides more efficiency and flexibility in how we train.

Employee Benefits and Support

To attract employees and meet the needs of our workforce, NW Natural strives to offer competitive compensation and benefits packages to employees. The benefits package options vary depending on type of employee and date of hire. NW Natural continuously looks for ways to support employees' work-life balance and well-being and this is reflected in physical, mental and financial wellness programs to meet the needs of our employees and help them care for their families. Benefits available to employees during 2023 included, among others: healthcare and other insurance coverages, wellness resources, retirement and savings plans, paid time off programs, and flexible and hybrid work schedules, where possible, employee resource groups, and culture and community-focused resources and opportunities, and employee recognition programs and discounts.

Talent Attraction and Development

In order to implement our business strategy and serve our customers, we depend upon our continuing ability to attract and retain diverse, talented professionals and a technically skilled workforce, and being able to transfer the knowledge and expertise of our workforce to new and increasingly diverse employees as our older workforce retires. A significant portion of our workforce is currently eligible or will reach retirement eligibility within the next five years, and therefore, we are focused on efforts to attract, train, and retain appropriately qualified and skilled workers to prevent loss of institutional knowledge or skills gaps.

NW Natural seeks to provide its employees with growth and development opportunities through programs designed to build skills and relationships. These programs currently include: (i) a culturally relevant mentoring program that creates opportunities for career growth by building relationships; (ii) a tuition assistance program for qualified educational pursuits; (iii) an internal class that provides participants with a big-picture understanding of the industry and company operations, equipping them to see how they contribute to NW Natural's success and identify opportunities for career growth; (iv) internal and external continuing educational courses relevant to areas of expertise; and (v) ongoing management and leadership training programs.

We regularly monitor employee engagement and satisfaction through a variety of tools, including our annual engagement survey that is designed to enable company leaders to gather valuable feedback and guidance from employees.

Diversity, Equity and Inclusion

We have a longstanding commitment to creating a diverse and inclusive culture that reflects and supports the communities we serve, and believe a diverse, equitable, and inclusive workforce at all levels contributes to long-term success. Our efforts in recruiting, promoting, and retaining diverse talent, building inclusive teams, and creating a culture that embraces differences are at the core of our workforce strategy. To attract diverse candidates, we work with community partners to help promote awareness of job opportunities within diverse communities.

We have employee-led groups that develop programs and activities that build awareness around issues important to their co-workers, families, customers, and our community. Groups include the Diversity, Equity & Inclusion Council, Women's Network, African American, Rainbow Alliance (LGBTQ+), Veterans, Somos Unidos (Latinx), Asian American, and Neurodiversity employee resource groups, Wellness Advisory Committee, and Sustainability and Equity Engagement Team. We also continue to emphasize diversity, equity and inclusion values through employee training and education, including expanded diversity training as part of new hire onboarding and other diversity, equity, and inclusion education that occurs throughout the year. An area of focus going forward is to understand and increase awareness of internal systems and structures that could limit representation and equity for underrepresented employees. To that end, we are working toward revising and refocusing new manager and new hire training to include implicit bias, diversity, equity and inclusion, and anti-racism education.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

For information concerning executive officers, see Part III, Item 10.

AVAILABLE INFORMATION

NW Holdings and NW Natural file annual, quarterly and current reports and other information with the Securities and Exchange Commission (SEC). The SEC maintains an Internet site where reports, proxy statements, and other information filed can be read, copied, and requested online at its website (www.sec.gov). In addition, we make available, free of charge, on our website (www.nwnaturalholdings.com), our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) and proxy materials filed under Section 14 of the Securities Exchange Act of 1934, as amended (Exchange Act), as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. We intend to use our website as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Accordingly, investors should monitor our website, in addition to following our press releases, SEC filings and public conference calls and webcasts. We have included our website address as an inactive textual reference only. Information contained on our website is not incorporated by reference into this annual report on Form 10-K.

NW Holdings and NW Natural have adopted a Code of Ethics for all employees, officers, and directors that is available on our website. We intend to disclose revisions and amendments to, and any waivers from, the Code of Ethics for officers and directors on our website. Our Corporate Governance Standards, Director Independence Standards, charters of each of the committees of the Board of Directors, and additional information about NW Holdings and NW Natural are also available at the website. Copies of these documents may be requested, at no cost, by writing or calling Shareholder Services, Northwest Natural Holding Company, 250 S.W. Taylor Street, Portland, Oregon 97204, telephone 503-220-2402.

ITEM 1A. RISK FACTORS

NW Holdings' and NW Natural's business and financial results are subject to a number of risks and uncertainties, many of which are not within our control, which could adversely affect our business, financial condition, and results of operations. Additional risks and uncertainties that are not currently known to us or that are not currently believed by us to be material may also harm our businesses, financial condition, and results of operations. When considering any investment in NW Holdings' or NW Natural's securities, investors should carefully consider the following information, as well as information contained in the caption "Forward-Looking Statements", Item 7A, and our other documents filed with the SEC. This list is not exhaustive and the order of presentation does not reflect management's determination of priority or likelihood. Additionally, our listing of risk factors that primarily affects one of our businesses does not mean that such risk factor is inapplicable to our other businesses.

Legal, Regulatory and Legislative Risks

REGULATORY RISK. *Regulation of NW Holdings' and NW Natural's regulated businesses, including changes in the regulatory environment, failure of regulatory authorities to approve rates which provide for timely recovery of costs and an adequate return on invested capital, or an unfavorable outcome in regulatory proceedings may adversely impact NW Holdings' and NW Natural's financial condition and results of operations.*

The OPUC and WUTC have general regulatory authority over NW Natural's gas business in Oregon and Washington. NW Holdings' regulated water utility businesses are generally regulated by the public utility commission in the state in which a water business is located. These public utility commissions have broad regulatory authority, including: the rates charged to customers; authorized rates of return on rate base, including ROE; the amounts and types of securities that may be issued by our regulated utility companies, like NW Natural; services our regulated utility companies provide and the manner in which they provide them; the nature of investments our utility companies make; deferral and recovery of various expenses, including, but not limited to, pipeline replacement, environmental remediation and compliance costs, capital, information technology and other investments, commodity hedging expense, and certain employee benefit expenses such as pension costs; transactions with affiliated interests; regulatory adjustment mechanisms such as weather adjustment mechanisms, and other matters. The OPUC also regulates actions investors may take with respect to our utility companies, NW Natural and NW Holdings. Similarly, FERC has regulatory authority over NW Natural's interstate storage services. Expansion of our businesses generally results in regulation by other regulatory authorities. For example, certain of NW Holdings' water companies are regulated in Idaho, Texas and Arizona.

The costs that are deemed recoverable in rates and prices regulators allow us to charge for regulated utility service, and the maximum FERC-approved rates FERC authorizes us to charge for interstate storage and related transportation services, are the most significant factors affecting both NW Natural's and NW Holdings' financial position, results of operations and liquidity. State utility regulators have the authority to disallow recovery of costs they find imprudently incurred or otherwise disallowed, and rates that regulators allow may be insufficient for recovery of costs we incur. We expect to continue to make expenditures to expand, improve and safely operate our gas and water utility distribution and gas storage systems, and to work toward decarbonizing our gas systems. Regulators can deny recovery of those costs. Furthermore, while each applicable state regulator has established an authorized rate of return for our regulated utility businesses, we may not be able to achieve the earnings level authorized. Moreover, in the normal course of business we may place assets in service or incur higher than expected levels of operating expense before rate

cases can be filed to recover those costs (this is commonly referred to as regulatory lag). The failure of any regulatory commission to approve requested rate increases on a timely basis to recover costs or to allow an adequate return could adversely impact NW Holdings' or NW Natural's financial condition, results of operations and liquidity.

As companies with regulated utility businesses, we frequently have dockets open with our regulators, including a general rate case filed with the OPUC in December 2023. The regulatory proceedings for these dockets typically involve multiple parties, including governmental agencies, consumer, environmental, and other advocacy groups, and other third parties. Each party advocates for the interests that they represent, which may include lower rates, additional regulatory oversight over the company, limitations on growth or phasing out of the gas system, decisions that favor electrification, or advancing other interests. We cannot predict the timing or outcome of these proceedings, or the effects of those outcomes on NW Holdings' and NW Natural's results of operations and financial condition.

REGULATION, COMPLIANCE AND TAXING AUTHORITY RISK. *NW Holdings and NW Natural are subject to governmental regulation, and compliance with local, state and federal requirements, including taxing requirements, and unforeseen changes in or interpretations of such requirements could affect NW Holdings' or NW Natural's financial condition and results of operations.*

NW Holdings and NW Natural are subject to regulation by federal, state and local governmental authorities. We are required to comply with a variety of laws and regulations and to obtain authorizations, permits, approvals and certificates from governmental agencies in various aspects of our business. Significant changes in federal, state, or local governmental leadership can accelerate or amplify changes in existing laws or regulations, or the manner in which they are interpreted or enforced. For instance, the 2020 United States Presidential election resulted in leadership changes in many federal administrative agencies and resulted in a wide range of new policies, executive orders, rules, initiatives and other changes to fiscal, tax, regulation, environmental, climate and other federal policies, many of which have components that affect the energy sector. The 2024 presidential and congressional elections may result in additional significant changes that may impact NW Natural and NW Holdings. Similarly, we could continue to face significant legislative, regulatory and other policy changes at the state level or in the local jurisdictions in which we operate. In addition, foreign governments may implement changes to their policies, in response to changes to U.S. policy or otherwise. Although we cannot predict the impact, if any, of these changes to our businesses, they could adversely affect NW Holdings' or NW Natural's financial condition and results of operations. Until we know what policy changes are made and how those changes impact our businesses and the business of our competitors over the long term, we will not know if, overall, we will benefit from them or will be negatively affected by them.

We cannot predict changes in laws, regulations, interpretations or enforcement or the impact of such changes. Additionally, any failure to comply with existing or new laws and regulations could result in fines, penalties or injunctive measures. For example, under the Energy Policy Act of 2005, the FERC has civil authority under the Natural Gas Act to impose penalties for current violations of over $1.5 million per day for each violation. In addition, as the regulatory environment for our businesses increases in complexity, the risk of inadvertent noncompliance may also increase. Changes in regulations, the imposition of additional regulations, and the failure to comply with laws and regulations could negatively influence NW Holdings' or NW Natural's operating environment and results of operations. There is uncertainty as to how our regulators will reflect the impact of the legislation and other government regulation in rates. The resulting ratemaking treatment may negatively affect NW Holdings' or NW Natural's financial condition and results of operations.

Additionally, changes in federal, state, local or foreign tax laws and their related regulations, or differing interpretations or enforcement of applicable law by a federal, state, local or foreign taxing authority, could result in substantial cost to us and negatively affect our results of operations. Tax law and its related regulations and case law are inherently complex and dynamic. Disputes over interpretations of tax laws may be settled with the taxing authority in examination, through programs like the Compliance Assurance Process (CAP), upon appeal or through litigation. Our judgments may include reserves for potential adverse outcomes regarding tax positions that have been or plan to be taken that may be subject to challenge by taxing authorities. Changes in laws, regulations or adverse judgments and the inherent difficulty in quantifying potential tax effects of business decisions may negatively affect NW Holdings' or NW Natural's financial condition and results of operations.

Furthermore, certain tax assets and liabilities, such as deferred tax assets and regulatory tax assets and liabilities, are recognized or recorded by NW Holdings or NW Natural based on certain assumptions and determinations made based on available evidence, such as projected future taxable income, tax-planning strategies, and results of recent operations. If these assumptions and determinations prove to be incorrect, the recorded results may not be realized, which may negatively impact the financial results of NW Holdings and NW Natural.

REPUTATIONAL RISKS. *To the extent that customers, legislators, or regulators have or develop a negative opinion of our businesses, NW Holdings' and NW Natural's financial position, results of operations and cash flows could be adversely affected.*

Anumber of factors can affect customers', legislators', regulators', and other third parties' perception of us or our business including: service interruptions or safety concerns due to failures of equipment or facilities or from other causes, and our ability to promptly respond to such failures; our ability to safeguard sensitive customer information; the timing and magnitude of rate increases; and volatility of rates. Customers', legislators', and regulators' opinions of us can also be affected by media coverage, including social media, which may include information, whether factual or not, that could damage the perception of natural gas, our brand, or our reputation.

Although we believe that natural gas serves an important role in helping our region reduce GHG emissions and move to a resilient lower-carbon energy system, certain advocacy groups have opposed the use of natural gas as a fuel source altogether and have pursued policies that limit, restrict, or impose additional costs on, the use of natural gas in a variety of contexts.

Concerns raised about the use of natural gas include the potential for natural gas explosions or delivery disruptions, methane leakage along production, transportation and delivery systems, and end-use equipment, and contribution of natural gas energy use to GHG emission levels and global warming. Similarly, concerns have also been raised regarding the use of RNG or hydrogen in place of conventional natural gas. In addition, studies and claims by advocacy groups contend that there are detrimental indoor public health effects associated with the use of natural gas, which may also impact public perception. Shifts in public sentiment due to these concerns or others that may be raised may impact further legislative initiatives, regulatory actions, and litigation, as well as behaviors and perceptions of customers, investors, lawmakers, and regulators.

If customers, legislators, regulators, or other third parties have or develop a negative opinion of us and our services, or of natural gas as an energy source generally, this could make it more difficult for us to achieve policy, legislative or regulatory outcomes supportive of our business. Negative opinions could also result in reduced customer growth, sales volumes reductions, increased use of other sources of energy, or difficulties in accessing capital markets. Any of these consequences could adversely affect NW Holdings' or NW Natural's financial position, results of operations and cash flows.

REGULATORY ACCOUNTING RISK. *In the future, NW Holdings or NW Natural may no longer meet the criteria for continued application of regulatory accounting practices for all or a portion of our regulated operations.*

If we can no longer apply regulatory accounting, we could be required to write off our regulatory assets and precluded from the future deferral of costs not recovered through rates at the time such amounts are incurred, even if we are expected to recover these amounts from customers in the future.

Public Health Risk

PUBLIC HEALTH RISK. *Public health threats, such as coronavirus (COVID-19) and the resulting economic conditions, or the emergence of other epidemic or pandemic crises, could materially and adversely affect NW Holdings' and NW Natural's business, results of operations, or financial condition.*

Public health threats, such as resurgences or mutations of COVID-19, could adversely affect our business by, among other things:

- impacting the health, safety, productivity and availability of our employees and contractors;
- disrupting our access to capital markets or increasing costs of capital affecting our liquidity in the future;
- reducing demand for natural gas, particularly from commercial and industrial customers that are suffering slow-downs or ultimately close completely due to pandemic effects;
- reducing customer growth and new meter additions due to less economic, construction or conversion activity;
- limiting our ability to collect on overdue accounts or disconnect gas service for nonpayment, beyond an amount or period of time acceptable to us;
- increasing our operating costs for emergency supplies, personal protective equipment, cleaning services and supplies, remote technology and other specific needs;
- impacting our capital expenditures if construction activities are suspended or delayed;
- sickening or causing a mandatory quarantine of a large percentage of our workforce, or key workgroups with specialized skill sets, impairing our ability to perform key business functions or execute our business continuity plans;
- impacting our or our contractors' or suppliers' ability to recruit and retain qualified personnel or otherwise impairing the functioning of our supply chain or ability to rely on third parties or business partners;
- adversely affecting the asset values of NW Natural's defined benefit pension plan or causing a failure to maintain sustained growth in pension investments over time, increasing our contribution requirements;
- limiting, delaying or curtailing entirely, public utility commissions' ability to approve or authorize applications or other requests we may make with respect to our regulated businesses;
- increasing volatility in the price of natural gas; and
- creating additional cybersecurity vulnerabilities due to ongoing heavy reliance on remote working.

The ultimate long-term impact of public health threats, such as the resurgence of COVID-19 or other pandemics, on our business cannot be predicted and will depend on factors beyond our knowledge or control, including economic effects, actions taken to mitigate its effects, and the extent to which normal economic and operating conditions can continue. Any of these factors could have an adverse effect on our business, outlook, financial condition, and results of operations and cash flows, which could be significant.

Growth and Strategic Risks

STRATEGIC TRANSACTION RISK. *NW Holdings' and NW Natural's ability to successfully complete strategic transactions is subject to significant risks, which could adversely affect NW Holdings' or NW Natural's financial condition, results of operations, and cash flows.*

From time to time, NW Holdings and NW Natural have pursued and may continue to pursue strategic transactions including mergers, acquisitions, combinations, divestitures, joint ventures, business development projects or other strategic transactions, including, but not limited to, investments in RNG projects on a regulated basis by NW Natural and on a non-regulated basis by NW Holdings, as

well as acquisitions by NW Holdings in the water, wastewater and water services, or in the gas or other utility sectors. Any such transactions involve substantial risks, including the following:

- such transactions that are contracted for may fail to close for a variety of reasons;
- the result of such transactions may not produce revenues, earnings or cash flow at anticipated levels, which could, among other things, result in the impairment of any investments or goodwill associated with such transactions;
- acquired businesses or assets could have environmental, permitting, or other problems for which contractual protections prove inadequate;
- there may be difficulties in integration or higher than expected operation costs of new businesses;
- there may exist liabilities that were not disclosed to us, that exceed our estimates, or for which our rights to indemnification from the seller are limited;
- we may be unable to obtain the necessary regulatory or governmental approvals to close a transaction or receive approvals granted subject to terms that are unacceptable to us;
- we may be unable to achieve the anticipated regulatory treatment of any such transaction as part of the transaction approval or subsequent to closing the transaction; or
- we may be unable to avoid a disposition of assets for a price that is less than the book value of those assets.

One or more of these risks could affect NW Holdings' and NW Natural's financial condition, results of operations, and cash flows.

BUSINESS DEVELOPMENT RISK. *NW Holdings' and NW Natural's business development projects may not be successful or may encounter unanticipated obstacles, costs, changes or delays that could result in a project being unsuccessful or becoming impaired, which could negatively impact NW Holdings' or NW Natural's financial condition, results of operations and cash flows.*

Business development projects involve many risks. We are currently engaged in several business development projects, including, but not limited to, several water, wastewater, water services and RNG projects, non-regulated investments in RNG projects, and purchasing, marketing and reselling of RNG and its associated attributes. We may also engage in other business development projects such as investments in additional long-term gas reserves, CNG refueling stations, power to gas, power generation, hydrogen projects, carbon capture projects or other similar projects. Our business development activities are subject to uncertainties and changed circumstances and may not reach the scale expected, be successful or perform as anticipated. Additionally, we may not be able to obtain required governmental permits and approvals to complete our projects in a cost-efficient or timely manner, potentially resulting in delays or abandonment of the projects. We could also experience issues such as: technological challenges; ineffective scalability; failure to achieve expected outcomes; unsuccessful business models; startup and construction delays; construction cost overruns; disputes with contractors; the inability to negotiate acceptable agreements such as rights-of-way, easements, construction, gas supply or other material contracts; changes in customer demand, perception or commitment; public opposition to projects; marketing risk and changes in market regulation, behavior or prices, market volatility or unavailability, including markets for RNG and its associated attributes or other environmental attributes; the inability to receive expected tax or regulatory treatment; and operating cost increases. Additionally, we may be unable to finance our business development projects at acceptable costs or within a scheduled time frame necessary for completing the project. Any of the foregoing risks, if realized, could result in business development efforts failing to produce expected financial results and the project investment becoming impaired, and such failure or impairment could have an adverse effect on NW Holdings' or NW Natural's financial condition and results of operations.

JOINT PARTNER RISK. *Investing in business development projects through partnerships, joint ventures or other business arrangements affects our ability to manage certain risks and could adversely impact NW Holdings' or NW Natural's financial condition, results of operations and cash flows.*

We use joint ventures and other business arrangements to manage and diversify the risks of certain development projects and investments, including NW Natural's gas reserves agreements, certain RNG projects, and certain of NW Holdings' subsidiaries' unregulated RNG projects and water platform investments. For example, in 2020, NW Natural began a partnership with BioCarbN to invest up to an estimated $38 million in four separate RNG development projects that access biogas derived from water treatment at Tyson Foods' processing plants, subject to approval by all parties. NW Holdings or NW Natural currently has and may further acquire or develop part-ownership interests in other projects in the future, including but not limited to, natural gas, water, wastewater, water services, RNG, or hydrogen projects. Under these arrangements, we may not be able to fully direct the management and policies of the business relationships, and other participants in those relationships may act contrary to our interests, including making operational decisions that could negatively affect our costs and liabilities. In addition, other participants may withdraw from the project, divest important assets, become financially distressed or bankrupt, be subject to additional regulatory or legal requirements, or have economic or other business interests or goals that are inconsistent with ours. We have in the past and may in the future become involved in disputes with our business partners, which could result in additional cost or divert management's attention.

NW Natural's gas reserves arrangements, which operate as a hedge backed by physical gas supplies, involve a number of risks, including: gas production that is significantly less than the expected volumes, or no gas volumes; operating costs that are higher than expected; inherent risks of gas production, including disruption to operations or a complete shut-in of the field; and one or more participants in one of these gas reserves arrangements becoming financially insolvent or acting contrary to NW Natural's interests. For example, Jonah Energy, the counterparty in NW Natural's gas reserves arrangement, no longer maintains any company credit ratings. Although NW Natural intends to continue monitoring Jonah Energy's financial condition and take appropriate actions to

preserve NW Natural's interests, it does not control Jonah Energy's financial condition or continued performance under the gas reserves arrangement. The cost of the original gas reserves venture is currently included in customer

rates and additional wells under that arrangement are recovered at specific costs, the occurrence of one or more of these risks could affect NW Natural's ability to recover this hedge in rates. Further, new gas reserves arrangements have not been approved for inclusion in rates, and regulators may ultimately determine to not include all or a portion of future transactions in rates. The realization of any of these situations could adversely impact NW Holdings' or NW Natural's financial condition, results of operations and cash flows.

CUSTOMER GROWTH RISK. *NW Holdings' and NW Natural's NGD margin, earnings and cash flow may be negatively affected if we are unable to sustain customer growth rates in our NGD segment.*

NW Natural's NGD margins and earnings growth have largely depended upon the sustained growth of its residential and commercial customer base due, in part, to the new construction housing market, conversions of customers to natural gas from other energy sources and growing commercial use of natural gas. Building codes recently enacted and others under consideration in our territory may have the effect of reducing our natural gas customer growth rate. For example, effective February 1, 2021, building codes in Washington state require new residential homes to achieve higher levels of energy efficiency based on specified carbon emissions assumptions, which calculate electric appliances to have lower on-site GHG emissions than comparable gas appliances. This increases the cost of new home construction incorporating natural gas depending on a number of factors including home size, equipment configurations, and building envelope measures. Additionally, the Washington State Building Code Council (SBCC) voted in April 2022 to include updates in the state commercial building energy code that are expected to restrict or eliminate the use of gas space and water heating in new commercial construction. In November 2022, the SBCC voted to include updates to the state residential building energy code that restrict the use of gas space and water heating in residential construction, with certain exceptions including for natural gas-fired heat pumps and hybrid fuel systems. The SBCC commercial and residential rules were expected to become effective July 1, 2023, but the SBCC delayed implementation and has taken steps to modify those rules. The timeline for implementation of the modified rules, if any, is March, 2024 unless the legislature delays, rejects, or amends the new rules. Certain jurisdictions in Oregon and the State of Oregon are considering similar measures. While we expect these types of codes to be subject to legal challenge, and the new modified SBCC rules are currently subject to legal challenges, we cannot predict the outcome of any such challenge. Insufficient customer growth, for economic, political, public perception, policy, or other reasons could adversely affect NW Holdings' or NW Natural's utility margin, earnings and cash flows.

RISK OF COMPETITION. *Our NGD business is subject to increased competition which could negatively affect NW Holdings' or NW Natural's results of operations.*

In the residential and commercial markets, NW Natural's NGD business competes primarily with suppliers of electricity, fuel oil, and propane. In the industrial market, NW Natural competes with suppliers of all forms of energy. Competition among these forms of energy is based on price, efficiency, reliability, performance, market conditions, technology, federal, state and local governmental regulation, actual and perceived environmental impacts, and public perception. Technological improvements such as electric heat pumps, batteries or other alternative technologies, or building code or other regulations or restrictions affecting the cost or ability to use certain gas appliances, could erode NW Natural's competitive advantage. If natural gas prices are high relative to other energy sources, or if the cost, environmental impact or public perception of such other energy sources improves relative to natural gas, it may negatively affect NW Natural's ability to secure new customers or retain our existing customers, which could have a negative impact on our customer growth rate and NW Holdings' and NW Natural's results of operations.

Our natural gas storage operations compete primarily with other storage facilities and pipelines. Increased competition in the natural gas storage business could reduce the demand for our natural gas storage services, drive prices down for our storage business, and adversely affect our ability to renew or replace existing contracts at rates sufficient to maintain current revenues and cash flows, which could adversely affect NW Holdings' and NW Natural's financial condition, results of operations and cash flows.

Operational Risks

OPERATING RISK. *Transporting and storing gas and liquid fuels and distributing gas and liquid fuels and, water and wastewater involves numerous risks that may result in accidents and other operating risks and costs, some or all of which may not be fully covered by insurance, and which could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.*

NW Holdings and NW Natural are subject to all of the risks and hazards inherent in the businesses of gas and liquid transmission, distribution and storage, water distribution, and water and wastewater services including:

- earthquakes, wildfires, floods, storms, landslides and other severe weather incidents and natural hazards;
- leaks or losses of gases or liquids, or contamination of gases or liquids by chemicals or compounds, as a result of the malfunction of equipment or facilities or otherwise;
- operator errors or damages from third parties;
- negative performance by our storage reservoirs, facilities, or wells that could cause us to fail to meet expected or forecasted operational levels or contractual commitments to our customers or other third parties;
- problems maintaining, or the malfunction of, pipelines, biodigester facilities, wellbores and related equipment and facilities that form a part of the infrastructure that is critical to the operation of our facilities;

- presence of chemicals or other compounds in the gases or liquids we deliver that could adversely affect the performance of the system or end-use equipment;
- collapse of underground storage reservoirs;
- inadequate supplies of RNG, natural gas or water or contamination of water supplies;
- operating costs that are substantially higher than expected;
- supply chain disruptions, including unexpected price increases, or supply restrictions beyond the control of our suppliers;
- migration of gas through faults in the rock or to some area of the reservoir where existing wells cannot drain the gas effectively, resulting in loss of the gas;
- blowouts (uncontrolled escapes of gas from a pipeline or well) or other accidents, fires and explosions; and
- risks and hazards inherent in the drilling operations associated with the development of gas storage facilities, and wells.

For example, TC Pipelines, LP (TC Pipelines) has identified the presence of a chemical substance, dithiazine, at several facilities on the system of its subsidiary, Gas Transmission Northwest (GTN), and those of some upstream and downstream connecting pipeline facilities. A portion of NW Natural's gas supplies from Canada are transported on GTN's pipelines. TC Pipelines reports that dithiazine can drop out of gas streams in a powdery form at some points of pressure reduction (for example, at a regulator), and that in incidents where a sufficient quantity of the material accumulates in certain places, improper functioning of equipment can occur, which can result in increased preventative and corrective action costs. While NW Natural has not detected significant quantities of dithiazine on its system to date, we continue to monitor and could discover increased levels of dithiazine or other compounds on NW Natural's system that could affect the performance of the system or end-use equipment.

These and other operational risks could result in disruption of service, personal injury or loss of human life, damage to and destruction of property and equipment, pollution or other environmental damage, breaches of our contractual commitments, and may result in curtailment or suspension of operations, which in turn could lead to significant costs and lost revenues. Further, because our pipeline, storage and distribution facilities are in or near populated areas, including residential areas, commercial business centers, and industrial sites, any loss of human life or adverse financial outcomes resulting from such events could be significant. We could be subject to lawsuits, claims, and criminal and civil enforcement actions. Additionally, we may not be able to maintain the level or types of insurance we desire, and the insurance coverage we do obtain may contain large deductibles or fail to cover certain hazards or cover all potential losses. The occurrence of any operating risks not covered by insurance could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.

SAFETY REGULATION RISK. *NW Holdings and NW Natural may experience increased federal, state and local regulation of the safety of our systems and operations, which could adversely affect NW Holdings' or NW Natural's operating costs and financial results.*

The safety and protection of the public, our customers and our employees is and will remain our top priority. We are committed to consistently monitoring, maintaining, and upgrading our distribution systems and storage operations to ensure that RNG, natural gas and water is acquired, stored and delivered safely, reliably and efficiently. Natural gas operators are subject to robust, ongoing federal, state and local regulatory oversight, which intensifies in response to incidents. For example, the 2020 Protecting our Infrastructure of Pipelines and Enhancing Safety Act (PIPES Act) prompted PHSMA to issue three new rulemakings impacting transmission lines, gathering lines, and valve automation in response to past incidents in other parts of the country. Proposed rules issued in 2023 by PHMSA include regulations related to the detection and repair of leaks and safety of gas distribution pipelines.

In addition, our workplaces are subject to the requirements of the Department of Transportation, through the Federal Motor Carrier Safety Administration, and the Occupational Safety and Health Administration, as well as state and local statutes and regulations that regulate the protection of the health and safety of workers. The failure to comply with these requirements or general industry standards, including keeping adequate records or preventing occupational injuries or exposure, could expose us to civil or criminal liability, enforcement actions, and regulatory fines and penalties that may not be recoverable through our rates and could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We intend to work diligently with industry associations and federal and state regulators to comply with these regulations and other new laws. We expect there to be increased costs associated with compliance, and those costs could be significant. If these costs are not recoverable in our customer rates, they could have a negative impact on NW Holdings' and NW Natural's operating costs and financial results.

RELIANCE ON THIRD PARTIES TO SUPPLY OR OPTIMIZE NATURAL GAS, RNG AND ENVIRONMENTAL ATTRIBUTES OR CREDITS RISK. *NW Natural relies on third parties to supply or optimize natural gas, RNG, storage or pipeline capacity, and environmental attributes or credits in its NGD segment, and limitations on NW Natural's ability to obtain supplies, engage in effective optimization, or failure to receive expected supplies, could have an adverse impact on NW Holdings' or NW Natural's financial results.*

NW Natural's ability to secure natural gas, RNG and environmental attributes or credits depends upon its ability to purchase and receive delivery of them from third parties. NW Natural, and in some cases its suppliers, does not have control over the availability of

natural gas, RNG or environmental attributes or credits, competition for those supplies, disruptions in those supplies, priority allocations on transmission pipelines, markets for those supplies, or pricing and other terms related to such

supplies. Additionally, third parties on whom NW Natural relies may fail to deliver supplies for which it has contracted. For example, in October, 2018, a 36-inch pipeline near Prince George, British Columbia owned by Enbridge ruptured, disrupting natural gas flows from Canada into Washington while the ruptured pipeline and an adjacent pipeline were assessed and the ruptured pipeline was repaired. Once repaired, pressurization levels for those pipelines were reduced for a significant period of time for assessment and testing. If NW Natural is unable or limited in its ability to obtain natural gas, RNG or environmental attributes or credits from its current suppliers or new sources, it may not be able to meet customers' gas requirements or regulatory or compliance requirements, and would likely incur costs associated with actions necessary to mitigate service disruptions or regulatory compliance, which could significantly and negatively impact NW Holdings' and NW Natural's results of operations.

NW Natural also contracts with an independent energy marketing company to provide asset management services regarding storage and pipeline capacity when those assets are not serving the needs of NGD business customers. We may not be able to fully direct these transactions, or the counterparty to these arrangements may act contrary to our interests, become financially distressed or have economic or other business interests or goals that are inconsistent with ours. Failure to effectively optimize our assets could result in a negative impact on NW Holdings' and NW Natural's financial condition, revenues and results of operations.

SINGLE TRANSPORTATION PIPELINE RISK. *NW Natural relies on a single pipeline company for the transportation of gas to its service territory, a disruption, limitation, or inadequacy of which could adversely impact its ability to meet customers' gas requirements, which could significantly and negatively impact NW Holdings' and NW Natural's results of operations.*

NW Natural's distribution system is directly connected to a single interstate pipeline, which is owned and operated by Northwest Pipeline. The pipeline's gas flows are bi-directional, transporting gas into the Portland metropolitan market from two directions: (1) the north, which brings supplies from the British Columbia and Alberta supply basins; and (2) the east, which brings supplies from the Alberta and the U.S. Rocky Mountain supply basins. If there is a rupture or inadequate capacity in, or supplies to maintain adequate pressures in, the pipeline, NW Natural may not be able to meet its customers' gas requirements and we would likely incur costs associated with actions necessary to mitigate service disruptions, both of which could significantly and negatively impact NW Holdings' and NW Natural's results of operations.

THIRD PARTY PIPELINE RISK. *NW Natural's gas storage business depends on third-party pipelines that connect our storage facilities to interstate pipelines, the failure or unavailability of which could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.*

Our gas storage facilities are reliant on the continued operation of a third-party pipeline and other facilities that provide delivery options to and from our storage facilities. Because we do not own all of these pipelines, their operations are not within our control. If the third-party pipeline to which we are connected were to become unavailable for current or future withdrawals or injections of natural gas due to repairs, damage to the infrastructure, lack of capacity or other reasons, our ability to operate efficiently and satisfy our customers' needs could be compromised, thereby potentially having an adverse impact on NW Holdings' or NW Natural's financial condition, results of operations and cash flows.

WORKFORCE RISK. *NW Holdings' and NW Natural's businesses are heavily dependent on being able to attract and retain qualified employees and maintain a competitive cost structure with market-based salaries and employee benefits, and workforce disruptions could adversely affect NW Holdings' or NW Natural's operations and results.*

NW Holdings' and NW Natural's ability to implement our business strategy and serve our customers is dependent upon our continuing ability to attract and retain diverse, talented professionals and a technically skilled workforce, and being able to transfer the knowledge and expertise of our workforce to new and increasingly diverse employees as our largely older workforce retires. A significant portion of our workforce is currently eligible or will reach retirement eligibility within the next five years, which will require that we attract, train and retain skilled workers to prevent loss of institutional knowledge or skills gaps. We face competition for qualified personnel with specific skillsets. This competition may result in increased pressure on wages or other challenges in recruiting or retaining personnel. Without an appropriately skilled workforce, our ability to provide quality service and meet our regulatory requirements will be challenged and this could negatively impact NW Holdings' and NW Natural's earnings. Additionally, approximately half of NW Natural workers are represented by the OPEIU Local No. 11 AFL-CIO and are covered by a collective bargaining agreement that extends to May 31, 2024. Disputes with the union representing NW Natural employees over terms and conditions of their agreement, or failure to timely and effectively renegotiate the agreement upon its expiration, could result in instability in our labor relationship or other labor disruptions or work stoppages that could impact the timely delivery of gas and other services from our utility and storage facilities, which could strain relationships with customers and state regulators and cause a loss of revenues. The collective bargaining agreements may also limit our flexibility in dealing with NW Natural's workforce, and the ability to change work rules and practices and implement other efficiency-related improvements to successfully compete in today's challenging marketplace, which may negatively affect NW Holdings' and NW Natural's financial condition and results of operations.

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Environmental Risks

ENVIRONMENTAL LIABILITY RISK. *Certain of NW Natural's, and possibly NW Holdings', properties and facilities may pose environmental risks requiring remediation, the costs of which are difficult to estimate and which could adversely affect NW Holdings' and NW Natural's financial condition, results of operations, and cash flows.*

NW Natural owns, or previously owned, properties that require environmental remediation or other action. NW Holdings or NW Natural may now, or in the future, own other properties that require environmental remediation or other action. NW Natural and NW Holdings accrue all material loss contingencies relating to these properties. A regulatory asset at NW Natural has been recorded for estimated costs pursuant to a deferral order from the OPUC and WUTC. In addition to maintaining regulatory deferrals, NW Natural settled with most of its historical liability insurers for only a portion of the costs it has incurred to date and expects to incur in the future. To the extent amounts NW Natural recovered from insurance are inadequate and it is unable to recover these deferred costs in utility customer rates, NW Natural would be required to reduce its regulatory assets which would result in a charge to earnings in the year in which regulatory assets are reduced. In addition, in Oregon, the OPUC approved the SRRM, which limits recovery of deferred amounts to those amounts which satisfy an annual prudence review and an earnings test that requires NW Natural to contribute additional amounts toward environmental remediation costs above approximately $10 million in years in which NW Natural earns above its authorized ROE. To the extent NW Natural earns more than its authorized ROE in a year, it would be required to cover environmental expenses greater than the $10 million with those earnings that exceed its authorized ROE. The OPUC ordered a review of the SRRM in 2018 or when we obtain greater certainty of environmental costs, whichever occurred first. We submitted information for review in 2018, and believe we could be subject to further review. Similarly, in October 2019, the WUTC authorized an ECRM, which allows for recovery of certain past deferred and future prudently incurred remediation costs allocable to Washington through application of insurance proceeds and collections from customers, subject to an annual prudence determination. These ongoing prudence reviews, or with respect to the SRRM, the earnings test, or the periodic review could reduce the amounts NW Natural is allowed to recover, and could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.

Moreover, we may have disputes with regulators and other parties as to the severity of particular environmental matters, what remediation efforts are appropriate, whether natural resources were damaged, and the portion of the costs or claims NW Natural or NW Holdings should bear. We cannot predict with certainty the amount or timing of future expenditures related to environmental investigations, remediation or other action, the portions of these costs allocable to NW Natural or NW Holdings, or disputes or litigation arising in relation thereto.

Environmental liability estimates are based on current remediation technology, industry experience gained at similar sites, an assessment of probable level of responsibility, and the financial condition of other potentially responsible parties. However, it is difficult to estimate such costs due to uncertainties surrounding the course of environmental remediation, the preliminary nature of certain site investigations, natural recovery of the site, unavoidable limitations associated with environmental investigations and remedial technologies, evolving science, and the application of environmental laws that impose joint and several liabilities on all potentially responsible parties. These uncertainties and disputes arising therefrom could lead to further adversarial administrative proceedings or litigation, with associated costs and uncertain outcomes, all of which could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.

ENVIRONMENTAL REGULATION COMPLIANCE RISK. *NW Holdings and NW Natural are subject to environmental regulations, compliance with which or failure to comply with, could adversely affect our operations or financial results.*

NW Holdings and NW Natural are subject to laws, regulations and other legal requirements enacted or adopted by federal, state and local governmental authorities relating to protection of the environment, including those legal requirements that govern discharges of substances into the air and water, the management and disposal of hazardous substances and waste, groundwater quality and availability, plant and wildlife protection, the emitting of greenhouse gases, and other aspects of environmental regulation. For example, our natural gas operations are subject to reporting requirements to a number of governmental authorities including, but not limited to, the Environmental Protection Agency (EPA), the Oregon Department of Environmental Quality (ODEQ), and the Washington State Department of Ecology regarding greenhouse gas emissions. We are also required to reduce emissions of GHGs over time in accordance with the Washington Climate Commitment Act. These and other current and future additional environmental regulations at the local, state or national level could result in increased compliance costs or additional operating restrictions, which may or may not be recoverable in customer rates, through insurance or otherwise. If these costs are not recoverable, or if these regulations reduce the desirability, availability, or cost-competitiveness of natural gas, they could have an adverse effect on NW Holdings' or NW Natural's operations or financial condition. Furthermore, failure to comply with such laws or regulations could subject us to possible enforcement actions, financial liability or litigation, any of which could adversely affect NW Holdings' or NW Natural's financial condition and results of operations.

GLOBAL CLIMATE CHANGE RISK. *Our businesses may be subject to physical risks associated with climate change, all of which could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.*

Climate change may cause physical risks, including an increase in sea level, intensified storms, water scarcity, wildfire susceptibility and intensity and changes in weather conditions, such as changes in precipitation, average temperatures and extreme wind or other extreme weather events or climate conditions. Moreover, a significant portion of the nation's gas

infrastructure is located in areas susceptible to storm damage that could be aggravated by wetland and barrier island erosion, which could give rise to gas supply interruptions and price spikes.

These and other physical changes could result in disruptions to natural gas production and transportation systems potentially increasing the cost of gas and affecting our natural gas businesses' ability to procure or transport gas to meet customer demand. These changes could also affect our distribution systems resulting in increased maintenance and capital costs, disruption of service, regulatory actions and lower customer satisfaction. Similar disruptions could occur in NW Holdings' water utility and unregulated RNG businesses. Additionally, to the extent that climate change adversely impacts the economic health or weather conditions of our service territory directly, it could adversely impact customer demand or our customers' ability to pay. Such physical risks could have an adverse effect on NW Holdings' or NW Natural's financial condition, results of operations, and cash flows.

PUBLIC PERCEPTION AND POLICY RISK. *Changes in public sentiment or public policy with respect to natural gas, including through local, state or federal laws or legislation or other regulation (including ballot initiatives, executive orders or regulatory codes) or litigation, could adversely affect NW Holdings' or NW Natural's financial condition, results of operations and cash flows.*

There are a number of international, federal, state, and local legislative, legal, regulatory and other initiatives being proposed and adopted in an attempt to measure, control or limit the effects of global warming and climate change, including greenhouse gas (GHG) emissions such as carbon dioxide, nitrous oxide, and methane. Legislation or other forms of public policy or regulation that aim to reduce GHG emissions at the federal, state, or local level have and could continue to take a variety of forms including, but not limited to, GHG emissions limits, reporting requirements, carbon taxes, requirements to purchase carbon credits, building codes, increased efficiency standards, additional charges to fund energy efficiency activities or other regulatory actions, and incentives or mandates to conserve energy, or use renewable energy sources. Federal, state, or local governments may provide tax advantages and other subsidies to support alternative energy sources, withdraw funding from fossil fuel sources, mandate the use of specific fuels or technologies, prohibit the use of natural gas, or promote research into new technologies to reduce the cost and increase the scalability of alternative energy sources. In 2021, the United States rejoined the Paris Agreement on Climate Change, and the United States Presidential administration has issued executive orders aimed at reducing GHG emissions, has declared climate change a national security priority, and continues to consider a wide range of policies, executive orders, rules, legislation and other initiatives to address climate change. For example, the Inflation Reduction Act of 2022 (IRA), was signed into law in August 2022 and includes a number of energy and climate related provisions including funding for the EPA to improve GHG reporting and enforcement, as well as a methane fee applicable to activities associated with gas production and processing facilities, transmission pipelines and certain storage facilities. The U.S. Congress may also pass federal climate change legislation in the future. Additionally, other federal agencies have taken or are expected to take actions related to climate change. For example, in March 2022, the Securities and Exchange Commission (SEC) proposed new rules relating to the disclosure of a range of climate-related matters, PHMSA has prepared regulations and other actions to limit methane emissions and the Commodities Futures Trading Commission (CFTC) has indicated it intends to take actions related to oversight of climate-related financial risks as pertinent to the derivatives and underlying commodities markets. Similarly, other federal agencies and regulations, including but not limited to the Consumer Products Safety Commission, the U.S. Department of Treasury, Federal Acquisitions Regulations, and others have indicated impending actions related to regulation related to climate change.

At the state level, the State of Washington has enacted the Climate Commitment Act (CCA), which establishes a comprehensive program that provides an overall limit for GHG emissions from major sources in the state that began on January 1, 2023 and declines yearly to 95% below 1990 levels by 2050. NW Natural is currently subject to the CCA. Similarly, in Oregon, in March 2020, the Oregon Governor issued an executive order (EO) establishing GHG emissions reduction goals and directing state agencies and commissions (including the ODEQ and the OPUC) to facilitate such GHG emission goals. In December 2021, the ODEQ concluded its process and issued final cap and reduce rules for the Climate Protection Program (CPP), which initially became effective January 1, 2022 and outlined GHG emissions reduction goals of 50% by 2035 and 90% by 2050 from a 2017-2019 baseline. The CPP was subsequently invalidated by the Oregon Court of Appeals in December 2023. Although NW Natural is not currently subject to the compliance requirements of the CPP, the ODEQ has stated that it intends to promulgate new rules covering GHG emissions, and we cannot predict the timing, scope or impact of such rules. We further expect that there will be additional efforts to address climate change in the 2024 legislative sessions in both Oregon and Washington and we cannot predict whether the legislatures will pass any climate related legislation and the potential impact any such legislation may have on the Company. In addition, the State of Washington is in the process of implementing, and the State of Oregon and some local jurisdictions are considering, building codes that could have the effect of disfavoring or disallowing natural gas in residential or commercial new construction or conversions, including locations within our service territory, such the City of Eugene. A number of local and county jurisdictions are also proposing or passing renewable energy resolutions, green tariffs or other measures in an effort to accelerate renewable energy goals.

Such current or future legislation, regulation or other initiatives (including executive orders, ballot initiatives or ordinances) could impose on our natural gas businesses operational requirements or restrictions, additional charges to fund energy efficiency initiatives, or levy a tax based on carbon content. In addition, certain jurisdictions, including San Francisco, Seattle, and New York have enacted measures to ban or discourage the use of new natural gas hookups in residential or other buildings. Other jurisdictions, including several in our service territory, such as the city of Milwaukie, have considered or are currently considering similar restrictions or other measures discouraging the use of natural gas, such as limitations or bans on the use of natural gas in

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new construction, requiring the conversion of buildings to electric heat, or adopting policies or incentives to encourage the use of electricity in lieu of natural gas. Such restrictions could adversely impact customer growth or usage and could adversely impact our ability to recover costs and maintain reasonable customer rates. In addition, certain states, cities, local jurisdictions and private parties have initiated lawsuits against companies related to climate change impacts, GHG emissions or climate-related disclosures. While NW Natural has not been subject to such litigation to date, such climate-related claims or actions could be costly to defend and could negatively impact our business, reputation, financial condition, and results of operations.

NW Natural believes natural gas has an important role in moving the Pacific Northwest to a lower carbon future, and to that end is developing programs and measures to reduce carbon emissions. However, NW Natural's efforts may not happen quickly enough to keep pace with legislation or other regulation, legal changes or public sentiment, or may be more costly or not be as effective as expected. Any of these initiatives, or our unsuccessful response to them, could result in us incurring additional costs to comply with the imposed policies, regulations, restrictions or programs, provide a cost or other competitive advantage to energy sources other than natural gas, reduce demand for natural gas, restrict our customer growth, impose costs or restrictions on end users of natural gas, impact the prices we charge our customers, increase the likelihood of litigation, impose increased costs on us associated with the adoption of new infrastructure and technology to respond to such requirements which may or may not be recoverable in customer rates, and could negatively impact public perception of our services or products that negatively diminishes the value of our brand, all of which could adversely affect NW Holdings' or NW Natural's business operations, financial condition and results of operations.

Business Continuity and Technology Risks

BUSINESS CONTINUITY RISK. *NW Holdings and NW Natural may be adversely impacted by local or national disasters, political unrest, terrorist activities, cyber-attacks or data breaches, and other extreme events to which we may not be able to promptly respond, which could adversely affect NW Holdings' or NW Natural's operations or financial condition.*

Local or national disasters, political unrest, terrorist activities, cyber-attacks and data breaches, power outages, and other extreme events are a threat to our assets and operations. Companies in critical infrastructure industries face a heightened risk due to being the target of, and having heightened exposure to, acts of terrorism or sabotage, including physical and security breaches of our physical infrastructure and information technology or operational technology systems in the form of cyber-attacks or other forms of attacks. These attacks could, among other things, target or impact our technology or mechanical systems that operate our distribution, transmission or storage facilities and result in a disruption in our operations, damage to our system and inability to meet customer requirements. In addition, the threat of terrorist activities could lead to increased economic instability and volatility in the price of RNG, natural gas or other necessary commodities that could affect our operations. Threatened or actual national disasters or terrorist activities may also disrupt capital or bank markets and our ability to raise capital or obtain debt financing, or impact our suppliers or our customers directly. Local disaster or civil unrest could result in disruption of our infrastructure or facilities, or part of our workforce being unable to operate or maintain our infrastructure or perform other tasks necessary to conduct our business. A slow or inadequate response to events may have an adverse impact on our operations and earnings. We may not be able to maintain sufficient insurance to cover all risks associated with local and national disasters, terrorist activities, cyber-attacks and other attacks or events. Additionally, large scale natural disasters or terrorist attacks could destabilize the insurance industry making the insurance we do have unavailable, which could increase the risk that an event could adversely affect NW Holdings' or NW Natural's operations or financial results.

RELIANCE ON TECHNOLOGY RISK. *NW Holdings' and NW Natural's efforts to integrate, consolidate and streamline each of their operations has resulted in increased reliance on technology, the failure of which could adversely affect NW Holdings' or NW Natural's financial condition and results of operations.*

NW Holdings and NW Natural have undertaken, and will continue to undertake, a variety of initiatives to integrate, standardize, centralize and streamline operations. These efforts have resulted in greater reliance on technological tools such as, at NW Natural: an enterprise resource planning system, technology associated with gas operations, a digital dispatch system, an automated meter reading system, a web-based ordering and tracking system, and other similar technological tools and initiatives. Our future success will depend, in part, on our ability to anticipate and adapt to technological changes in a cost-effective manner and to offer, on a timely basis, services that meet customer demands and evolving industry standards. New technologies may emerge that could be superior to, or may not be compatible with, some of our existing technologies, and may require us to make significant expenditures to remain competitive. We continue to implement technology to improve our business processes and customer interactions. In addition, our various existing information technology systems require periodic modifications, upgrades and/or replacement. For example, NW Natural has recently implemented upgrades to its SAP system and intends to replace its customer information system in the near future.

There are various risks associated with these systems in addition to upgrades and replacements, including hardware and software failure, communications failure, data distortion or destruction, unauthorized access to data, misuse of proprietary or confidential data, unauthorized control through electronic means, programming mistakes and other inadvertent errors or deliberate human acts. In addition, we are dependent on a continuing flow of important components and appropriately skilled individuals to maintain and upgrade our information technology systems. Our suppliers have faced disruptions due to COVID-19 and may face additional

production or import delays due to natural disasters, strikes, lock-outs, political unrest, pandemics or other such circumstances. Technology services provided by third-parties also could be disrupted due to events and circumstances beyond our control which could adversely impact our business, financial condition and results of operations.

Any modifications, upgrades, system maintenance or replacements subject us to inherent costs and risks, including potential disruption of our internal control structure, substantial capital expenditures, additional administrative and operating expenses, retention of sufficiently skilled personnel to implement and operate the new systems, and other risks and costs of delays or difficulties in transitioning to new systems or of integrating new systems into our current systems. In addition, the difficulties with implementing new technology systems may cause disruptions in our business operations and have an adverse effect on our business and operations, if not anticipated and appropriately mitigated. There is also risk that we may not be able to recover all costs associated with projects to improve our technological capabilities, which may adversely affect NW Holdings' or NW Natural's financial condition and results of operations.

CYBERSECURITY RISK. *NW Holdings' and NW Natural's status as an infrastructure services provider coupled with its reliance on technology could result in a security breach which could adversely affect NW Holdings' or NW Natural's financial condition and results of operations.*

Although we take precautions to protect our technology systems and are not aware of any material security breaches to date, there is no guarantee that the procedures we have implemented to protect against unauthorized access to secured data and systems, including our operational technology and information technology systems, are adequate to safeguard against all security breaches or other cyberattacks. Additionally, the facilities and systems of clients, suppliers and third-party service providers also could be vulnerable to cyber risks and attacks, and such third party systems may be interconnected to our systems. Therefore, an event caused by cyberattacks or other malicious act at an interconnected third party could impact our business and facilities similarly. As these potential cyber security attacks become more common and sophisticated, we could be required to incur costs to strengthen our systems or maintain insurance coverage against potential losses. Moreover, a variety of regulatory agencies are increasingly focused on cybersecurity risks, and specifically in critical infrastructure sectors. For example, the Transportation Security Administration (TSA) has published security directives and is currently in the process of implementing formal rules mandating cybersecurity actions for critical pipeline owners and operators. Failure to meet the requirements of these directives or other cybersecurity regulations could result in fines or other penalties. We are continuing to evaluate the potential costs of implementation of these directives, and there is no assurance that we will be able to continue to recover in rates costs associated with such compliance.

In addition, our businesses could experience breaches of security pertaining to sensitive customer, employee, and vendor information maintained by us in the normal course of business, which could adversely affect our reputation, diminish customer confidence, disrupt operations, materially increase the costs we incur to protect against these risks, and subject us to possible financial liability or increased regulation or litigation. All of these risks could adversely affect NW Holdings' or NW Natural's financial condition and results of operations.

Financial and Economic Risks

HOLDING COMPANY DIVIDEND RISK. *As a holding company, NW Holdings depends on its operating subsidiaries, including NW Natural, to meet financial obligations and the ability of NW Holdings to pay dividends on its common stock is dependent on the receipt of dividends and other payments from its subsidiaries, including NW Natural.*

As a holding company, NW Holdings' only significant assets are the stock and membership interests of its operating subsidiaries, which at this time is primarily NW Natural. NW Holdings' direct and indirect subsidiaries are separate and distinct legal entities, managed by their own boards of directors, and have no obligation to pay any amounts to their respective shareholders, whether through dividends, loans or other payments. The ability of these companies to pay dividends or make other distributions on their common stock is subject to, among other things: their results of operations, net income, cash flows and financial condition, as well as the success of their business strategies and general economic and competitive conditions; the prior rights of holders of existing and future debt securities and any future preferred stock issued by those companies; and any applicable legal restrictions.

In addition, the ability of NW Holdings' subsidiaries to pay upstream dividends and make other distributions is subject to applicable state law and regulatory restrictions. Under the OPUC and WUTC regulatory approvals for the holding company formation, if NW Natural ceases to comply with credit and capital structure requirements approved by the OPUC and WUTC, it will not, with limited exceptions, be permitted to pay dividends to NW Holdings. Under the OPUC and WUTC orders authorizing the holding company reorganization, NW Natural may not pay dividends or make distributions to NW Holdings if NW Natural's credit ratings and common equity levels fall below specified ratings and levels. If NW Natural's long-term secured credit ratings are below A- for S&P and A3 for Moody's, dividends may be issued so long as NW Natural's common equity is 45% or above. If NW Natural's long-term secured credit ratings are below BBB for S&P and Baa2 for Moody's, dividends may be issued so long as NW Natural's common equity is 46% or above. Dividends may not be issued if NW Natural's long-term secured credit ratings fall to BB+ or below for S&P or Ba1 or below for Moody's, or if NW Natural's common equity is below 44%. The ratio is measured using common equity and long-term debt excluding imputed debt or debt-like lease obligations, and is determined on a preceding or projected 13-month basis.

EMPLOYEE BENEFIT RISK. *The cost of providing pension and postretirement healthcare benefits is subject to changes in pension assets and liabilities, changing employee demographics and changing actuarial assumptions, which may have an adverse effect on NW*

Holdings' or NW Natural's financial condition, results of operations and cash flows.

Until NW Natural closed the pension plans to new hires, which for non-union employees was in 2006 and for union employees was in 2009, it provided pension plans and postretirement healthcare benefits to eligible full-time utility employees and retirees. Approximately 28% of NW Natural's current utility employees were hired prior to these dates, and therefore remain eligible for these plans. Other businesses we acquire may also have pension plans. The costs to NW Natural, or the other applicable businesses we may acquire, for providing such benefits is subject to change in the market value of the pension assets, changes in employee demographics including longer life expectancies, increases in healthcare costs, current and future legislative changes, and various actuarial calculations and assumptions. The actuarial assumptions used to calculate our future pension and postretirement healthcare expenses may differ materially from actual results due to significant market fluctuations and changing withdrawal rates, wage rates, interest rates and other factors. These differences may result in an adverse impact on the amount of pension contributions, pension expense or other postretirement benefit costs recorded in future periods. Sustained declines in equity markets and reductions in bond rates may have a material adverse effect on the value of the pension fund assets and liabilities. In these circumstances, NW Natural may be required to recognize increased contributions and pension expense earlier than it had planned to the extent that the value of pension assets is less than the total anticipated liability under the plans, which could have a negative impact on NW Holdings' and NW Natural's financial condition, results of operations and cash flows.

HEDGING RISK. *NW Holdings' and NW Natural's risk management policies and hedging activities cannot eliminate the risk of commodity price movements and other financial market risks, and hedging activities may expose us to additional liabilities for which rate recovery may be disallowed, which could result in an adverse impact on NW Holdings' and NW Natural's operating revenues, costs, derivative assets and liabilities and operating cash flows.*

NW Natural's gas purchasing requirements expose us to risks of commodity price movements, while NW Holdings' and NW Natural's use of debt and equity financing exposes us to interest rate, liquidity and other financial market risks. We attempt to manage these exposures with both financial and physical hedging mechanisms, including NW Natural's gas reserves transactions which are hedges backed by physical gas supplies and interest rate hedging arrangements at NW Holdings and NWN Water. While we have risk management procedures for hedging in place, they may not always work as planned and cannot entirely eliminate the risks associated with hedging. Additionally, our hedging activities may cause us to incur additional expenses to obtain the hedge. We do not hedge our entire interest rate or commodity cost exposure, and the unhedged exposure will vary over time. Gains or losses experienced through NW Natural's hedging activities, including carrying costs, generally flow through NW Natural's PGA mechanism or are recovered in future general rate cases. However, the hedge transactions NW Natural enters into for utility purposes are subject to a prudence review by the OPUC and WUTC, and, if found imprudent, those expenses may be, and have been previously, disallowed, which could have an adverse effect on NW Holdings' or NW Natural's financial condition and results of operations.

In addition, our actual business requirements and available resources may vary from forecasts, which are used as the basis for hedging decisions and could cause our exposure to be more or less than anticipated. Moreover, if NW Natural's derivative instruments and hedging transactions do not qualify for regulatory deferral or hedge accounting treatment under U.S. GAAP, NW Holdings' or NW Natural's results of operations and financial condition could be adversely affected.

NW Holdings and NW Natural also have credit and performance exposure to derivative counterparties. Counterparties owing NW Holdings, NW Natural or their respective subsidiaries money, physical natural gas, RNG or environmental attributes could breach their obligations. Should the counterparties to these arrangements fail to perform, we may be forced to enter into alternative arrangements to meet our normal business requirements. In that event, NW Holdings' or NW Natural's financial results could be adversely affected. Additionally, under most of NW Natural's hedging arrangements, a downgrade of its senior unsecured long-term debt credit rating could allow its counterparties to require NW Natural to post cash, a letter of credit or other form of collateral, which would expose NW Natural to additional costs and may trigger significant increases in borrowing from its credit facilities or equity contribution needs from NW Holdings, if the credit rating downgrade is below investment grade. Further, based on current interpretations, each of NW Holdings, NW Natural and NWN Water is not considered a "swap dealer" or "major swap participant" in 2023, so we are exempt from certain requirements under the Dodd-Frank Act. If we are unable to claim this exemption, we could be subject to higher costs for our derivatives activities, and such higher costs could have a negative impact on NW Holdings' and NW Natural's operating costs and financial results.

GAS PRICE RISK. *Higher natural gas commodity prices and volatility in the price of gas may adversely affect NW Natural's NGD business, whereas lower gas price volatility may adversely affect NW Natural's gas storage business, negatively affecting NW Holdings' and NW Natural's results of operations and cash flows.*

The cost of natural gas is affected by a variety of factors, including weather, changes in demand, the level of production and availability of natural gas supplies, transportation constraints, availability and cost of pipeline capacity, federal, state and local energy and environmental policy, regulation and legislation, natural disasters and other catastrophic events, national and worldwide economic and political conditions, and the price and availability of alternative fuels. In 2022 and 2023 there was increased pricing and volatility in the current and forward gas markets. At NW Natural, the cost we pay for natural gas is generally passed through to customers through an annual PGA rate adjustment. If gas prices were to increase significantly and remain higher, it could raise the cost of energy to NW Natural's customers, potentially causing those customers to conserve or switch to alternate sources of energy.

Sustained significant price increases could also cause new home builders and commercial developers to select alternative energy sources. Decreases in the volume of gas NW Natural sells could reduce NW Holdings or

NW Natural's earnings, and a decline in customers could slow growth in future earnings. Additionally, notwithstanding NW Natural's current rate structure, higher gas costs could result in increased pressure on the OPUC or the WUTC to seek other means to reduce NW Natural's rates, which also could adversely affect NW Holdings' and NW Natural's results of operations and cash flows.

Temporary gas price increases can also adversely affect NW Holdings' and NW Natural's operating cash flows, liquidity and results of operations because a portion (10% or 20%) of any difference between the estimated average PGAgas cost in rates and the actual average gas cost incurred is recognized as current income or expense.

Temporary or sustained higher gas prices may also cause NW Natural to experience an increase in short-term debt and temporarily reduce liquidity because it pays suppliers for gas when it is purchased, which can be in advance of when these costs are recovered through rates. Significant increases in the price of gas can also slow collection efforts as customers experience increased difficulty in paying their higher energy bills, leading to higher than normal delinquent accounts receivable resulting in greater expense associated with collection efforts and increased bad debt expense.

INABILITY TO ACCESS CAPITAL MARKET RISK. *NW Holdings' or NW Natural's inability to access capital, or significant increases in the cost of capital, could adversely affect NW Holdings' or NW Natural's financial condition and results of operations.*

NW Holdings' and NW Natural's ability to obtain adequate and cost effective short-term and long-term financing depends on maintaining investment grade credit profiles, perceptions of our business in capital markets, and the existence of liquid and stable financial markets. NW Holdings relies on access to equity, debt, and bank markets to finance equity contributions to subsidiaries and other business requirements. NW Natural relies on access to capital and bank markets, including commercial paper and bond markets, to finance its operations, construction expenditures and other business requirements, and to refinance maturing debt that cannot be funded entirely by internal cash flows. Disruptions in capital markets, including but not limited to, pandemics, political unrest, inflationary pressures, recessionary pressures, or rising interest rates could adversely affect our ability to access short-term and long-term financing or refinance maturing indebtedness. Our access to funds under committed credit facilities, which are currently provided by a number of banks, is dependent on the ability of the participating banks to meet their funding commitments. Those banks may not be able to meet their funding commitments if they experience shortages of capital and liquidity. Disruptions in the bank or capital financing markets as a result of economic uncertainty, changing or increased regulation of the financial sector, or failure of major financial institutions, or disruptions in credit markets, could adversely affect NW Holdings' and NW Natural's access to capital and negatively impact our ability to run our businesses, achieve NW Natural's authorized rate of return, and make strategic investments.

Furthermore, recent trends toward investments that are perceived to be "green" or "sustainable" could shift capital away from, or increase the cost of capital for, our natural gas business. We believe our business is an important component of a low carbon future and are striving to decarbonize our systems. Nevertheless, perceptions in the financial markets could differ or outpace our decarbonization progress and result in a shift funding away from, or limit or restrict certain forms of funding for, natural gas businesses.

NW Natural is currently rated by S&P and Moody's and a negative change in its credit ratings, particularly below investment grade, could adversely affect its cost of borrowing and access to sources of liquidity and capital. Such a downgrade could further limit its access to borrowing under available credit lines. Additionally, downgrades in its current credit ratings below investment grade could cause additional delays in NW Natural's ability to access the capital markets while it seeks supplemental state regulatory approval, which could hamper its ability to access credit markets on a timely basis. NW Holdings' credit profile is largely supported by NW Natural's credit ratings and any negative change in NW Natural's credit ratings would likely negatively impact NW Holdings' access to sources of liquidity and capital and cost of borrowing. Acredit downgrade to NW Natural, or resulting negative impact on NW Holdings, could also require additional support in the form of letters of credit, cash or other forms of collateral and otherwise adversely affect NW Holdings' or NW Natural's financial condition and results of operations.

IMPAIRMENT OF LONG-LIVED ASSETS OR GOODWILL RISK. *Impairments of the value of long-lived assets or goodwill could have a material effect on NW Holdings' or NW Natural's financial condition, or results of operations.*

NW Holdings and NW Natural review the carrying value of long-lived assets other than goodwill whenever events or changes in circumstances indicate the carrying amount of the assets might not be recoverable. The determination of recoverability is based on the undiscounted net cash flows expected to result from the operation of such assets. Projected cash flows depend on the future operating costs and projected revenues associated with the asset.

We review the carrying value of goodwill annually or whenever events or changes in circumstances indicate that such carrying value may not be recoverable. Agoodwill impairment analysis begins with a qualitative analysis of events and circumstances. If the qualitative assessment indicates that the carrying value may be at risk, we will perform a quantitative assessment and recognize a goodwill impairment for any amount in which the fair value of a reporting unit exceeds its fair value. NW Holdings' total goodwill was

$163.3 million as of December 31, 2023 and $149.3 million as of December 31, 2022. All of our goodwill is related to water and wastewater acquisitions. There have been no impairments recognized for the water and wastewater acquisitions to date. Any impairment charge taken with respect to our long-lived assets or goodwill could be material and could have a material effect on NW Holdings' or NW Natural's financial condition and results of operations.

CUSTOMER CONSERVATION RISK. *Customers' conservation efforts may have a negative impact on NW Holdings' and NW Natural's revenues.*

An increasing national focus on energy conservation, including improved building practices and appliance efficiencies may result in increased energy conservation by customers. This can decrease NW Natural's sales of natural gas and adversely affect NW Holdings' or NW Natural's results of operations because revenues are collected mostly through volumetric rates, based on the amount of gas sold. In Oregon, NW Natural has a conservation tariff which is designed to recover lost utility margin due to declines in residential and small commercial customers' consumption. However, NW Natural does not have a conservation tariff in Washington that provides it this margin protection on sales to customers in that state. Similar conservation risks exist for water utilities. Customers' conservation efforts may have a negative impact on NW Holdings' and NW Natural's financial condition, revenues and results of operations.

ECONOMIC RISK. *Changes in the economy and in the financial markets may have a negative impact on our financial condition and results of operations.*

If an economic slowdown occurs, our financial condition, results of operations, and cash flows could be adversely affected. Moreover, fluctuations and uncertainties in the economy make it challenging for us to accurately forecast and plan future business activities and to identify risks that may affect our business, financial condition, and operating results. Changes in economic activity in our markets and in global financial markets can result lower demand for energy, increased incidence of customers' inability to pay or delay in paying utility bills or increase in customer bankruptcies, less new housing construction or fewer conversions to natural gas, higher levels of residential foreclosures or vacancies, uncertainty regarding energy prices and the capital and commodity markets, increased credit risk and supply chain uncertainty. We are evaluating and monitoring current economic conditions, which include but are not limited to: inflation, interest rates and rising commodity costs, recessionary pressures, banking environment and risk of further bank failure, heightened cybersecurity awareness, geopolitical uncertainty, including the ongoing conflicts in Europe and the Middle East, and supply chain disruptions. These and other macroeconomic conditions may adversely impact the markets in which we operate and could cause the local, national or global economy to enter a period of recession. We cannot predict the timing, strength, or duration of any future economic slowdown or recession. If the economy or the markets in which we operate decline from present levels, it may have an adverse effect on our business, financial condition, and results of operations.

WEATHER RISK. *Warmer than average weather may have a negative impact on our revenues and results of operations.*

We are exposed to weather risk in our natural gas business, primarily at NW Natural. A majority of NW Natural's gas volume is driven by gas sales to space heating residential and small commercial customers during the winter heating season. Current NW Natural rates are based on an assumption of average weather. Warmer than average weather typically results in lower gas sales. Colder weather typically results in higher gas sales. Although the effects of warmer or colder weather on utility margin in Oregon are expected to be mitigated through the operation of NW Natural's weather normalization mechanism, weather variations from normal could adversely affect utility margin because NW Natural may be required to purchase more or less gas at spot rates, which may be higher or lower than the rates assumed in its PGA. Additionally, extreme weather events, such as those that occurred in February 2021 and January 2024 can result in the purchase of higher levels of gas at significantly higher spot rates. Also, a portion of NW Natural's Oregon residential and commercial customers (usually less than 10%) have opted out of the weather normalization mechanism, and approximately 12% of its customers are located in Washington where it does not have a weather normalization mechanism. These effects could have an adverse effect on NW Holdings' and NW Natural's financial condition, results of operations and cash flows.

Water Business Risks

WATER SECTOR BUSINESS. *NW Holdings' water, wastewater and water services businesses are subject to a number of risks in addition to the risks described above.*

Although the water businesses are not currently expected to materially contribute to the results of operations of NW Holdings, these businesses are subject to risks, in addition to those described above, including:

- contamination of water supplies, including water provided to customers with naturally occurring or human-made substances or other hazardous materials, or disruptions to water treatment processes;
- interruptions in water supplies and service, weather conditions, natural disasters and droughts;
- insufficient water supplies, limitations on or disputes with respect to water rights or supplies, or the inability to secure water rights or supplies at a reasonable cost;
- disruptions to the wastewater collection and treatment process;
- reliance on third parties for water supplies and transportation of such water supplies;
- the ability to attract and retain customers to our water services business and competition for customers' business;
- conservation efforts by customers;
- regulatory and legal requirements, including environmental, health and safety laws and regulations;
- operational risks, including customer and employee safety; and

- the outcome of rate cases and other regulatory proceedings.

Significant losses, liabilities or impairments arising from these businesses may adversely affect NW Holdings' financial position or results of operations.

INVESTMENT RISK. *NW Holdings' expectations with respect to the financial results of its investments in water, wastewater and water services operations are based on various assumptions and beliefs that may not prove accurate, resulting in failures or delays in achieving expected returns or performance.*

NW Holdings' expansion into the water sector is an important component of its growth strategy. Although NW Holdings expects its water and wastewater utility operations and water services businesses will result in various benefits, including expanding customer bases, providing investment opportunities through infrastructure development and enhancing regulatory relationships within the local communities served, NW Holdings may not be able to realize these or other benefits. Achieving the anticipated benefits is subject to a number of uncertainties, including whether the businesses acquired can be operated in the manner intended and whether costs to finance the acquisitions and investments will be consistent with expectations, as well as whether investments in the water sector can reach scale in a reasonable period of time. Events outside of our control, including but not limited to regulatory changes or developments, could adversely affect our ability to realize the anticipated benefits from building NW Holdings' water platform. The integration of newly acquired water businesses, particularly over noncontiguous geographic regions, may be unpredictable, subject to delays or changed circumstances, and such businesses may not perform in accordance with our expectations. In addition, anticipated costs, level of management's attention and internal resources to achieve the integration of or operate the acquired businesses may differ significantly from our current estimates resulting in failures or delays in achieving expected returns or performance. We have previously acquired, and from time to time may make further investments in unregulated businesses on the water platform, including wastewater and water services businesses, which may result in additional uncertainty or volatility of earnings from these businesses. If NW Holdings' expectations regarding the financial results of its investments in water operations prove to be inaccurate, it may adversely affect NW Holdings' financial position or results of operations.

Non-Regulated RNG Risks

INVESTMENT RISK. *NW Holdings' expectations with respect to the financial results of its investments in non-regulated RNG investments are based on various assumptions and beliefs that may not prove accurate, resulting in failures or delays in achieving expected returns.*

NW Holdings' expansion into the non-regulated RNG business is an important component of its growth strategy. Although NW Holdings expects this expansion will result in various benefits, including providing cost-effective solutions to decarbonize the utility, commercial, industrial and transportation sectors, NW Holdings may not be able to realize these or other benefits. Achieving the anticipated benefits is subject to a number of uncertainties, including whether the investments can be made at an expected scale, whether the investments can be monetized in the manner intended, and whether costs to finance the investments will be consistent with expectations. Events outside of our control, including but not limited to market or regulatory changes or developments, could adversely affect our ability to realize the anticipated benefits from building NW Holdings' non-regulated RNG platform. The establishment and growth of a non-regulated RNG business may be unpredictable, subject to uncertainties or changed circumstances, and such business may not perform in accordance with our expectations. In addition, anticipated costs, level of management's attention and internal resources to achieve the integration of the acquired investments may differ significantly from our current estimates resulting in failures or delays in achieving expected returns or performance. As part of our business model, we may purchase RNG from third parties in a variety of structures, including on a volumes-produced basis. Conversely, we may sell RNG in a variety of structures, including on a fixed-volume basis. This model could result in a mismatch between our purchased RNG portfolio and RNG volumes we have contracted to sell at any one time, which could result in our obligation to procure additional RNG at then-market prices or to pay damages to satisfy RNG sales contracts to which we are a party, which amounts could be significant. For example, the RNG purchase contract between Ohio Renewables and a subsidiary of EDL is on a volumes-produced basis, whereas Ohio Renewables' contract for the sale of RNG from 2025 through 2042 is a fixed-volume contract. We could additionally experience technological challenges; ineffective scalability or inability to achieve production volumes consistent with our expectations and marketing arrangements; construction delays or cost overruns; disputes with third party business partners; risks related to markets for RNG and its associated attributes (including changes in market regulation, behavior, or prices); the inability to receive expected tax or regulatory treatment; unsuccessful business models; or unexpected operating costs. If NW Holdings' expectations regarding the financial results of its investments in non-regulated RNG prove to be inaccurate, it may adversely affect NW Holdings' financial position or results of operations.

RENEWABLES BUSINESS RISK. *NW Natural Renewables is an unregulated subsidiary of NW Holdings established to pursue unregulated renewable natural gas activities. These activities are subject to a number of risks in addition to the risks described above.*

Our Renewables business is subject to risks, in addition to those described above, including:

- unpredictable production levels or performance or gas quality below expected levels, which may impact our ability to accept or deliver RNG under our contractual agreements;
- construction risks or delays, including due to inclement weather, supply chain or labor disruptions or otherwise;
- cost overruns and the need to commit more capital than initially budgeted as a result of environmental, construction, technological or other complications;
- weather conditions;
- changes in energy commodity prices, including pricing of, and volatility in markets for, RNG and its associated attributes;

- equipment failure, difficulties or delays in repairing or replacing equipment, technical difficulties or otherwise higher than expected operating costs;

- regulatory, policy, and legal requirements, including environmental, health and safety laws and regulations or regulations that may impact the value of RNG and its associated attributes or our ability to deliver RNG in the manner contemplated under our contractual arrangements;
- changes to laws or policies that may reduce demand for, or desirability of, RNG or its associated attributes;
- reliance on third parties, including for pipeline interconnection and for a sufficient supply of waste for conversion to RNG;
- catastrophic events such as fires, explosions, earthquakes, droughts, acts of terrorism and other force majeure events that may impact the Renewables business, its customers, suppliers, or other business partners; and
- failures or delays in obtaining necessary land rights, permits, approvals or other consents required to construct and operate projects.

Significant losses, liabilities or impairments arising from these businesses may adversely affect NW Holdings' financial position or results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

We have no unresolved staff comments.

ITEM 1C. CYBERSECURITY

Processes of Addressing Cybersecurity Threats

Cybersecurity is critical to our business. As an energy infrastructure company, we face a variety of cybersecurity threats that range from attacks common to most industries, such as ransomware and denial-of-service, to attacks from more advanced and persistent, highly organized adversaries, including nation state actors, that target critical infrastructure sectors. We recognize the critical importance of maintaining the safety and security of our systems and data and have a holistic process for overseeing and managing cybersecurity and related risks. The process is supported by management and overseen by our board of directors.

One of the tools used by management and our Board of Directors in managing business risks is an annual enterprise risk management (ERM) assessment to identify and manage key existing and emerging risks our company faces. Our ERM process is designed to identify significant risks relevant to the company and assess the characteristics and circumstances of the risks to identify both the potential impacts to our company of a particular risk and the velocity with which the risk may manifest. Cybersecurity is among the risks identified in our ERM assessment and has been embedded in the Company's operating procedures, internal controls and information systems.

In addition to our overall ERM process, we have developed and implemented a cybersecurity risk management program and processes intended to detect, assess, manage, and develop resiliency against material risks from cybersecurity threats. Our cybersecurity program utilizes a risk-based approach and includes written cybersecurity and information technology processes and procedures, including a cybersecurity incident response plan that involves procedures for responding to cybersecurity incidents. We design and assess our program informed by various cybersecurity frameworks, such as the National Institute of Standards and Technology (NIST) and leverage a widely-adopted risk assessment model to identify, measure and prioritize cybersecurity and technology risks. The goal of our program is to prevent, identify, escalate, investigate, resolve and recover from identified incidents and security incidents in a timely manner.

Our cybersecurity program also incorporates intelligence sharing capabilities about emerging threats within the utility industry and other industries through collaboration with peer companies and specialized consultants and advisors, public-private partnerships with government intelligence agencies, including the FBI, CISA, and the Department of Energy Office of Cybersecurity, Energy Security and Emergency Response, and geopolitical briefings. We also leverage third-party benchmarking, the results from regular internal and third-party audits, technology partner resources, threat intelligence feeds, and other similar resources to inform our cybersecurity processes and allocate resources.

Beginning in May 2021, the Department of Homeland Security's (DHS) Transportation Security Administration (TSA) released two directives, with several updates, applicable to certain owners and operators of pipeline facilities, including NW Natural. These directives cumulatively required owners and operators to implement cybersecurity incident reporting to the DHS, designate two cybersecurity coordinators, and perform a gap assessment of current entity cybersecurity practices against certain voluntary TSA security guidelines and report relevant results and proposed mitigation to applicable DHS agencies; implement a significant number of specified cyber security controls and processes; and clarifying Operational Technology (OT) scope and providing a risk- and outcome-based framework. We made significant additional and accelerated investments in cybersecurity in response to the TSA directives.

Our cybersecurity program has several fundamental tenants, including security governance, cybersecurity risk management, compliance, defensibility, zero-trust architecture and cloud security. We utilize multilayered defenses and continuous monitoring with

data analytics to detect anomalies and search for cyber threats in our system.

Key components of our cybersecurity risk management program include:

- risk assessments designed to help identify cybersecurity risks to our critical systems, information, services, and our broader technology environment;
- the use of external service providers with specific expertise, where appropriate, to assess, test or otherwise assist with aspects of our security processes;
- cybersecurity awareness training of our employees, incident response personnel and senior management, as well as periodic experiential learning through “phishing simulations”;
- segmentation of, and back-ups for, certain of our sensitive systems and data;
- third-party cyber risk management process for vendors including, among other things, a security assessment, contracting program, and ongoing monitoring for vendors based on their risk profile;
- physical security around our sensitive infrastructure and cybersystems.

In accordance with our program and processes, we regularly assess risks from cybersecurity and technology threats and monitor our information systems for potential vulnerabilities. We conduct regular reviews and tests of our information security program and also utilize audits by our internal audit team and third-party consultants, table-top exercises, penetration and vulnerability testing, data recovery testing, simulations, and other exercises to evaluate the effectiveness of our information security program and improve our security measures and planning. We are continuously working to evolve our oversight processes to mature how we identify and manage cybersecurity risks, and we perform periodic maturity assessments to measure our progress.

As a regulated energy infrastructure company, for decades we have used an incident command system (ICS) as a standardized approach to the command, control and coordination of a variety of emergency situations. In the event of emergencies, including cybersecurity events, we stand up an Incident Command Team to respond to the emergency. We exercise and train the ICT for a variety of emergencies, including, cyber events on a regular basis.

At this time, we have not identified any risks from known previous cybersecurity incidents, that have materially affected or are reasonably likely to materially affect us, including our operations, business strategy, results of operations or financial condition. With a majority of our business in energy and infrastructure, we face sophisticated and rapidly evolving attempts to overcome our security measures and protections. The occurrence of both intentional and unintentional incidents could occur in the future. We face certain ongoing risks from cybersecurity threats that, if realized, are reasonably likely to materially affect us, including our operations, business strategy, results of operations, or financial condition. See Item 1A, "Risk Factors” above for additional information on risks related to our business, including for example risks related to cyber attacks, information and system breaches, and technology disruptions and failures, our reliance on technology.

Cybersecurity Governance

Our Board considers cybersecurity risk as part of its risk oversight function and has delegated oversight of cybersecurity and other information technology risks to the Audit Committee. The Audit Committee oversees management’s implementation of the cybersecurity risk management program.

The Audit Committee receives regular reports from management on our cybersecurity risks. Additionally, management updates the Audit Committee as necessary, regarding any cybersecurity incidents. The Audit Committee reports to the full Board regarding the Audit Committee’s areas of oversight, including those related to cybersecurity. The full Board also receives briefings from management on our cybersecurity risk management program periodically. Additionally, our Board receives presentations on cybersecurity topics from our IT management team or external experts as part of the Board’s ongoing education.

Our management team, including our Cybersecurity management team, has primary responsibility for our overall cybersecurity risk management program, and supervises both our internal cybersecurity personnel and our retained external cybersecurity consultants. Our Cybersecurity management team has been led, since 2017, by our Vice President, Chief Information Officer, who also functions as our Chief Information Security Officer and reports to our CEO. Mr. Downing has an extensive career of 29 years in information technology services in the energy sector, including at WorleyParsons, British Petroleum and Schlumberger. He holds a degree in Information Systems as well as a Masters of Business Administration.

Mr. Downing is supported by Mr. Carlson, our Director of Cybersecurity and Compliance, and his team. Mr. Carlson has 24 years of experience in information technology focused on highly regulated sectors including energy, government, and insurance. He holds a bachelor’s degree in Information Technology, and master’s degrees in Information Assurance and Business Administration. The remainder of our team is comprised of cybersecurity professionals with broad experience and expertise, including in cybersecurity, threat assessments and detection, mitigation technologies, cybersecurity training, incident response, cyber forensics, insider threats and regulatory compliance. Collectively our team has certifications from various organizations such as American Society for Industrial Security, AXELOS, Cloud Security Alliance, Information Systems Audit and Control Association, International Information System Security Certification Consortium and SANS Institute.

Our cybersecurity and compliance team regularly collects data on cybersecurity threats and risk areas, monitors our systems, and conducts testing to assess our processes and procedures and the threat landscape. The CIO receives regular updates on cybersecurity matters, results of mitigation efforts and cybersecurity incident response and remediation.

In the event of an incident, we intend to utilize our ICT and follow our detailed incident program and processes, which outlines the steps to be followed from incident detection to mitigation, recovery and notification, including notifying relevant functional areas, as well as senior leadership and the Board, as appropriate.

ITEM 2. PROPERTIES

NW Natural's Natural Gas Distribution Properties

NW Natural's natural gas pipeline system consists of approximately 14,300 miles of distribution mains, approximately 700 miles of transmission mains and approximately 10,300 miles of service lines located in its territory in Oregon and southwest Washington. In addition, the pipeline system includes service regulators and meters, as well as district regulators and metering stations. Natural gas pipelines are located in public rights-of-way pursuant to franchise agreements, ordinances, or other legal rights, or on lands of others pursuant to easements obtained from the owners of such lands. NW Natural also holds permits for the crossing of numerous railroads, navigable waterways and smaller tributaries throughout our entire service territory.

NW Natural owns service building facilities in Portland, Oregon, as well as various satellite service centers, garages, warehouses, and other buildings necessary and useful in the conduct of its business. Resource centers are maintained on owned or leased premises at convenient points in the distribution system to provide service within NW Natural's service territory.

NW Natural commenced a 20-year lease in March 2020 for a headquarters and operations center in Portland, Oregon.

NW Natural's Mortgage and Deed of Trust (Mortgage) is a first mortgage lien on certain gas properties owned from time to time by NW Natural, including substantially all of the property constituting NW Natural's natural gas distribution plant balances.

These properties are used in the NGD segment.

NW Natural's Natural Gas Storage Properties

NW Natural holds leases and other property interests in approximately 12,000 net acres of underground natural gas storage in Oregon and easements and other property interests related to pipelines associated with these facilities. NW Natural owns rights to depleted gas reservoirs near Mist, Oregon that are continuing to be developed and operated as underground gas storage facilities. NW Natural also holds all future storage rights in certain other areas of the Mist gas field in Oregon in addition to other leases and property interests.

NW Natural owns LNG storage facilities in Portland and near Newport, Oregon.

A portion of these properties are used in the NGD segment.

NWN Water's Distribution Properties

NWN Water owns and maintains water distribution pipes, storage, wells and other infrastructure and wastewater treatment facilities, and holds related leases and other property interests in Oregon, Washington, Idaho, Texas and Arizona. Pipelines are located in municipal streets or alleys pursuant to franchise or occupation ordinances, in county roads or state highways pursuant to agreements or permits granted pursuant to statute, or on lands of others pursuant to easements obtained from the owners of such lands. These properties are used by entities that are aggregated and reported as other under NW Holdings.

We consider all of our properties currently used in our operations, both owned and leased, to be well maintained, in good operating condition, and, along with planned additions, adequate for our present and foreseeable future needs.

ITEM 3. LEGAL PROCEEDINGS

Other than the proceedings disclosed in Note 17, we have only nonmaterial litigation in the ordinary course of business.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

NW Holdings' common stock is listed and trades on the New York Stock Exchange under the symbol NWN.

There is no established public trading market for NW Natural's common stock.

As of February 14, 2024, there were 4,060 holders of record of NW Holdings' common stock and NW Holdings was the sole holder of NW Natural's common stock.

The following table provides information about purchases of NW Holdings' equity securities that are registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, during the quarter ended December 31, 2023:

	Issuer Purchases of Equity Securities			
Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[1]	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs[1]
Balance forward			2,124,528	$ 16,732,648
10/01/23-10/31/23	—	$ —	—	—
11/01/23-11/30/23	—	$ —	—	—
12/01/23-12/31/23	—	$ —	—	—
Total	—		2,124,528	$ 16,732,648

(1) During the quarter ended December 31, 2023, no shares of NW Holdings common stock were repurchased pursuant to the NW Holdings Board of Directors-approved share repurchase program. Effective August 3, 2022, we received NW Holdings Board approval to extend the repurchase program. Such authorization will continue until the program is used, terminated or replaced. For more information on this program, see Note 5.

ITEM 6. RESERVED

Not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is management's assessment of NW Holdings' and NW Natural's financial condition, including the principal factors that affect results of operations. The discussion covers the years ended December 31, 2023, 2022, and 2021 and refers to the consolidated results of NW Holdings, the substantial majority of which consist of the operating results of NW Natural. When significant activity exists at NW Holdings that does not exist at NW Natural, additional disclosure has been provided. References in this discussion to "Notes" are to the Notes to the Consolidated Financial Statements in Item 8 of this report.

NW Natural's natural gas distribution activities are reported in the natural gas distribution (NGD) segment. The NGD segment also includes NWN Gas Reserves, which is a wholly-owned subsidiary of Energy Corp, the NGD-portion of NW Natural's Mist storage facility in Oregon, and NW Natural RNG Holding Company, LLC. NW Natural RNG Holding Company, LLC holds investments in Lexington Renewable Energy, LLC and Dakota City Renewable Energy LLC, which are accounted for under the equity method. Other activities aggregated and reported as other at NW Natural include the non-NGD storage activity at Mist as well as asset management services and the appliance retail center operations. Other activities aggregated and reported as other at NW Holdings include NNG Financial's investment in Kelso-Beaver Pipeline (KB Pipeline); NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities; and NWN Water, which through itself or its subsidiaries, owns and continues to pursue investments in the water, wastewater, and water services sectors. See Note 4 for further discussion of our business segment and other, as well as our direct and indirect wholly-owned subsidiaries.

NON-GAAP FINANCIAL MEASURES. In addition to presenting the results of operations and earnings amounts in total, certain financial measures are expressed in cents per share, which are non-GAAP financial measures. All references in this section to earnings per share (EPS) are on the basis of diluted shares. We use such non-GAAP financial measures to analyze our financial performance because we believe they provide useful information to our investors, analysts, and creditors in evaluating our financial condition and results of operations. Our non-GAAP financial measures should not be considered a substitute for, or superior to, measures calculated in accordance with U.S. GAAP. Moreover, these non-GAAP financial measures have limitations in that they do not reflect all the items associated with the operations of the business as determined in accordance with GAAP. Other companies may calculate similarly titled non-GAAP financial measures differently than how such measures are calculated in this report, limiting the usefulness of those measures for comparative purposes. A reconciliation of each non-GAAP financial measure to the most directly comparable GAAP financial measure is provided below.

	2023	2022	2021
Diluted EPS - Total[(1)]	$ 2.59	$ 2.54	$ 2.56
Diluted EPS - NGD segment[(2)]	2.59	2.34	2.24
Diluted EPS - NW Holdings - other[(2)]	—	0.20	0.32

(1) Total Diluted EPS is equal to the sum of Diluted EPS - NGD segment and Diluted EPS - NW Holdings – other.
(2) Non-GAAP financial measure

EXECUTIVE SUMMARY

NW Holdings' financial results and highlights for the year include:

- Reported net income of $93.9 million or $2.59 per share (diluted) for 2023 compared to $86.3 million or $2.54 per share (diluted) in the prior year
- Added over 15,000 gas and water utility connections in the last 12 months for a combined growth rate of 1.8% as of December 31, 2023 mainly driven by strong water acquisitions and combined organic growth;
- Invested $327.3 million in natural gas and water utility systems to support growth, enhance reliability and resiliency, and upgrade technology;
- Scored second in the West among large utilities in the 2023 J.D. Power Gas Utility Residential Customer Satisfaction Study, making this the 20th consecutive year customers have ranked NW Natural among the top two utilities;
- Filed an Oregon general rate case for NW Natural requesting a $154.9 million revenue requirement increase to support system investments and cost increases;
- Closed four water utility acquisitions in 2023, launched our water services business and continued to increase our investment in the largest privately owned water utility in Oregon; and
- Increased our dividend for the 68th consecutive year to an annual indicated dividend rate of $1.95 per share.

Key financial highlights for NW Holdings include:

	2023		2022		2021	
In millions	Amount	Per Share	Amount	Per Share	Amount	Per Share
Consolidated net income	$ 93.9	$ 2.59	$ 86.3	$ 2.54	$ 78.7	$ 2.56

Key financial highlights for NW Natural include:

	2023	2022	2021
In millions	Amount	Amount	Amount
Consolidated net income	$ 104.7	$ 91.6	$ 81.2
Natural gas distribution margin	575.0	505.9	479.8

2023 COMPARED TO 2022. Consolidated net income increased $13.2 million at NW Natural primarily due to the following factors:

- $69.1 million increase in NGD segment margin driven by new rates in Oregon and Washington, actual gas prices that were lower than what was estimated in the 2022-2023 PGA, amortization of deferred balances (which is mostly offset in operations and maintenance expenses and interest expense), and customer growth; and
- $15.8 million increase in other income, net primarily due to interest income from invested cash and the equity portion of AFUDC, and lower pension costs; partially offset by
- $39.8 million increase in operations and maintenance expenses due to higher payroll costs, higher contract labor, the amortization of deferred balances (which is mostly offset in revenues), information technology costs and amortization expense related to cloud computing arrangements;
- $14.3 million increase in interest expense, net primarily due to higher long-term debt balances;
- $6.5 million increase in depreciation expense due to additional capital investments;
- $4.8 million increase in general taxes primarily driven by higher property and payroll taxes; and
- $4.6 million increase in income tax expense due to higher pre-tax income.

Consolidated net income increased $7.6 million at NW Holdings primarily due to the following factors:

- $13.2 million increase in consolidated net income at NW Natural as discussed above; partially offset by
- $5.6 million decrease in other net income primarily reflecting higher interest expense at the holding and water companies.

2022 COMPARED TO 2021. Consolidated net income increased $10.4 million at NW Natural primarily due to the following factors:

- $26.1 million increase in NGD segment margin driven by new rates in Oregon and Washington, customer growth, and amortization of deferred balances; and
- $12.3 million increase in other income, net primarily due to lower pension costs; partially offset by
- $16.0 million increase in operations and maintenance expenses due to higher contract labor, amortization expense related to cloud computing arrangements, information technology costs, and professional service fees;
- $3.3 million increase in interest expense primarily due to higher long-term debt balances and higher interest rates;
- $2.7 million increase in income tax expense due to an increase in pre-tax income;
- $2.5 million increase in depreciation expense due to additional capital investments; and
- $2.0 million increase in general taxes primarily driven by higher property taxes.

Consolidated net income increased $7.6 million at NW Holdings primarily due to the following factors:

- $10.4 million increase in consolidated net income at NW Natural as discussed above; partially offset by
- $2.8 million decrease in other net income primarily reflecting higher interest expense at the holding company.

Diluted EPS for NW Holdings decreased $0.02 per share primarily due to a common share issuance on April 1, 2022 and share issuances through NW Holdings' at-the-market program, partially offset by an increase in consolidated net income.

CURRENT ECONOMIC CONDITIONS. We continuously review and monitor current economic conditions, which include but are not limited to: inflation and interest rates, supply chain disruptions, and other regulatory, physical or cyber related risks impacting our business. We have experienced higher material and labor costs as a result of inflation as well as increased interest costs from higher rates over the past year. We also continue to experience long lead times on certain materials, including meter parts, microchips, semi-conductors, and IT equipment. However, through advanced planning, carrying additional levels of inventory, diversifying our vendors, and making contingency plans to address risks, we are striving to mitigate supply chain risks. We have maintained enhanced cybersecurity monitoring, assessments, and third-party penetration tests in response to reports that cybersecurity attacks have increased and may continue to increase.

NW Holdings and NW Natural continue to monitor interest rates and financing options for all of its businesses. Interest rates increased in 2022 and 2023 resulting from actions taken by the U.S. Federal Reserve to increase short-term rates as inflation was elevated. NW Natural generally recovers interest expense on its long-term debt through its authorized cost of capital. Certain working capital items, such as the cost of gas, are deferred and accrue interest in Oregon and Washington. Additionally, short-term debt is incorporated in the capital structure in Washington. NW Natural Water's regulated water and wastewater utilities generally recover interest expense from long-term debt through their respective authorized cost of capital.

DIVIDENDS

NW Holdings dividend highlights include:

Per common share	2023	2022	2021
Dividends paid	$ 1.9425	$ 1.9325	$ 1.9225

In January 2024, the Board of Directors of NW Holdings declared a quarterly dividend on NW Holdings common stock of $0.4875 per share, payable on February 15, 2024, to shareholders of record on January 31, 2024, reflecting an indicated annual dividend rate of $1.95 per share.

See "Financial Condition - *Liquidity and Capital Resources*" for more information regarding the NW Holdings and NW Natural dividend policies and regulatory conditions on NW Natural dividends to its parent, NW Holdings.

RESULTS OF OPERATIONS

Regulatory Matters

Regulation and Rates

NATURAL GAS DISTRIBUTION. NW Natural's natural gas distribution business is subject to regulation by the OPUC and WUTC with respect to, among other matters, rates and terms of service, systems of accounts, and issuances of securities by NW Natural. In 2023, approximately 88% of NGD customers were located in Oregon, with the remaining 12% in Washington. Earnings and cash flows from natural gas distribution operations are largely determined by rates set in general rate cases and other proceedings in Oregon and Washington. They are also affected by weather, the local economies in Oregon and Washington, the pace of customer growth in the residential, commercial, and industrial markets, federal, state and local energy, policy, customer preferences and NW Natural's ability to remain price competitive, control expenses, and obtain reasonable and timely regulatory recovery of its natural gas distribution-related costs, including operating expenses and investment costs in plant and other regulatory assets. See "*Most Recent Completed Rate Cases*" below.

MIST INTERSTATE GAS STORAGE. NW Natural's interstate storage activity at Mist is subject to regulation by the OPUC, WUTC, and the Federal Energy Regulatory Commission (FERC) with respect to, among other matters, rates and terms of service. The OPUC also regulates intrastate storage services at Mist, while FERC regulates interstate storage services at Mist. The FERC uses a maximum cost of service model which allows for gas storage prices to be set at or below the cost of service as approved by FERC in our last regulatory filing. The OPUC Schedule 80 rates are tied to the FERC rates, and are updated whenever NW Natural modifies FERC maximum rates. See "*Most Recent Completed Rate Cases*" below.

OTHER. The wholly-owned regulated water businesses of NWN Water, a wholly-owned subsidiary of NW Holdings, are subject to regulation by the utility commissions in the states in which they are located, which currently includes Oregon, Washington, Arizona,

Idaho, and Texas. The wholly-owned regulated wastewater businesses of NWN Water are subject to regulation by the utility commissions in the states in which they are located, which currently includes Texas and Arizona.

Most Recent Completed Rate Cases

OREGON. On October 24, 2022, the OPUC issued an order for rates effective November 1, 2022, which authorized a return on equity (ROE) of 9.4%, a cost of capital of 6.836%, and a capital structure of 50% common equity and 50% long-term debt. After adjustments provided in the order, the order increased the revenue requirement by $59.4 million, and included a rate base of $1.76 billion, or an increase of $320 million since the last rate case. The OPUC also ordered an adjustment to NW Natural's current line extension allowance methodology to a five times margin approach (which for an average residential customer is currently approximately $2,300), declining to four times margin on November 1, 2023, and three times margin on November 1, 2024. The OPUC further ordered that the costs NW Natural sought to recover related to its Lexington RNG project were reasonable and prudently incurred under Senate Bill 98 and adopted an automatic adjustment clause that allows for NW Natural's RNG project costs to be added to rates annually on November 1st.

From November 1, 2020 through October 31, 2022, the OPUC authorized rates to customers based on an ROE of 9.4% and a cost of capital of 6.965% with a capital structure of 50% common equity and 50% long-term debt. The OPUC also authorized NW Natural to recover the expense associated with the Oregon Corporate Activity Tax (CAT) as a component of base rates.

WASHINGTON. On October 21, 2021, the WUTC issued an order concluding NW Natural's general rate case filed in December 2020 (WUTC Order). The WUTC Order provides for an annual revenue requirement increase over two years, consisting of a 6.4% or $5.0 million increase in the first year beginning November 1, 2021 (Year One), and up to a 3.5% or $3.0 million increase in the second year beginning November 1, 2022 (Year Two). The increase is based on the following assumptions:

- Cost of capital of 6.814%; and
- Average rate base of $194.7 million, an increase of $20.9 million since the last rate case for capital expenditures already expended at the time of filing, with an additional expected $31.2 million increase in Year One, and an additional expected $21.4 million increase in Year Two, with the increases in Year One and Year Two relating to expected capital expenditures in those years.

The WUTC Order does not specify the underlying inputs to the cost of capital, including capital structure and return on equity. New rates authorized by the WUTC Order were effective November 1, 2021. In September 2023, NW Natural received a letter of compliance from the WUTC acknowledging that the Year Two rates are no longer subject to review and refund.

From November 1, 2019 through October 31, 2021, the WUTC authorized rates to customers based on an ROE of 9.4% and an overall rate of return of 7.161% with a capital structure of 50.0% long-term debt, 1.0% short-term debt, and 49.0% common equity. The WUTC also authorized the recovery of environmental remediation expenses allocable to Washington customers through an Environmental Cost Recovery Mechanism (ECRM) and directed NW Natural to provide federal tax reform benefits to customers. See "Rate Mechanisms - Environmental Cost Deferral and Recovery - *Washington ECRM*" below.

FERC. NW Natural is required under its Mist interstate storage certificate authority and rate approval orders to file every five years either a petition for rate approval or a cost and revenue study to change or justify maintaining the existing rates for its interstate storage services. NW Natural filed a rate petition with the FERC in August 2023 and the revised rates were effective beginning September 1, 2023.

NW Natural continuously evaluates the need for rate cases in its jurisdictions.

Regulatory Proceeding Updates

2024 OREGON RATE CASE. On December 29, 2023, NW Natural filed a request for a general rate increase with the OPUC. The filing includes a requested $154.9 million annual revenue requirement increase based upon the following assumptions or requests:

- Capital structure of 50% long-term debt and 50% equity;
- Return on equity of 10.1%;
- Cost of capital of 7.406%; and
- Average rate base of $2.14 billion.

The filing includes effects of inflation, an updated depreciation study, and an increase in average rate base of $381 million compared to the last rate case for several long-planned investments by NW Natural including the following:

- Supporting reinforcement, safety and reliability of NW Natural's distribution systems and operating facilities;
- Upgrading technology to, among other things, further modernize NW Natural's information technology infrastructure, enhance cybersecurity protections, and modernize metering infrastructure; and
- Investing in components of NW Natural's Mist and liquified natural gas storage facilities, which support service during winter heating months.

NW Natural's filing will be reviewed by the OPUC and other stakeholders. The process is anticipated to take up to 10 months with new rates expected to take effect November 1, 2024.

Rate Mechanisms

During 2023 and 2022, NW Natural's key approved rates and recovery mechanisms for each service area included:

	Oregon		Washington	
	2022 Rate Case (effective 11/1/2022)	2020 Rate Case (effective 11/1/2020)	2021 Rate Case (effective 11/1/2021)	2019 Rate Case (effective 11/1/2019)
Authorized Rate Structure:				
Return on Equity	9.4%	9.4%	**	9.4%
Rate of Return	6.8%	7.0%	6.8%	7.2%
Debt/Equity Ratio	50%/50%	50%/50%	**	51%/49%
Key Regulatory Mechanisms:				
Purchased Gas Adjustment (PGA)	X	X	X	X
Gas Cost Incentive Sharing	X	X		
Decoupling	X	X		
Weather Normalization (WARM)	X	X		
RNG Automatic Adjustment Clause	X			
Environmental Cost Recovery	X	X	X	X
Interstate Storage and Asset Management Sharing	X	X	X	X

** The WUTC Order does not specify the underlying inputs to the cost of capital, including capital structure and return on equity.

Annually, or more often if circumstances warrant, NW Natural reviews all regulatory assets for recoverability. If NW Natural should determine all or a portion of these regulatory assets no longer meet the criteria for continued application of regulatory accounting, then NW Natural would be required to write-off the net unrecoverable balances against earnings in the period such a determination was made.

PURCHASED GAS ADJUSTMENT. Rate changes are established for NW Natural each year under purchased gas adjustment (PGA) mechanisms in Oregon and Washington to reflect changes in the expected cost of natural gas commodity purchases. The PGA filings include costs for gas purchases, gas commodity derivative contracts, gas storage costs, gas reserves costs, pipeline demand costs, renewable natural gas and its environmental attributes, including renewable thermal certificates, and temporary rate adjustments, which amortize balances of deferred regulatory accounts.

Included in the 2022-23 PGA, the OPUC and WUTC approved a new customer rate mitigation program to address higher gas costs, which includes a temporary bill credit for NW Natural's residential customers from November 2022 to March 2023, with deferral of the temporary bill credit to be recovered in warmer months when customers typically see lower bills. As of December 31, 2023, the amount deferred to a regulatory asset related to the bill credit that remains to be collected from customers was approximately $5.3 million. The residual balance is scheduled to be collected from customers in the 2023-24 PGA year.

In September 2023, NW Natural filed its annual PGAs and received OPUC and WUTC approval in October 2023. PGA rate changes were effective November 1, 2023. Rates may vary between states due to different rate structures, rate mechanisms and hedging policies.

Each year, NW Natural hedges gas prices on a portion of NW Natural's annual sales requirement based on normal weather, including both physical and financial hedges. NW Natural entered the 2023-24 gas year with total forecasted sales volume hedged at approximately 82%, including 66% in financial hedges and 16% in physical gas supplies. The total hedged was approximately 85% in Oregon and 55% in Washington.

For the subsequent two gas years, NW Natural was hedged in total between 20% and 39% for annual requirements, which consists of between 22% and 42% in Oregon and 0% and 13% in Washington. Hedge levels are subject to change based on actual load volumes, which depend to a certain extent on weather, economic conditions, and gas reserve production. Also, gas storage inventory levels may increase or decrease with storage expansion, changes in storage contracts with third parties, variations in the heat content of the gas, and/or storage recall by NW Natural. Gas purchases and hedges entered into for the upcoming PGA year will be included in the Company's PGA filings in Oregon and Washington.

Under the current PGA mechanism in Oregon, there is an incentive sharing provision whereby NW Natural is required to select each year an 80% deferral or a 90% deferral of higher or lower actual gas costs compared to estimated PGA prices, such that the impact on NW Natural's current earnings from the incentive sharing is either 20% or 10% of the difference between actual and estimated gas costs, respectively. For the 2023-24 and 2022-23 gas years, NW Natural selected the 90% deferral option.

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Under the Washington PGAmechanism, NW Natural defers 100% of the higher or lower actual gas costs, and those gas cost differences are passed on to customers through the annual PGArate adjustment.

CLIMATE COMMITMENT ACT. Washington has enacted the Climate Commitment Act (CCA), which establishes a comprehensive program that includes an overall limit for GHG emissions from major sources in the state that declines yearly. The program began January 1, 2023. In December 2023, the WUTC approved a CCAcost recovery mechanism with a rate effective date of January 1, 2024. Under this mechanism, NW Natural recovers CCAcosts and will defer any difference between forecasted and actual costs in the following year. Additionally, under the approved tariff, proceeds from the sale of allowances, which is required under the CCA, would be used to offset CCAcompliance costs for low-income customers. Any remaining proceeds would benefit other customers through fixed bill credits or use in other carbon reduction programs.

Additionally in December 2023, the WUTC approved a request to modify NW Natural's CCAdeferral to allow for the recovery of interest from customers based on the actual cash paid for purchases of allowances, less proceeds received from the sale of allowances.

EARNINGS TEST REVIEW. NW Natural is subject to an annual earnings review in Oregon to determine if the NGD business is earning above its authorized ROE threshold. If NGD business earnings exceed a specific ROE level, then 33% of the amount above that level is required to be deferred or refunded to customers. Under this provision, if NW Natural selects the 80% deferral gas cost option, then NW Natural retains all earnings up to 150 basis points above the currently authorized ROE. If NW Natural selects the 90% deferral option, then it retains all earnings up to 100 basis points above the currently authorized ROE. For the 2022-23 and 2023-24 gas years, NW Natural selected the 90% deferral option. The ROE threshold is subject to adjustment annually based on movements in long-term interest rates. For calendar years 2021, 2022, and 2023, the ROE threshold was 10.40% in all periods. There were no refunds required for 2021 and 2022. NW Natural does not expect a refund for 2023 based on results, and anticipates filing its 2023 earnings test in May 2024.

GAS RESERVES. In 2011, the OPUC approved the Encana gas reserves transaction to provide long-term gas price protection for NGD business customers and determined costs under the agreement would be recovered on an ongoing basis through the annual PGA mechanism. Gas produced from NW Natural's interests is sold at then prevailing market prices, and revenues from such sales, net of associated operating and production costs and amortization, are included in cost of gas. The cost of gas, including a carrying cost for the rate base investment made under the original agreement, is included in NW Natural's annual Oregon PGAfiling, which allows NW Natural to recover these costs through customer rates. The net investment under the original agreement earns a rate of return.

In 2014, NW Natural amended the original gas reserves agreement in response to Encana's sale of its interest in the Jonah field located in Wyoming to Jonah Energy. Under the amended agreement with Jonah Energy, NW Natural has the option to invest in additional wells on a well-by-well basis with drilling costs and resulting gas volumes shared at the amended proportionate working interest for each well in which NW Natural invests. Volumes produced from the additional wells drilled after the amended agreement are included in NW Natural's Oregon PGAat a fixed rate of $0.4725 per therm. NW Natural has not participated in additional wells since 2014.

DECOUPLING. In Oregon, NW Natural has a decoupling mechanism. Decoupling is intended to break the link between revenue and the quantity of gas consumed by customers, removing any financial incentive to discourage customers' efforts to conserve energy. The Order in the 2020 Oregon general rate case also approved of extending NW Natural's decoupling calculation for the months of November and May to the month of April. This mechanism employs a use-per-customer decoupling calculation, which adjusts margin revenues to account for the difference between actual and expected customer volumes. The margin adjustment resulting from differences between actual and expected volumes under the decoupling component is recorded to a deferral account, which is included in the annual PGAfiling. The Oregon decoupling baseline usage per customer was reset in the 2020 Oregon general rate case.

WARM. In Oregon, NW Natural has an approved weather normalization mechanism (WARM), which is applied to residential and small commercial customer bills. This mechanism is designed to help stabilize the collection of fixed costs by adjusting residential and small commercial customer billings based on temperature variances from average weather, with rate decreases when the weather is colder than average and rate increases when the weather is warmer than average. The mechanism is applied to bills from December through mid-May of each heating season. The mechanism adjusts the margin component of customers' rates to reflect average weather, which uses the 25-year average temperature for each day of the billing period. Daily average temperatures and 25-year average temperatures are based on a set point temperature of 59 degrees Fahrenheit for residential customers and 58 degrees Fahrenheit for commercial customers. The collections of any unbilled WARM amounts due to tariff caps and floors are deferred and earn a carrying charge until collected, or returned, in the PGAthe following year. Residential and small commercial customers in Oregon are allowed to opt out of the weather normalization mechanism, and as of December 31, 2023, 7% of total eligible customers had opted out. NW Natural does not have a weather normalization mechanism approved for Washington customers, which account for about 12% of total customers. See "Business Segment—*Natural Gas Distribution*" below.

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INDUSTRIAL TARIFFS. The OPUC and WUTC have approved tariffs covering NGD service to major industrial customers, which are intended to give NW Natural certainty in the level of gas supplies needed to serve this customer group. The approved terms include, among other things, an annual election period, special pricing provisions for out-of-cycle changes, and a requirement that industrial customers complete the term of their service election under NW Natural's annual PGA tariff.

ENVIRONMENTAL COST DEFERRAL AND RECOVERY. NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recover prudently incurred costs allocable to Oregon customers, subject to an earnings test. Effective beginning November 1, 2019, the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers.

Oregon SRRM

Under the Oregon SRRM collection process, there are three types of deferred environmental remediation expense:

- Pre-review - This class of costs represents remediation spend that has not yet been deemed prudent by the OPUC. Carrying costs on these remediation expenses are recorded at NW Natural's authorized cost of capital. NW Natural anticipates the prudence review for annual costs and approval of the earnings test prescribed by the OPUC to occur by the third quarter of the following year.
- Post-review - This class of costs represents remediation spend that has been deemed prudent and allowed after applying the earnings test, but is not yet included in amortization. NW Natural earns a carrying cost on these amounts at a rate equal to the five-year treasury rate plus 100 basis points.
- Amortization - This class of costs represents amounts included in current customer rates for collection and is calculated as one-fifth of the post-review deferred balance. NW Natural earns a carrying cost equal to the amortization rate determined annually by the OPUC, which approximates a short-term borrowing rate. NW Natural included $9.6 million and $6.8 million of deferred remediation expense approved by the OPUC for collection during the 2023-24 and 2022-23 PGA years, respectively.

In addition, the SRRM also provides for the annual collection of $5.0 million from Oregon customers through a tariff rider. As it collects amounts from customers, NW Natural recognizes these collections as revenue net of any earnings test adjustments and separately amortizes an equal and offsetting amount of the deferred regulatory asset balance through the environmental remediation operating expense line shown separately in the operating expenses section of the Consolidated Statements of Comprehensive Income (Loss). See Note 17 for more information on our environmental matters.

The SRRM earnings test is an annual review of adjusted NGD ROE compared to authorized NGD ROE. To apply the earnings test NW Natural must first determine what if any costs are subject to the test through the following calculation:

Annual spend	
Less: $5.0 million base rate rider	
Prior year carry-over[1]	
$5.0 million insurance + interest on insurance	
Total deferred annual spend subject to earnings test	
Less: over-earnings adjustment, if any	
Add: deferred interest on annual spend[2]	
Total amount transferred to post-review	

(1) Prior year carry-over results when the prior year amount transferred to post-review is negative. The negative amount is carried over to offset annual spend in the following year.

(2) Deferred interest is added to annual spend to the extent the spend is recoverable.

To the extent the NGD business earns at or below its authorized ROE as defined in the SRRM, the total amount transferred to post-review is recoverable through the SRRM. To the extent more than authorized ROE is earned in a year, the amount transferred to post-review would be reduced by those earnings that exceed its authorized ROE. For 2023, NW Natural has performed this test, which is anticipated to be submitted to the OPUC in May 2024. No earnings test adjustment is expected for 2023.

Washington ECRM

The ECRM established by the WUTC order effective November 1, 2019 permits NW Natural's recovery of environmental remediation expenses allocable to Washington customers. These expenses represent 3.32% of costs associated with remediation of sites that historically served both Oregon and Washington customers. The order allows for recovery of past deferred and future prudently incurred remediation costs allocable to Washington through application of insurance proceeds and collections from customers. Prudently incurred costs that were deferred from the initial deferral authorization in February 2011 through June 2019 were fully offset with insurance proceeds, with any remaining insurance proceeds to be amortized over a 10.5 year period. On an annual basis, NW Natural will file for a prudence determination and a request to recover remediation expenditures in excess of insurance amortizations in the following year's customer rates. After insurance proceeds are fully

amortized, if in a particular year the request to collect deferred amounts exceeds one percent of Washington normalized revenues, then the excess will be collected over three years with interest.

INTERSTATE STORAGE AND ASSET MANAGEMENT SHARING. On an annual basis, NW Natural credits amounts to Oregon and Washington customers as part of a regulatory incentive sharing mechanism related to net revenues earned from Mist gas storage for assets developed in advance of utility customer needs, and asset management revenues. In January 2024, the OPUC approved the annual 2024 bill credit for Oregon customers' share of interstate storage and asset management activities totaling approximately $20.6 million, which was credited to customers' bills in February 2024. This includes revenue generated for the November 2022 through October 2023 PGA year. Credits are given to customers in Washington as reductions in rates through the annual PGA filing in November.

During the first quarter of 2023, NW Natural refunded an interstate storage and asset management sharing credit of approximately $23.5 million to Oregon customers. Commercial and industrial customers in Oregon received this credit in February 2023, which totaled approximately $10.5 million. Residential customers in Oregon received this credit as a reduction to the temporary rate mitigation adjustment in 2023, and totaled approximately $13.0 million.

The following table presents the credits to NGD customers:

In millions	2023	2022	2021
Oregon	$ 23.5	$ 41.1	$ 9.1
Washington	2.9	1.5	3.1

COVID-19 DEFERRAL DOCKETS. During 2020, Oregon and Washington approved our applications to defer certain COVID-19 related costs. Costs that may be recoverable include, but are not limited to, the following: personal protective equipment, cleaning supplies and services, bad debt expense, financing costs to secure liquidity, and certain lost revenue, net of offsetting direct expense reductions associated with COVID-19. As part of the 2022 Oregon general rate case, NW Natural received approval from the OPUC to recover the 2020 and 2021 COVID-19 deferral totaling $10.9 million beginning November 1, 2022 over a two-year period. NW Natural is authorized to recover the 2022 COVID-19 deferral totaling $6.5 million beginning November 1, 2023 through October 31, 2024. In addition, approximately $2.3 million of forgone late fee revenue will be recognized over the same time period as the 2022 COVID-19 deferral. Beginning January 2023, NW Natural is no longer deferring any COVID-19 related costs in Oregon. NW Natural expects to recover its COVID-19 deferrals in Washington in a future proceeding.

LOW INCOME DISCOUNT TARIFFS.

Oregon

In July 2022, NW Natural received approval from the OPUC for an income-qualifying residential bill discount program. The income threshold for program participation is at or below 60 percent of Oregon state median income (SMI). The program provides a bill discount for income-qualifying residential customers at four discount tier levels based on household income compared to SMI, with higher discounts given for lower income levels. Participating customers can self-certify their income and household size to qualify for the program directly with NW Natural or their local Community Action Agency. The program was available for qualifying customers starting November 1, 2022. Costs for the bill discount program include simultaneous recovery from all customers. Costs for the bill discount program, inclusive of start-up and administrative costs of the program, are recoverable in rates. The amount deferred to a regulatory asset as of December 31, 2023 was $3.6 million.

	Total Household Income	Bill Discount Percentage
Tier 0	At or below 15% SMI	40%
Tier 1	16% - 30% of SMI	25%
Tier 2	31% - 45% of SMI	20%
Tier 3	46% - 60% of SMI	15%

Washington

In December 2023, NW Natural received approval from the WUTC for an income-qualifying residential bill discount program. The program was available for qualifying customers starting January 1, 2024. The Washington program is similar to the Oregon program, with the exception of the discount tier levels shown below. The income threshold for the Washington program participation is based on the greater of area median income (AMI) or federal poverty level (FPL).

	Total Household Income	Bill Discount Percentage
Tier 0	At or below 60% FPL	80%
Tier 1	61% - 120% of FPL	40%
Tier 2	121% - 150% of FPL	20%
Tier 3	Greater of 80% AMI or 151% - 200% of FPL	15%

RENEWABLE NATURAL GAS AND AUTOMATIC ADJUSTMENT CLAUSE. On June 19, 2019, the Oregon legislature passed Senate Bill 98 (SB 98), which enables natural gas utilities to procure or develop RNG on behalf of their Oregon customers. The bill was signed into law by the governor in July 2019, and subsequently, the OPUC adopted final rules in July 2020.

SB 98 and the rules outline the following parameters for the RNG program including: setting voluntary goals for adding as much as 30% renewable natural gas into the state's pipeline system by 2050; enabling gas utilities to invest in and own the cleaning and conditioning equipment required to bring raw biogas and landfill gas up to pipeline quality, as well as the facilities to connect to the local gas distribution system; and allowing up to 5% of a utility's revenue requirement to be used to cover the incremental cost or investment in renewable natural gas infrastructure.

Further, the law supports all forms of renewable natural gas including renewable hydrogen, which is made from excess wind, solar and hydro power. Renewable hydrogen can be used for the transportation system, industrial use, or blended into the natural gas pipeline system.

Pursuant to the 2022 Oregon general rate case, the OPUC ordered that the costs NW Natural sought to recover related to its investment in Lexington Renewables Energy, LLC were reasonable and prudently incurred under SB 98. Furthermore, the OPUC approved an automatic adjustment clause that allows for NW Natural's investments in RNG projects, including operating costs, to be added to rates annually on November 1st, following a prudence review. The RNG recovery mechanism allows NW Natural to defer for recovery or credit the differences between the forecasted and actual costs of the RNG projects, subject to an earnings test that includes deadbands at 50 basis points below and above NW Natural's authorized ROE. For 2023, NW Natural has performed this test, which is anticipated to be submitted to the OPUC in May 2024. No earnings test adjustment is expected for 2023. For RNG procurement contracts, NW Natural seeks recovery of the costs in the PGA and other filings, subject to a prudence review.

In February 2023, NW Natural filed a request to include its investment in Dakota City Renewable Energy LLC in the approved RNG mechanism effective November 1, 2023. In October 2023, the OPUC approved an all-party settlement that deems the investment to be prudent and allows NW Natural to begin recovering the investment costs and expenses of the facility. The RNG facility began production in April 2023. Under the RNG mechanism, expenses incurred prior to the rate effective date are not recoverable under this rate mechanism. Additionally, recovery is subject to the earnings test requirements under the RNG recovery mechanism discussed above. The Dakota City investment is subject to a production risk-sharing mechanism based on the expected per unit of production. NW Natural is required to share 25% of the costs above this threshold.

INTEGRATED RESOURCE PLAN (IRP). NW Natural generally files a full IRP biennially for Oregon and Washington with the OPUC and WUTC, respectively. NW Natural jointly filed its 2022 IRP for both Oregon and Washington on September 23, 2022. The 2022 IRP outlines scenarios of future requirements based on a range of inputs that would provide the least-cost and least-risk resources to meet future demand and environmental compliance obligations. With respect to IRPs generally, the WUTC issues letters of compliance and Oregon acknowledges the IRP. In August 2023, NW Natural received a letter of compliance from the WUTC acknowledging the 2022 IRP.

The OPUC issued their order on NW Natural's 2022 IRP in August 2023. The OPUC acknowledged key system investments including the Portland LNG cold box project and the Forest Grove reinforcement project. The OPUC declined at that time to acknowledge certain elements related to long-term analysis and selection of resources and suggested that NW Natural work with interested parties to develop and refine modeling related to these open items.

The development of an IRP filing is an extensive and complex process that engages multiple stakeholders in an effort to build a robust and commonly understood analysis. The final product is intended to provide a long-term outlook of the supply-side and demand-side resource requirements for reliable and low cost natural gas service while also meeting NW Natural's environmental compliance requirements. The IRP examines and analyzes uncertainties in the planning process, including potential changes in governmental and regulatory policies. The CCA that was passed in Washington is an example of a new policy that resulted in compliance requirements that need to be included in the planning process.

PIPELINE SECURITY. In May and July 2021, the Department of Homeland Security's (DHS) Transportation Security Administration (TSA) released two security directives applicable to certain owners and operators of natural gas pipeline facilities (including local distribution companies). The first directive require owners and operators to implement cybersecurity incident reporting to the DHS, designate a cybersecurity coordinator, and perform a gap assessment of current entity cybersecurity practices against certain voluntary TSA security guidelines and report relevant results and proposed mitigation to applicable DHS agencies. The second directive requires entities to implement a significant number of specified cybersecurity controls and processes. The TSA released a third directive renewing the second directive as well as clarifying Operational Technology (OT) scope and providing a risk- and outcome-based framework. The third directive is effective until July 2023 and will expire in July 2024. The TSA is in the process of formulating regulations with the aim of rendering the security directives permanent. NW Natural is currently evaluating and

implementing the security directives and related deliverables. NW Natural frequently updates the TSA on its progress on achieving the security directives.

NW Natural filed requests with the OPUC and WUTC to defer the costs associated with complying with the TSA's security directives. As of December 31, 2023, NW Natural has invested approximately $44.2 million in information and operational

technology. A majority of the capital investment was included in rate base starting November 1, 2022 in Oregon.

NW Natural continues to evaluate the potential effect of these directives on our operations and facilities, as well as the potential total cost of implementation, and will continue to monitor for any clarifications or amendments to these directives. We may seek to request recovery from customers of any additional costs incurred to the extent that incremental expenses and capital expenditures are incurred in the future.

ERP UPGRADE. In the fourth quarter of 2020, NW Natural filed requests to defer expenses pertaining to a project to upgrade the existing enterprise resource planning (ERP) system with the OPUC and WUTC. A stipulation supported by all parties in the Oregon docket was filed and approved by the OPUC in the third quarter of 2021. Under the settlement agreement, NW Natural will recover 100% of costs incurred up to the $8.55 million estimate of Oregon-allocated costs provided in the docket. Approval of the Washington deferral was resolved as part of the most recent general rate case. NW Natural placed its new ERP system into service in September 2022. On November 1, 2022, NW Natural began recovering all expenses deferred and accruing interest over a 10-year period.

WATER AND WASTEWATER UTILITIES. NWN Water currently serves an estimated 180,000 people through approximately 73,000 connections across five states. We continued to expand our water and wastewater utility business during 2023.

- In the first quarter of 2023, NWN Water signed a purchase agreement for a water utility with approximately 1,450 connections in Arizona. The purchase agreement was approved by the ACC in September 2023 and the acquisition closed in the fourth quarter of 2023.
- In the second quarter of 2023, NWN Water signed a purchase agreement for a water and wastewater business with approximately 2,150 connections in Oregon. The purchase agreement was approved by the OPUC in October 2023 and the acquisition closed in the fourth quarter of 2023.
- In the second quarter of 2023, NWN Water increased its ownership stake in Avion Water Company, Inc.
- In the fourth quarter of 2023, NWN Water acquired a water utility with approximately 2,400 connections in Arizona.

For our regulated water utilities, we have been executing general rate cases.

- In February 2023, Salmon Valley Water Company filed a general rate case with the OPUC with new rates effective September 1, 2023.
- In May 2023, Falls Water Company filed a general rate case with the IPUC with new rates effective December 15, 2023.
- In October 2023, Foothills Utilities filed a general rate case with the ACC and requested rates to go into effect no later than November 30, 2024.

Environmental Regulation and Legislation Matters

There is a growing international and domestic focus on climate change and the contribution of GHG emissions, most notably methane and carbon dioxide, to climate change. In response, there are increasing efforts at the international, federal, state, and local level to regulate GHG emissions. Legislation or other forms of regulation could take a variety of forms including, but not limited to, GHG emissions limits, reporting requirements, carbon taxes, requirements to purchase carbon credits, building codes, increased efficiency standards, additional charges to fund energy efficiency activities or other regulatory actions, incentives or mandates to conserve energy or use renewable energy sources, tax advantages and other subsidies to support alternative energy sources, a reduction in rate recovery for construction costs related to the installation of new customer services or other new infrastructure investments, mandates for the use of specific fuels or technologies, bans on specific fuels or technologies, or promotion of research into new technologies to reduce the cost and increase the scalability of alternative energy sources. These efforts could include legislation, legislative proposals, directed government funding, or new regulations at the federal, state, and local level, as well as private party litigation related to GHG emissions or regulation thereof. We recognize certain of our businesses, including our natural gas business, are likely to be affected by current or future regulation seeking to limit GHG emissions.

International

In early 2021, the U.S. rejoined the Paris Agreement on Climate, which establishes non-binding targets to reduce GHG emissions from both developed and developing nations. Under the Paris Agreement, signatory countries are expected to submit their nationally determined contributions to curb GHG emissions and meet the agreed temperature objectives every five years. On April 22, 2021, the United States federal administration announced the U.S. nationally determined contribution to achieve a fifty to fifty-two percent reduction from 2005 levels in economy-wide net GHG emissions by 2030.

Federal

President Biden’s administration has issued executive orders directing agencies to conduct a general review of regulations and executive actions related to the environment and reestablished a framework for considering the social cost of carbon as part of certain agency cost-benefit analyses for new regulations. President Biden’s administration continues to consider a wide range of additional policies, executive orders, rules, legislation, and other initiatives to address climate change.

The Inflation Reduction Act of 2022 (IRA) was signed into law in August 2022 and includes several climate and energy provisions. The IRA is expected to provide significant funding through grants, tax credits, and investments to support various initiatives including manufacturing, renewable energy production and consumption, transportation electrification and climate-smart agriculture. The IRA includes tax credits for RNG, hydrogen, carbon capture projects and geothermal heat pumps, among

other investments. The IRA also includes funding for the EPA to improve GHG reporting and enforcement, as well as a methane fee applicable to activities associated with gas production and processing facilities, transmission pipelines and certain storage facilities, creates a new corporate alternative minimum tax of 15 percent that applies to corporations with average annual financial statement income in excess of one billion dollars, and creates a new 1 percent excise tax on the net stock repurchases by public companies. Guidance from several federal agencies is pending regarding various aspects of the IRA and the manner in which it will be implemented. We continue to assess effects of the IRA that are relevant to our businesses, and will continue to do so as it is implemented. The U.S. Congress may also pass federal climate change legislation in the future. We cannot predict when or if Congress will pass such legislation and in what form.

In addition, the EPA regulates GHG emissions pursuant to the Clean Air Act. For example, the EPA requires the annual reporting of GHG emissions from certain industries, specified emission sources, and facilities. Under this reporting rule, local natural gas distribution companies like NW Natural are required to report system throughput to the EPA on an annual basis. The EPA also has required additional GHG reporting regulations to which NW Natural is subject, requiring the annual reporting of fugitive emissions from operations. Other federal regulatory agencies, including the U.S. Department of Energy, are beginning to address matters related to GHG emissions that may include changes in their regulatory oversight approach, policies and rules.

Other federal agencies have taken or are expected to take actions related to climate change. For example, in March 2022, the Securities and Exchange Commission (SEC) proposed new rules relating to the disclosure of a range of climate-related matters, PHMSA is expected to prepare regulations and other actions to limit methane emissions, the Commodities Futures Trading Commission (CFTC) has indicated it intends to take actions related to oversight of climate-related financial risks as pertinent to the derivatives and underlying commodities markets. Similarly, other federal agencies and regulations, including but not limited to , the U.S. Department of Treasury, Federal Acquisitions Regulations, and others have indicated impending regulatory actions related to climate change. To the extent these agencies adopt final rules as proposed or in modified form, we or our customers could incur increased costs. These could include internal costs as well as external costs such as the cost of independent experts to provide attestation reports on our GHG emissions data and increased audit costs.

Washington State

In 2023, Washington comprised approximately 11% of NW Natural's revenues, as well as 2% and 14% of new meters from commercial and residential customers, respectively. Effective February 1, 2021, building codes in Washington state require new residential homes to achieve higher levels of energy efficiency based on specified carbon emissions assumptions, which calculate electric appliances to have lower on-site GHG emissions than comparable gas appliances. This increases the cost of new home construction incorporating natural gas depending on a number of factors including home size, equipment configurations, and building envelope measures. Additionally, the Washington State Building Code Council (SBCC) voted in April 2022 to include updates in the state commercial building energy code that would restrict or eliminate the use of gas space and water heating in new commercial construction. In November 2022, the SBCC voted to include updates to the state residential building energy code that are expected to restrict the use of gas space and water heating in residential construction, with certain exceptions including for natural gas-fired heat pumps and hybrid fuel systems. The SBCC commercial and residential rules were expected to become effective July 1, 2023, but the SBCC delayed implementation and has modified those rules. The expected timeline for implementation of the modified rules, if any, is March, 2024 unless the legislature delays, rejects or amends the new rules. The new modified rules are currently subject to legal challenge by a number of companies and organizations and are likely to be subject to additional legal challenge.

Washington has also enacted the CCA, which establishes a comprehensive program that includes an overall limit for GHG emissions from major sources in the state that declines yearly beginning January 1, 2023, resulting in an overall reduction of GHG emissions to 95% below 1990 levels by 2050. The Washington Department of Ecology has adopted rules to create a cap-and-invest program, under which entities, including natural gas and electric utilities, large manufacturing facilities, and transportation and other fuel providers, which are subject to the CCA must either reduce their emissions, purchase qualifying offsets (including RNG) or obtain allowances to cover any remaining emissions. NW Natural is subject to the CCA, has received an order authorizing deferral of CCA costs from the WUTC, and is currently recovering CCA compliance costs in rates.

Oregon

On March 10, 2020, the governor of Oregon issued an executive order (EO) establishing GHG emissions reduction goals of at least 45% below 1990 emission levels by 2035 and at least 80% below 1990 emission levels by 2050 and directed state agencies and commissions to facilitate such GHG emission goals targeting a variety of sources and industries. Although the EO does not specifically direct actions of natural gas distribution businesses, the OPUC is directed to prioritize proceedings and activities that advance decarbonization in the utility sector, mitigate the energy burden experienced by utility customers and ensure system reliability and resource adequacy. The EO also directs other state agencies, including the Oregon Department of Environmental Quality (ODEQ), to cap and reduce GHG emissions from transportation fuels and all other liquid and gaseous fuels, including natural gas, adopt building energy efficiency goals for new building construction, reduce methane gas emissions from landfills and food waste, and submit a proposal for adoption of state goals for carbon sequestration and storage by Oregon's forest, wetlands and agricultural lands. The OPUC is also charged with carrying out the EO to the extent it is consistent with its statutory authority and duties, and to focus on equitable impacts to low-income customers under its current statutory authority.

In December 2021, the ODEQ concluded its rulemaking process and issued final cap and reduce rules for its Climate Protection Program (CPP), which became effective in January of 2022. The CPP outlines GHG emissions reduction goals of 50% by 2035 and 90% by 2050 from a 2017-2019 baseline. The ODEQ rules were held invalid on procedural grounds by the Oregon Court of Appeals in December 2023. In January, 2024, ODEQ announced that it would not appeal the Oregon Court of Appeals' decision, but that it would re-engage in a rulemaking process and it expects the new rulemaking to take approximately 12 months. NW Natural received an order from the OPUC authorizing deferral of CPP compliance costs for the initial rule and intended to pursue inclusion of those compliance costs in rates and we are in the process of determining treatment given the CPP is invalid. We would expect to take the same actions with respect to any subsequently adopted ODEQ rules.

Local Jurisdictions and Other Advocacy

In addition to legislative activities at the state level, advocacy groups have indicated a willingness to pursue municipal ordinances and ballot measures or other local activities. Some local and county governments in the United States also have been proposing or passing renewable energy resolutions, restrictions, taxes, or fees seeking to accelerate climate action goals. A number of cities across the country, and several in our service territory are taking action or currently considering actions such as limitations or bans on the use of natural gas in new construction or otherwise. For example, in February 2023, the Eugene City Council passed an ordinance that prohibits the use of natural gas in low rise residential buildings beginning with permits submitted after June of 2023. That ordinance was initially referred to the voters on the November 2023 ballot and was subsequently rescinded by the Eugene City Council. In connection with its recission of the ordinance, the City Council directed the Eugene City Manager to develop a plan to address GHG emissions and align incentives around GHG emissions. Similarly, some jurisdictions and advocates are seeking to ban the use of natural gas and certain natural gas appliances inside homes and contend that there are detrimental indoor health effects associated with the use of natural gas.

NW Natural is actively engaged with federal, state and local policymakers, consumers, customers, small businesses and other business coalitions, economic development practitioners, and other advocates in our service territory and is working with these communities to communicate the role that direct use natural gas, and in the coming years, RNG and hydrogen, can play in pursuing more effective policies to reduce GHGs while supporting reliability, resiliency, energy choice, equity, and energy affordability.

NW Natural Decarbonization Initiatives and Compliance Actions

Our customers are currently paying less for their natural gas today than they did 15 years ago. We expect that compliance with any form of regulation of GHG emissions, including the CCA in Washington or any similar program adopted in Oregon, as well as voluntary actions under SB 98 or otherwise, will require additional resources and legislative or regulatory tools, and will increase costs. The developing and changing implementation guidance for the CCA and new rulemaking process for an Oregon carbon reduction program under the Oregon EO, evolving carbon credit markets and other regulatory tool options, decades-long timeframes for compliance, likely changing and evolving laws and energy policy, and evolving technological advancements, all make it difficult to accurately predict long-term tools for and costs of compliance. In September 2022, NW Natural filed its integrated resource plans (IRPs) with the OPUC and WUTC. Those IRPs comprehensively evaluate resource options available to serve NW Natural's customers' energy, capacity and environmental compliance needs, and are an informative component of the resources selected for compliance with the CCA and any subsequently developed Oregon program. While we model compliance with the CCA and any similar program in our IRPs, the expected costs of compliance are uncertain and subject to significant change. We are currently including costs of compliance with the CCA in rates. Costs to comply currently are increasing non-low income residential bills by approximately 12% to 38%.

These projected customer bill impacts of the CCA are estimates, are likely to increase beyond the first compliance period, and are subject to change as these laws are implemented and compliance begins. The costs are also likely to vary significantly based on forecasting assumptions related to permitted levels of rate recovery, available technologies and equipment, weather patterns and gas usage, customer growth or attrition, allocation of fixed costs among classes of customers, energy efficiency levels, availability, use and cost of renewables, feasibility of broad-scale hydrogen in the natural gas system, and a number of other assumptions used in the complex analysis of integrated resource planning.

We are not currently able to quantify the extent to which limitations on natural gas use, or declining line extension allowances provided in rates to cover construction costs for new services, will affect new meter additions, or to what extent carbon compliance costs included in rates will affect the competitiveness of our business and the demand for natural gas service. All of these developments could negatively affect our gas utility customer growth. However, at the same time natural gas utilities will be subject to GHG emissions regulation, we expect that other energy source providers will be subject to similar, or in some cases stricter or more rapid, compliance requirements that are likely to affect their cost and competitiveness relative to natural gas as well. For example, President Biden has announced his intention to have a carbon-free electricity sector by 2035, 15 years before the target date of the CCA. In June 2021, the State of Oregon enacted HB 2021, a clean electricity bill that requires the state’s two largest investor-owned electric utilities and retail electricity service suppliers to reduce GHG emissions associated with electricity sold to Oregon customers to 100 percent below baseline levels by 2040 with interim steps, including an 80 percent reduction by 2030 and 90 percent reduction by 2035. This bill does not replace the separate renewable portfolio standards previously established in Oregon, which sets requirements for how much of the electricity used in Oregon must come from renewable resources. In Washington, SB 5116, the

Clean Energy Transformation Act, requires all electric utilities in Washington to transition to carbon-neutral electricity by 2030 and to 100 percent carbon-free electricity by 2045. We expect compliance with

these and other laws will increase the cost of energy for electric customers in our service territory. We are not able to determine at this time whether increased electricity costs will make natural gas use more or less competitive on a relative basis.

We expect these and other trends to drive innovation of, and demand for, technological developments and innovative new products that reduce GHG emissions. Research and development are occurring across the energy sector, including in the gas sector with work being conducted on gas heat pumps, higher efficiency water and space heating appliances including hybrid systems, carbon capture utilization and storage developments, continued development of technologies related to RNG, and various forms of hydrogen for different applications, among others.

NW Natural continues to take proactive steps in seeking to reduce GHG emissions in our region and we diligently communicate with local, state, and federal governments and communities about those steps. NW Natural has been a leader among gas utilities in innovative programs. Notable programs have included a decoupling rate structure designed to weaken the link between revenue and gas consumption by customers adopted in 2007, and establishment of a voluntary Smart Energy carbon offset program for customers established in 2007, and removal of all known cast iron and bare steel to create one of the tightest and most modern distribution systems in the country. We continue to believe that NW Natural has an important role in providing affordable and equitable energy to the communities we serve. NW Natural is an important provider of energy to families and businesses in Oregon and southwest Washington. Natural gas sales to our residential and commercial customers account for approximately 7% of Oregon's GHG emissions according to the 2021 data from the State of Oregon Department of Environmental Quality In-Boundary GHG Inventory. We intend to continue to provide this necessary energy to our communities with the goal of using our modern pipeline system to help the Pacific Northwest transition to a cleaner energy future.

In 2016, NW Natural initiated a multi-pronged, multi-year strategy to accelerate and deliver greater GHG emission reductions in the communities we serve. Key components of this strategy include customer energy efficiency, continued adoption of NW Natural's voluntary Smart Energy carbon offset program, and seeking to incorporate RNG and hydrogen into our gas supply. RNG is produced from organic materials including food, agricultural and forestry waste, wastewater, or landfills. We believe RNG has the potential to significantly reduce net GHG emissions because methane that would otherwise be released to the atmosphere can be captured from these organic materials as they decompose and then conditioned to pipeline quality and distributed into our existing system. In 2019, Oregon Senate Bill 98 (SB 98) was signed into law enabling NW Natural to procure RNG on behalf of customers and provided voluntary targets that would allow us to make qualified investments and purchase RNG from third parties.

Under SB 98, NW Natural is actively working to procure RNG supply for customers and increase the amount of RNG on our system and is also exploring the development of renewable hydrogen through power to gas. To that end, in 2020 and 2021, NW Natural announced several agreements and investments to procure RNG for its customers. For example, NW Natural began a partnership with BioCarbN to invest up to an estimated $38 million in four separate RNG development projects that will access biogas derived from water treatment at Tyson Foods' processing plants, subject to approval by all parties. The first project was commissioned in early 2022 and the second was commissioned in April 2023. To date, NW Natural has signed agreements with options to purchase or develop RNG for utility customers totaling about 3% of NW Natural's annual sales volume in Oregon.

Business Segment - Natural Gas Distribution (NGD)

NGD margin results are primarily affected by customer growth, revenues from rate-base additions, and, to a certain extent, by changes in delivered volumes due to weather and customers' gas usage patterns. In Oregon, NW Natural has a conservation tariff (also called the decoupling mechanism), which adjusts margin up or down each month through a deferred regulatory accounting adjustment designed to offset changes resulting from increases or decreases in average use by residential and commercial customers. NW Natural also has a weather normalization tariff in Oregon, WARM, which adjusts customer bills up or down to offset changes in margin resulting from above- or below-average temperatures during the winter heating season. Residential and commercial customers in Oregon are allowed to opt out of the weather normalization mechanism, and as of December 31, 2023, approximately 7% of total eligible customers had opted out. NW Natural does not have a weather normalization mechanism approved for Washington customers, which account for about 12% of total customers. The decoupling and WARM mechanisms are designed to reduce, but not eliminate, the volatility of customer bills and natural gas distribution revenue. See "Regulatory Matters—*Rate Mechanisms*" above. In addition to NW Natural's local gas distribution business, the NGD segment also includes the portion of the Mist underground storage facility used to serve NGD customers, the North Mist gas storage expansion, NWN Gas Reserves, which is a wholly owned subsidiary of Energy Corp., and NW Natural RNG Holding Company, LLC.

The NGD business is primarily seasonal in nature due to higher gas usage by residential and commercial customers during the cold winter heating months. Other categories of customers experience seasonality in their usage but to a lesser extent. Seasonality affects the comparability of the results of operations of the NGD business across quarters but not across years.

NGD segment highlights include:

Dollars and therms in millions, except EPS data	2023	2022	2021
NGD net income	$ 94.0	$ 79.7	$ 69.0
Diluted EPS - NGD segment	$ 2.59	$ 2.34	$ 2.24
Gas sold and delivered (in therms)	1,207	1,252	1,185
NGD margin[(1)]	$ 575.0	$ 505.9	$ 479.8

[(1)] See Natural Gas Distribution Margin Table below for additional detail.

2023 COMPARED TO 2022. NGD net income was $94.0 million in 2023 compared to $79.7 million in 2022. The primary factors contributing to the increase in NGD net income were as follows:

- $69.1 million increase in NGD margin primarily due to:
  - $47.5 million increase due to new customer rates in Oregon and Washington that went into effect November 1, 2022;
  - $9.4 million increase due to actual gas prices that were lower than what was estimated in the 2022-2023 PGA;
  - $9.2 million increase due to the amortization of deferred balances primarily related to COVID-19, cybersecurity, and ERP upgrades (which is mostly offset in operations and maintenance expenses and interest expense; and
  - $4.6 million increase driven by customer growth; partially offset by
  - $2.4 million decrease due to warmer than average weather for customers not covered under the weather normalization mechanism.
- $15.8 million increase in other income, net driven by interest income from invested cash and the equity portion of AFUDC, and lower pension costs; partially offset by
- $40.0 million increase in NGD operations and maintenance expenses due to higher payroll costs, higher contract labor, the amortization of deferred balances (which is mostly offset in revenues), information technology costs and amortization expense related to cloud computing arrangements;
- $14.3 million increase in interest expense primarily due to higher long-term debt balances;
- $6.5 million increase in depreciation expense due to additional capital investments in the distribution system, including several significant information technology projects that were placed into service in September 2022; and
- $4.9 million higher income tax expense reflecting higher pre-tax income.

Total natural gas sold and delivered in 2023 decreased 4% over 2022 primarily due to 8% warmer than average weather in 2023 compared to 1% colder than average weather in 2022.

2022 COMPARED TO 2021. NGD net income was $79.7 million in 2022 compared to $69.0 million in 2021. The primary factors contributing to the increase in NGD net income were as follows:

- $26.1 million increase in NGD margin primarily due to:
  - $14.9 million increase due to new customer rates from the 2022 Oregon and 2021 Washington rate cases that went into effect November 1, 2022;
  - $6.1 million increase driven by customer growth;
  - $3.0 million increase due to higher usage from colder comparative weather from customers that are not decoupled, net of the loss from the Oregon gas cost incentive sharing mechanism;
  - $2.9 million increase due to the amortization of deferred balances primarily related to COVID-19, cybersecurity, and ERP upgrades; and
- $12.1 million increase in other income, net primarily due to lower pension non-service costs and interest income from the equity portion of AFUDC; partially offset by
- $16.7 million increase in NGD operations and maintenance expenses due to higher contract labor, amortization expense related to cloud computing arrangements, professional service fees, and information technology costs;
- $3.4 million increase in interest expense primarily due to higher long-term debt balances and higher interest rates, partially offset by higher AFUDC debt interest income;
- $2.9 million higher income tax expense reflecting higher pre-tax income; and
- $2.4 million increase in depreciation expense as we continue to invest in our natural gas utility system and facilities.

Total natural gas sold and delivered in 2022 increased 6% over 2021 primarily due to 1% colder than average weather in 2022 compared to 12% warmer than average weather in 2021.

NATURAL GAS DISTRIBUTION MARGIN TABLE. The following table summarizes the composition of NGD gas volumes, revenues, and cost of sales:

In thousands, except degree day and customer data	2023	2022	2021	Favorable (Unfavorable) 2023 vs. 2022	Favorable (Unfavorable) 2022 vs. 2021
NGD volumes (therms):					
Residential and commercial sales	735,755	766,592	703,054	(30,837)	63,538
Industrial sales and transportation	470,919	485,745	481,721	(14,826)	4,024
Total NGD volumes sold and delivered	1,206,674	1,252,337	1,184,775	(45,663)	67,562
Operating revenues:					
Residential and commercial sales	$ 1,015,072	$ 881,370	$ 730,794	$ 133,702	$ 150,576
Industrial sales and transportation	97,886	86,810	65,299	11,076	21,511
Other distribution revenues	4,540	1,944	1,707	2,596	237
Other regulated services	18,902	19,628	19,087	(726)	541
Total operating revenues	1,136,400	989,752	816,887	146,648	172,865
Less: Cost of gas	500,061	429,861	292,538	(70,200)	(137,323)
Less: Environmental remediation expense	12,899	12,389	9,938	(510)	(2,451)
Less: Revenue taxes	48,432	41,627	34,600	(6,805)	(7,027)
NGD margin	$ 575,008	$ 505,875	$ 479,811	$ 69,133	$ 26,064
NGD margin[1]					
Residential and commercial sales	$ 512,479	$ 455,686	$ 430,295	$ 56,793	$ 25,391
Industrial sales and transportation	34,748	33,543	32,182	1,205	1,361
Gain (loss) from gas cost incentive sharing	4,459	(4,917)	(3,381)	9,376	(1,536)
Other margin	4,426	1,943	1,633	2,483	310
Other regulated services	18,896	19,620	19,082	(724)	538
NGD margin	$ 575,008	$ 505,875	$ 479,811	$ 69,133	$ 26,064
Degree days[2]					
Average[3]	2,686	2,686	2,692	—	(6)
Actual	2,480	2,712	2,378	(9)%	14 %
Percent (warmer) colder than average weather	(8)%	1 %	(12)%		
NGD meters - end of period:					
Residential meters	728,915	724,287	715,958	4,628	8,329
Commercial meters	69,273	69,139	68,961	134	178
Industrial meters	1,062	1,071	978	(9)	93
Total number of meters	799,250	794,497	785,897	4,753	8,600
NGD meter growth:					
Residential meters	0.6 %	1.2 %			
Commercial meters	0.2 %	0.3 %			
Industrial meters	(0.8)%	9.5 %			
Total meter growth	0.6 %	1.1 %			

(1) Amounts reported as NGD margin for each category of meters are operating revenues less cost of gas, environmental remediation expense and revenue taxes.

(2) Heating degree days are units of measure reflecting temperature-sensitive consumption of natural gas, calculated by subtracting the average of a day's high and low temperatures from 59 degrees Fahrenheit.

(3) Average weather represents the 25-year average of heating degree days. Beginning November 1, 2022, average weather is calculated over the period June 1, 1996 through May 31, 2021, as determined in NW Natural's 2022 Oregon general rate case. From November 1, 2020 through October 31, 2022, average weather was calculated over the period June 1, 1994 through May 31, 2019, as determined in NW Natural's 2020 Oregon general rate case.

Residential and Commercial Sales

The primary factors that impact results of operations in the residential and commercial markets are customer growth, seasonal weather patterns, energy prices, competition from other energy sources, and economic conditions in our service areas. The impact of weather on margin is significantly reduced through NW Natural's weather normalization mechanism in Oregon; approximately 81% of NW Natural's total customers are covered under this mechanism. The remaining customers either opt out of the mechanism or are located in Washington, which does not have a similar mechanism in place. For more information on the weather mechanism, see "Regulatory Matters—Rate Mechanisms—*WARM*" above.

NGD residential and commercial sales highlights include:

In millions	2023	2022	2021
Volumes (therms):			
Residential sales	455.7	478.1	445.6
Commercial sales	280.1	288.5	257.5
Total volumes	735.8	766.6	703.1
Operating revenues:			
Residential sales	$ 685.5	$ 595.0	$ 506.2
Commercial sales	329.6	286.4	224.6
Total operating revenues	$ 1,015.1	$ 881.4	$ 730.8
NGD Margin:			
Residential margin	$ 371.3	$ 328.2	$ 312.5
Commercial margin	141.2	127.5	117.8
Total NGD margin	$ 512.5	$ 455.7	$ 430.3

2023 COMPARED TO 2022. NGD residential and commercial operating revenue increased $133.7 million and NGD margin increased $56.8 million compared to the prior year. The increase was primarily driven by new customer rates in Oregon and Washington that took effect on November 1, 2022 and 0.6% growth in residential customer meters. Sales volumes decreased 30.8 million therms, or 4%, due to lower usage driven by comparatively warmer weather.

2022 COMPARED TO 2021. The increase of $150.6 million in total NGD residential and commercial operating revenue and $25.4 million in NGD margin were primarily the result of new customer rates in Oregon and Washington that took effect on November 1, 2022, 1.2% growth in residential customer meters, and higher usage from colder comparative weather from customers that are not decoupled. Sales volumes increased 63.5 million therms, or 9%, primarily due to higher usage driven by comparatively colder weather.

Industrial Sales and Transportation

Industrial customers have the option of purchasing sales or transportation services. Under the sales service, the customer buys the gas commodity from NW Natural. Under the transportation service, the customer buys the gas commodity directly from a third-party gas marketer or supplier. The NGD gas commodity cost is primarily a pass-through cost to customers; therefore, NGD profit margins are not materially affected by an industrial customer's decision to purchase gas from third parties. Industrial and large commercial customers may also select between firm and interruptible service options, with firm services generally providing higher profit margins compared to interruptible services. To help manage gas supplies, industrial tariffs are designed to provide some certainty regarding industrial customers' volumes by requiring an annual service election which becomes effective November 1, special charges for changes between elections, and in some cases, a minimum or maximum volume requirement before changing options.

NGD industrial sales and transportation highlights include:

In millions	2023	2022	2021
Volumes (therms):			
Firm and interruptible sales	102.3	104.4	90.8
Firm and interruptible transportation	368.6	381.3	390.9
Total volumes	470.9	485.7	481.7
NGD Margin:			
Firm and interruptible sales	$ 14.1	$ 13.6	$ 12.6
Firm and interruptible transportation	20.6	19.9	19.6
Total NGD margin	$ 34.7	$ 33.5	$ 32.2

2023 COMPARED TO 2022. NGD industrial sales and transportation margin increased $1.2 million compared to the prior year primarily driven by new rates in Oregon and Washington that took effect on November 1, 2022, partially offset by lower sales volumes. Sales volumes decreased 14.8 million therms, or 3%, primarily due to lower usage from multiple customers, most notably in the primary metals, pulp and paper, glass, stone and clay, and chemical manufacturing industries.

2022 COMPARED TO 2021. NGD total industrial sales and transportation volumes increased 4.0 million therms, or 1%, primarily due to higher usage from multiple customers, most notably in the light manufacturing, primary metals, and electric manufacturing industries, partially offset by lower usage from customers in the plastic manufacturing industry. NGD margin increased $1.3 million primarily driven by new rates in Oregon and Washington that took effect on November 1, 2022.

Other Regulated Services Margin

Other Regulated Services primarily consist of lease revenues from NW Natural's North Mist storage facility as well as other lease revenues for compressed natural gas assets. See Note 7 for more information regarding North Mist expansion lease accounting.

Other regulated services margin highlights include:

In millions	2023	2022	2021
North Mist storage services	$ 18.6	$ 19.4	$ 18.9
Other services	0.3	0.2	0.2
Total other regulated services	$ 18.9	$ 19.6	$ 19.1

2023 COMPARED TO 2022. Other regulated services margin decreased $0.7 million compared to the prior year due to lower depreciation rates for the North Mist facility beginning November 1, 2022.

2022 COMPARED TO 2021. Other regulated services margin increased $0.5 million due to an increase in storage service revenue from the North Mist facility.

Cost of Gas

Cost of gas as reported by the NGD segment includes gas purchases, gas storage costs, gas commodity derivatives contracts, pipeline demand costs, seasonal demand cost balancing adjustments, renewable natural gas and its attributes, including renewable thermal certificates, regulatory gas cost deferrals, gas reserves costs, and company gas use. The OPUC and WUTC generally require natural gas commodity costs to be billed to customers at the actual cost incurred, or expected to be incurred. Customer rates are set each year so that if cost estimates were met the NGD business would not earn a profit or incur a loss on gas commodity purchases; however, in Oregon we have the incentive sharing mechanism described under "Regulatory Matters—Rate Mechanisms—*Purchased Gas Adjustment*" above. In addition to the PGAincentive sharing mechanism, gains and losses from hedge contracts entered into after annual PGArates are effective for Oregon customers are also required to be shared and therefore may impact net income. Further, NW Natural also has a regulatory agreement whereby it earns a rate of return on its investment in the gas reserves acquired under the original agreement with Encana and includes gas from the amended gas reserves agreement at a fixed rate of $0.4725 per therm, which are also reflected in NGD margin. See "Application of Critical Accounting Policies and Estimates—*Derivative Instruments and Hedging Activities*" below.

Cost of gas highlights include:

In millions, except where indicated	2023	2022	2021
Cost of gas	$ 500.1	$ 429.9	$ 292.5
Volumes sold (therms)[(1)]	838.1	871.0	793.9
Average cost of gas (cents per therm)	$ 0.60	$ 0.49	$ 0.37
Gain (loss) from gas cost incentive sharing[(2)]	$ 4.5	$ (4.9)	$ (3.4)

[(1)] This calculation excludes volumes delivered to industrial transportation customers.
[(2)] For a discussion of the gas cost incentive sharing mechanism, see "Regulatory Matters—Rate Mechanisms—*Purchased Gas Adjustment*" above.

2023 COMPARED TO 2022. Cost of gas increased $70.2 million, or 16%, primarily due to a 21% increase in the average cost of gas with these higher gas costs embedded in the 2022-2023 PGA. Volumes sold decreased 32.9 million, or 4%, due to lower usage from customers driven by comparatively warmer weather.

2022 COMPARED TO 2021. Cost of gas increased $137.4 million, or 47%, primarily due to a 32% increase in the average cost of gas with the majority of these higher gas costs embedded in the PGA. The remaining increase in cost of gas is primarily the result of a 10% increase in volumes sold, driven by customer growth and comparatively colder weather.

Other

Other activities aggregated and reported as other at NW Holdings include NNG Financial's investment in Kelso-Beaver Pipeline (KB Pipeline); NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities; NWN Water, which owns and continues to pursue investments in the water, wastewater and water services sectors; and NWN Water's investment in

Avion Water Company, Inc. (Avion Water). Other activities aggregated and reported as other at NW Natural include the non-NGD storage activity at Mist as well as asset management services and the appliance retail center operations. See Note 4 for further discussion of our business segment and other, as well as our direct and indirect wholly-owned subsidiaries. See Note 13 for information on our Avion Water investment.

At Mist, NW Natural provides gas storage services to customers in the interstate and intrastate markets using storage capacity that has been developed in advance of NGD customers' requirements. Pre-tax income from gas storage at Mist and asset management services is subject to revenue sharing with NGD customers. Under this regulatory incentive sharing mechanism, NW Natural retains 80% of pre-tax income from Mist gas storage services and asset management services when the underlying costs of the capacity being used are not included in NGD business rates. The remaining 20% is credited to a deferred regulatory account for credit to NGD customers. To the extent that the capacity used is included in NGD rates, NW Natural retains 10% of pre-tax income from such storage and asset management services and 90% is credited to NGD business customers.

The following table presents the results of activities aggregated and reported as other for both NW Holdings and NW Natural:

In millions, except EPS data	2023	2022	2021
NW Natural other - net income	$ 10.7	$ 11.9	$ 12.2
Other NW Holdings activity	(10.9)	(5.3)	(2.5)
NW Holdings other - net income (loss)	$ (0.2)	$ 6.6	$ 9.7
Diluted earnings per share - NW Holdings - other	$ —	$ 0.20	$ 0.32

2023 COMPARED TO 2022. Other net income decreased $6.8 million and $1.2 million at NW Holdings and NW Natural, respectively. The decrease at NW Natural was primarily due to lower sales at the appliance retail center. The decrease at NW Holdings was driven by higher interest expense at the holding and water companies, partially offset by a gain recognized from a settlement agreement.

2022 COMPARED TO 2021. Other net income decreased $3.1 million and $0.3 million at NW Holdings and NW Natural, respectively. The decrease at NW Holdings was driven by the decrease at NW Natural, higher interest expense at the holding company, and costs associated with non-regulated renewable natural gas activities.

Consolidated Operations

Operations and Maintenance

Operations and maintenance highlights include:

In millions	2023	2022	2021
NW Natural	$ 244.7	$ 204.8	$ 188.8
Other NW Holdings operations and maintenance	29.1	19.9	15.4
NW Holdings	$ 273.8	$ 224.7	$ 204.2

2023 COMPARED TO 2022. Operations and maintenance expense increased $39.8 million at NW Natural primarily due to the following:

- $10.6 million increase related to higher payroll costs;
- $7.9 million increase in contract labor for safety and reliability and support for information technology system upgrades;
- $7.7 million increase due to the amortization of deferred balances (which is mostly offset in revenues) primarily related to COVID-19, cybersecurity and information technology system upgrades;
- $6.0 million increase in information technology licensing costs and maintenance;
- $5.4 million increase in amortization expense related to cloud computing arrangements; and
- $1.9 million increase in bad debt expense.

Operations and maintenance expense increased $49.1 million at NW Holdings primarily due to the following:

- $39.8 million increase in operations and maintenance expense at NW Natural as discussed above; and
- $9.3 million increase in other NW Holdings operations and maintenance expense primarily due to costs associated with recently acquired water and wastewater subsidiaries and business development costs at the holding company.

2022 COMPARED TO 2021. Operations and maintenance expense increased $16.0 million for NW Natural primarily due to the following:

- $6.0 million increase in contract labor for safety and reliability and contracted support for information technology system upgrades;
- $4.1 million increase in amortization expense related to cloud computing arrangements;
- $3.0 million increase in information technology maintenance and support; and
- $2.0 million increase in professional service fees.

Operations and maintenance expense increased $20.5 million for NW Holdings primarily due to the following:

- $16.0 million increase in operations and maintenance expense at NW Natural as discussed above; and
- $4.5 million increase in other NW Holdings operations and maintenance expense primarily due to costs associated with water and wastewater subsidiaries and non-regulated renewable natural gas activities.

Depreciation

Depreciation highlights include:

In millions	2023	2022	2021
NW Natural	$ 119.5	$ 113.0	$ 110.5
Other NW Holdings depreciation	6.1	3.7	3.0
NW Holdings	$ 125.6	$ 116.7	$ 113.5

2023 COMPARED TO 2022. Depreciation expense increased $6.5 million for NW Natural, primarily due to additional capital investments in the distribution system, such as installing new mains and services and replacing regulating equipment, as well as upgrading and improving the transmission system for mains. In addition, NW Natural placed several significant information technology projects into service in September 2022 and continued to invest in information technology projects in 2023.

Depreciation expense increased $8.9 million for NW Holdings, primarily due to a $2.4 million increase in other NW Holdings depreciation related to water and wastewater subsidiaries and a $6.5 million increase at NW Natural as discussed above.

2022 COMPARED TO 2021. Depreciation expense increased $2.5 million for NW Natural, primarily due to additional capital investments in the distribution system, Mist storage, and information technology systems, as well as renovation and construction of resource and operations service centers. The increase was partially offset by the amortization of cloud computing arrangements, which are recorded within operations and maintenance expenses beginning in 2022.

Depreciation expense increased $3.2 million for NW Holdings, primarily due to a $0.7 million increase in other NW Holdings depreciation related to water and wastewater subsidiaries and a $2.5 million increase at NW Natural as discussed above.

Other Income (Expense), Net

Other income (expense), net highlights include:

In millions	2023	2022	2021
NW Natural total other income (expense), net	$ 15.4	$ (0.4)	$ (12.7)
Other NW Holdings activity	2.5	1.6	0.1
NW Holdings total other income (expense), net	$ 17.9	$ 1.2	$ (12.6)

Other income (expense), net primarily consists of regulatory interest, pension and other postretirement non-service costs, gains from company-owned life insurance, interest income and donations.

2023 COMPARED TO 2022. Other income, net increased $15.8 million at NW Natural primarily due to $5.5 million of interest income from invested cash, $4.1 million from higher equity AFUDC interest income, and $5.8 million of lower pension costs. Costs related to our defined benefit pension plan for 2023 decreased compared to the prior year due to a decrease in amortization of actuarial losses.

Other income, net increased $16.7 million at NW Holdings driven by the increase at NW Natural discussed above and a $2.7 million gain recognized from a settlement agreement with a third party to settle outstanding receivables, partially offset by contributions to fund community outreach initiatives at NW Holdings.

2022 COMPARED TO 2021. Other expense, net decreased $12.3 million at NW Natural primarily due to lower pension non-service costs and interest income from the equity portion of AFUDC. Costs related to our defined benefit pension plan in 2022 decreased compared to the prior year due to changes in assumptions and gains on plan assets.

Other income, net increased $13.8 million at NW Holdings driven by the change at NW Natural discussed above, in addition to earnings from Avion Water.

Interest Expense, Net

Interest expense, net highlights include:

In millions	2023	2022	2021
NW Natural	$ 60.6	$ 46.3	$ 43.0
Other NW Holdings interest expense	16.0	6.9	1.5
NW Holdings	$ 76.6	$ 53.2	$ 44.5

2023 COMPARED TO 2022. Interest expense, net, increased $14.3 million at NW Natural primarily due to higher interest expense on a higher level of long-term debt, partially offset by a lower level of short-term debt.

Interest expense, net, increased $23.3 million at NW Holdings due to the increase at NW Natural discussed above and higher interest expense on a higher level of long-term debt at NW Holdings and NWN Water.

2022 COMPARED TO 2021. Interest expense, net, increased $3.3 million at NW Natural primarily due to a higher interest rate on a lower commercial paper balance and higher interest rates and a higher level of long-term debt, partially offset by higher AFUDC debt interest income.

Interest expense, net, increased $8.7 million at NW Holdings primarily due to the increase at NW Natural discussed above and higher interest expense on the credit facility and long-term debt at NW Holdings as a result of higher balances and higher interest rates.

Income Tax Expense

NW Holdings income tax expense highlights include:

In millions	2023	2022	2021
Income tax expense	$ 32.4	$ 29.1	$ 27.4
Effective tax rate	25.6 %	25.2 %	25.8 %

NW Natural income tax expense highlights include:

In millions	2023	2022	2021
Income tax expense	$ 35.7	$ 31.0	$ 28.3
Effective tax rate	25.4 %	25.3 %	25.9 %

2023 COMPARED TO 2022. The effective tax rate increased 0.4% and 0.1% at NW Holdings and NW Natural, respectively. The increase in the effective tax rate is primarily due to higher pre-tax income in the current period compared to the prior year.

2022 COMPARED TO 2021. The effective tax rate decreased 0.6 percentage points at both NW Holdings and NW Natural. The decrease in the effective tax rate is primarily due to lower income tax amortization of the 2020 Oregon Corporate Activity Tax (CAT) in 2022, which was subject to regulatory deferral when it became effective on January 1, 2020 and then amortized in income tax expense as recovery began in late 2020, 2021, and 2022.

FINANCIAL CONDITION

Capital Structure

NW Holdings' long-term goal is to maintain a strong and balanced consolidated capital structure. NW Natural targets a regulatory capital structure of 50% common equity and 50% long-term debt, which is consistent with approved regulatory allocations in Oregon, which has an allocation of 50% common equity and 50% long-term debt without recognition of short-term debt, and Washington, which has an allocation of 50% long-term debt, 1% short-term debt, and 49% common equity.

When additional capital is required, debt or equity securities are issued depending on both the target capital structure and market conditions. These sources of capital are also used to fund long-term debt retirements and short-term commercial paper maturities. See "*Liquidity and Capital Resources*" below and Note 9. Achieving our target capital structure and maintaining sufficient liquidity to meet operating requirements is necessary to maintain attractive credit ratings and provide access to the capital markets at reasonable costs.

NW Holdings' consolidated capital structure, excluding short-term debt, was as follows:

	December 31,	
	2023	2022
Common equity	44.9 %	46.8 %
Long-term debt (including current maturities)	55.1	53.2
Total	100.0 %	100.0 %

NW Natural's consolidated capital structure, excluding short-term debt, was as follows:

	December 31,	
	2023	2022
Common equity	47.5 %	51.4 %
Long-term debt (including current maturities)	52.5	48.6
Total	100.0 %	100.0 %

As of December 31, 2023 and 2022, NW Holdings' consolidated capital structure included common equity of 43.5% and 42.4%, long-term debt of 48.3% and 45.0%, and short-term debt including current maturities of long-term debt of 8.2% and 12.6%, respectively. As of December 31, 2023 and 2022, NW Natural's consolidated capital structure included common equity of 47.2% and 47.9%, long-term debt of 52.2% and 41.6%, and short-term debt including current maturities of long-term debt of 0.6% and 10.5%, respectively.

During 2023, NW Natural's capital structure changed primarily due to the issuance of long-term debt and capital contributions from NW Holdings. NW Holdings' capital structure changed primarily due to the issuance of long-term debt and common stock at NW Holdings. See further discussion below in "Cash Flows — *Financing Activities*".

Liquidity and Capital Resources

At December 31, 2023 and December 31, 2022, NW Holdings had approximately $32.9 million and $29.3 million, and NW Natural had approximately $19.8 million and $13.0 million, of cash and cash equivalents, respectively. In order to maintain sufficient liquidity during periods when capital markets are volatile, NW Holdings and NW Natural may elect to maintain higher cash balances and add short-term borrowing capacity. NW Holdings and NW Natural may also pre-fund their respective capital expenditures when long-term fixed rate environments are attractive. NW Holdings and NW Natural expect to have ample liquidity in the form of cash on hand and from operations and available credit capacity under credit facilities to support funding needs.

ATM Equity Program

In August 2021, NW Holdings initiated an at-the-market (ATM) equity program by entering into an equity distribution agreement under which NW Holdings may issue and sell from time to time shares of common stock, no par value, having an aggregate gross sales price of up to $200 million. NW Holdings is under no obligation to offer and sell common stock under the ATM equity program, which expires in August 2024. Any shares of common stock offered under the ATM equity program are registered on NW Holdings' universal shelf registration statement filed with the SEC. During the year ended December 31, 2023, NW Holdings issued and sold 1,646,325 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $66.4 million, net of fees and commissions paid to agents of $1.2 million. As of December 31, 2023, NW Holdings had $43.5 million of equity available for issuance under the program.

NW Holdings

For NW Holdings, short-term liquidity is primarily provided by cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities. NW Holdings also has a universal shelf registration statement filed with the SEC for the issuance of debt and equity securities, which it used to sell long-term unsecured notes that are due to close in early March 2024. NW Holdings long-term debt and equity issuances are primarily used to provide equity contributions to NW Holdings' operating subsidiaries for operating and capital expenditures and other corporate purposes. NW Natural also has a universal shelf registration statement filed with the SEC for the issuance of debt securities. From 2024 through 2026, we estimate NW Holdings' and NW Natural's combined incremental capital needs to be in the range of $500 million to $575 million. NW Holdings' issuance of securities is not subject to regulation by state public utility commissions, but the dividends from NW Natural to NW Holdings are subject to regulatory ring-fencing provisions. NW Holdings guarantees the debt of its wholly-owned subsidiary, NWN Water. See "*Long-Term Debt*" below for more information regarding NWN Water debt.

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC in connection with the holding company reorganization, NW Natural may not pay dividends or make distributions to NW Holdings if NW Natural's credit ratings and common equity ratio, defined as the ratio of equity to long-term debt, fall below specified levels. If NW Natural's long-term secured credit ratings are below

A- for S&P and A3 for Moody's, dividends may be issued so long as NW Natural's common equity ratio is 45% or more. If NW Natural's long-term secured credit ratings are below BBB for S&P and Baa2 for Moody's,

dividends may be issued so long as NW Natural's common equity ratio is 46% or more. Dividends may not be issued if NW Natural's long-term secured credit ratings are BB+ or below for S&P or Ba1 or below for Moody's, or if NW Natural's common]equity ratio is below 44%, where the ratio is measured using common equity and long-term debt excluding imputed debt or debt-like lease obligations. In each case, common equity ratios are determined based on a preceding or projected 13-month average. In addition, there are certain OPUC notice requirements for dividends in excess of 5% of NW Natural's retained earnings.

Additionally, if NW Natural's common equity (excluding goodwill and equity associated with non-regulated assets), on a preceding or projected 13-month average basis, is less than 46% of NW Natural's capital structure, NW Natural is required to notify the OPUC, and if the common equity ratio falls below 44%, file a plan with the OPUC to restore its equity ratio to 44%. This condition is designed to ensure NW Natural continues to be adequately capitalized under the holding company structure. Under the WUTC order, the average common equity ratio must not exceed 56%.

At December 31, 2023 and 2022, NW Natural satisfied the ring-fencing provisions described above.

Based on several factors, including current cash reserves, committed credit facilities, its ability to receive dividends from its operating subsidiaries, in particular NW Natural, a contracted issuance of long-term debt in March 2024, and an expected ability to issue long-term debt and equity securities in the capital markets, NW Holdings believes its liquidity is sufficient to meet anticipated near-term cash requirements, including all contractual obligations, investing, and financing activities as discussed in "*Cash Flows*" below.

NW HOLDINGS DIVIDENDS. Quarterly dividends have been paid on common stock each year since NW Holdings' predecessor's stock was first issued to the public in 1951. Annual common stock dividend payments per share, adjusted for stock splits, have increased each year since 1956. The declarations and amount of future dividends to shareholders will depend upon earnings, cash flows, financial condition, NW Natural's ability to pay dividends to NW Holdings and other factors. The amount and timing of dividends payable on common stock is at the sole discretion of the NW Holdings Board of Directors.

NW Natural

For the NGD business segment, short-term borrowing requirements typically peak during colder winter months when the NGD business borrows money to cover the lag between natural gas purchases and bill collections from customers. Short-term liquidity for the NGD business is primarily provided by cash balances, internal cash flow from operations, proceeds from the sale of commercial paper notes, as well as available cash from multi-year credit facilities, short-term credit facilities, company-owned life insurance policies, the sale of long-term debt, and equity contributions from NW Holdings. NW Natural's long-term debt and contributions from NW Holdings are primarily used to finance NGD capital expenditures, refinance maturing debt, and provide temporary funding for other general corporate purposes of the NGD business.

Based on its current debt ratings (see "*Credit Ratings*" below), NW Natural has been able to issue commercial paper and long-term debt at attractive rates. In the event NW Natural is not able to issue new long-term debt due to adverse market conditions or other reasons, NW Natural expects that near-term liquidity needs can be met using internal cash flows, issuing commercial paper, receiving equity contributions from NW Holdings, or drawing upon a committed credit facility. NW Natural also has a universal shelf registration statement filed with the SEC for the issuance of secured and unsecured debt securities.

In the event senior unsecured long-term debt ratings are downgraded, or outstanding derivative positions exceed a certain credit threshold, counterparties under derivative contracts could require NW Natural to post cash, a letter of credit, or other forms of collateral, which could expose NW Natural to additional cash requirements and may trigger increases in short-term borrowings while in a net loss position. NW Natural was not required to post collateral at December 31, 2023. See Note 15 below.

Other items that may have a significant impact on NW Natural's liquidity and capital resources include NW Natural's pension contribution requirements and environmental expenditures.

PENSION CONTRIBUTIONS. NW Natural expects to make contributions to its company-sponsored defined benefit plan, which is closed to new employees, over the next several years under applicable laws and regulations. See "Application of Critical Accounting Policies —*Pensions and Postretirement Benefits*" below and Note 10 for more information.

ENVIRONMENTAL EXPENDITURES. NW Natural expects to continue using cash resources to fund environmental liabilities for future environmental remediation or action. NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recover prudently incurred costs allocable to Oregon customers, subject to an earnings test. On October 21, 2019 the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers beginning November 1, 2019. See Note 17 and "Results of Operations—Regulatory Matters— *Environmental Cost Deferral and Recovery*" above.

Based on several factors, including current credit ratings, NW Natural's commercial paper program, current cash reserves, committed credit facilities, and an expected ability to issue long-term debt and receive equity contributions from NW Holdings,

NW Natural believes its liquidity is sufficient to meet anticipated near-term cash requirements, including all contractual obligations, and investing and financing activities as discussed in "*Cash Flows*" below.

NW NATURAL DIVIDENDS. The declarations and amount of future dividends to NW Holdings will depend upon earnings, cash flows, financial condition, the satisfaction of OPUC and WUTC regulatory ring-fencing restrictions, and other factors. The amount and timing of dividends payable on common stock is subject to approval of the NW Natural Board of Directors.

Gas and Pipeline Capacity Purchase Agreements

NW Natural has signed agreements providing for the reservation of firm pipeline capacity under which it is required to make monthly payments for contracted capacity. The pricing component of the monthly payment is established, subject to change, by U.S. or Canadian regulatory bodies, or is established directly with private counterparties, as applicable. In addition, NW Natural has entered into long-term agreements to release firm pipeline capacity. NW Natural also enters into short-term and long-term gas purchase agreements. Refer to Note 16 for gas and pipeline capacity purchase commitments.

NW Natural Renewables is an unregulated subsidiary of NW Natural Holdings established to pursue unregulated renewable natural gas activities. In September 2021, a subsidiary of NW Natural Renewables, Ohio Renewables, and a subsidiary of EDL, a global producer of sustainable distributed energy, executed agreements to partially fund two production facilities that are designed to convert landfill waste gases to RNG (EDL Facilities). The EDL Facilities have been constructed, and testing and commissioning of these facilities is underway, but has been delayed. Upon each of the EDL Facilities achieving full commercial operations, Ohio Renewables is committed to make cash payments of approximately $25 million per facility to partially fund the infrastructure required to condition biogas. Alongside these development agreements, Ohio Renewables and the subsidiary of EDL executed agreements for Ohio Renewables to purchase up to an annual specified amount of RNG produced by the EDL Facilities over a 20-year period. Upon commencement of commercial operations, we currently estimate the amount of RNG purchases based on prices and quantities specified in the agreements to be as follows: approximately $6.2 million in 2024, $21.0 million in 2025, $21.0 million in 2026, $27.3 million in 2027, $27.3 million in 2028 and $579.7 million thereafter.

Ohio Renewables has contracted to sell RNG produced by the EDL Facilities up to certain specified volumes in each of calendar years 2024 through 2026 to an investment-grade counterparty. We currently estimate RNG volumes to be sold pursuant to this agreement to be approximately 3,540,000 MMbtu over the life of the agreement, provided that such amounts of RNG are produced by the EDL Facilities during that period.

Ohio Renewables additionally has contracted to sell a fixed-volume amount of RNG under a long-term agreement with an investment-grade utility beginning in 2025 and extending through 2042. Amounts to be delivered under this agreement are estimated to be 112,500 MMbtu in 2025, 375,000 MMbtu in 2026, 1,950,000 MMbtu annually in 2027 through 2034, and 2,775,000 MMbtu annually in years 2035 through 2042. Under the current contract, if less than 75% of the contracted volumes of RNG are not delivered on an annual basis, Ohio Renewables is obligated to pay the per MMbtu price for volumes between the amount delivered and 75% of the contracted volumes on an annual basis.

Other Purchase Agreements

Other purchase commitments primarily consist of remaining balances under existing purchase orders and gas storage agreements. At December 31, 2023, the amount due over the duration of the purchase agreements totaled $35.4 million. Except for these certain purchase commitments, NW Holdings and NW Natural have no material off-balance sheet financing arrangements.

Short-Term Debt

The primary source of short-term liquidity for NW Holdings is cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time.

The primary source of short-term liquidity for NW Natural is from the sale of commercial paper, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time. In addition to issuing commercial paper or entering into bank loans to meet working capital requirements, including seasonal requirements to finance gas purchases and accounts receivable, short-term debt may also be used to temporarily fund capital requirements. For NW Natural, commercial paper and bank loans are periodically refinanced through the sale of long-term debt or equity contributions from NW Holdings. Commercial paper, when outstanding, is sold through two commercial banks under an issuing and paying agency agreement and is supported by one or more unsecured revolving credit facilities. See “Credit Agreements” below.

At December 31, 2023 and 2022, NW Natural's short-term debt consisted of the following:

	December 31, 2023		December 31, 2022	
In millions	Balance Outstanding	Weighted Average Interest Rate[1]	Balance Outstanding	Weighted Average Interest Rate[1]
NW Natural:				
Commercial paper	$ 16.8	5.5 %	$ 170.2	4.6 %
Other (NW Holdings):				
Credit agreement	73.0	6.4 %	88.0	5.3 %
NW Holdings	$ 89.8		$ 258.2	

[1] Weighted average interest rate on outstanding short-term debt

Credit Agreements

NW Holdings

NW Holdings has a $200 million sustainability-linked credit agreement, with a feature that allows it to request increases in the total commitment amount, up to a maximum of $300 million. The maturity date of the agreement is November 3, 2026, with available extensions of commitments for two additional one-year periods, subject to lender approval.

All lenders under the NW Holdings credit agreement are major financial institutions with committed balances and investment grade credit ratings as of December 31, 2023 as follows:

In millions

Lender rating, by category	Loan Commitment
AA/Aa	$ 200
Total	$ 200

Based on credit market conditions, it is possible one or more lending commitments could be unavailable to NW Holdings if the lender defaulted due to lack of funds or insolvency; however, NW Holdings does not believe this risk to be imminent due to the lenders' strong investment-grade credit ratings. There was $73.0 million and $88.0 million of outstanding balances under the NW Holdings agreement at December 31, 2023 and 2022, respectively.

The NW Holdings credit agreement permits the issuance of letters of credit in an aggregate amount of up to $40 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. The credit agreement requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at December 31, 2023 and 2022, with consolidated indebtedness to total capitalization ratios of 56.5% and 57.6%, respectively.

The NW Holdings credit agreement also requires NW Holdings to maintain debt ratings (which are defined by a formula using NW Natural's credit ratings in the event NW Holdings does not have a credit rating) with Standard & Poor's (S&P) and Moody's Investors Service, Inc. (Moody's) and notify the lenders of any change in its senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Holdings' debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreements are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreements when ratings are changed. NW Holdings maintains a credit rating with S&P of A+ and does not currently maintain ratings with Moody's.

Interest charges on the NW Holdings credit agreement were indexed to the London Interbank Offered Rate (LIBOR) through January 31, 2023. The agreement was amended to replace LIBOR with the secured overnight financing rate (SOFR) beginning February 2023. The SOFR is subject to a 10 basis point spread adjustment. The NW Holdings credit agreement also includes a mechanism that can increase or decrease the undrawn interest rate by up to 1 basis point and undrawn interest rate by up to 5 basis points in accordance with NW Holdings' independently verified achievement of quantifiable metrics related to two goals—one related to carbon savings and one related to in-line inspections of NW Natural's transmission pipeline. Performance against these metrics is designed to be assessed annually with pricing adjustments, if any, resetting off of primary pricing annually and not cumulatively.

NW Holdings had no letters of credit issued and outstanding at December 31, 2023 and 2022.

NW Natural

NW Natural has a sustainability-linked multi-year credit agreement for unsecured revolving loans totaling $400 million, with a feature that allows NW Natural to request increases in the total commitment amount, up to a maximum of $600 million. The maturity date of the agreement is November 3, 2026 with an available extension of commitments for two additional one-year periods, subject to lender approval.

All lenders under the NW Natural credit agreement are major financial institutions with committed balances and investment grade credit ratings as of December 31, 2023 as follows:

In millions

Lender rating, by category	Loan Commitment
AA/Aa	$ 400
Total	$ 400

Based on credit market conditions, it is possible one or more lending commitments could be unavailable to NW Natural if the lender defaulted due to lack of funds or insolvency; however, NW Natural does not believe this risk to be imminent due to the lenders' strong investment-grade credit ratings.

The NW Natural credit agreement permits the issuance of letters of credit in an aggregate amount of up to $60 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. There were no outstanding balances under this credit agreement at December 31, 2023 or 2022. The credit agreement requires NW Natural to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Natural was in compliance with this covenant at December 31, 2023 and 2022, with consolidated indebtedness to total capitalization ratios of 52.8% and 52.1%, respectively.

The NW Natural credit agreement also requires NW Natural to maintain credit ratings with S&P and Moody's and notify the lenders of any change in NW Natural's senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Natural's debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreement are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreement when ratings are changed. See "*Credit Ratings*" below.

Interest charges on the NW Natural credit agreement were indexed to the LIBOR through January 31, 2023. The agreement was amended to replace LIBOR with the SOFR beginning February 2023. The SOFR is subject to a 10 basis point spread adjustment. The NW Natural credit agreement also includes a mechanism that can increase or decrease the undrawn interest rate by up to 1 basis point and undrawn interest rate by up to 5 basis points in accordance with NW Natural's independently verified achievement of quantifiable metrics related to two goals—one related to carbon savings and one related to in-line inspections of NW Natural's transmission pipeline. Performance against these metrics is designed to be assessed annually with pricing adjustments, if any, resetting off of primary pricing annually and not cumulatively.

NW Natural had one letter of credit outstanding at December 31, 2023 and no letters of credit outstanding at December 31, 2022. In December 2023, NW Natural issued a $15 million letter of credit through its existing credit agreement, which expired January 5, 2024.

Letters of Credit Facility

In January 2024, NW Natural entered into an Uncommitted Letter of Credit and Reimbursement Agreement (LC Reimbursement Agreement), pursuant to which NW Natural agreed to reimburse each Lender acting as an issuing bank (Issuing Bank) thereunder for disbursements in respect of letters of credit (Letters of Credit) issued pursuant to the LC Reimbursement Agreement from time to time. The Company expects to use Letters of Credit issued under the facility created by the LC Reimbursement Agreement (LC Facility) primarily to support its participation in Washington Climate Commitment Act cap-and-invest program auctions.

Although there is no expressly stated maximum amount of Letters of Credit that can be issued or outstanding under the LC Facility, under current regulatory authority from the OPUC, the aggregate sum of Letters of Credit outstanding and available to be drawn under the LC Reimbursement Agreement may not exceed $100 million at any one time. The Issuing Banks have no commitment to issue Letters of Credit under the LC Facility and will have the discretion to limit and condition the terms for the issuance of Letters of Credit (including maximum face amounts) in their sole discretion.

The LC Reimbursement Agreement requires NW Natural to maintain certain ratings with S&P and Moody's. NW Natural must also notify the Administrative Agent and Lenders of any change in the S&P or Moody's Ratings, although any such change is not an event of default.

The LC Reimbursement Agreement prohibits NW Natural from permitting Consolidated Indebtedness to be greater than 70% of Total Capitalization, each as defined therein and calculated as of the end of each fiscal quarter of NW Natural. Failure to comply with this financial covenant would constitute an Event of Default under the LC Reimbursement Agreement. The occurrence of this or any other Event of Default would entitle the Administrative Agent to require cash collateral for the LC Exposure, as defined in the LC

Reimbursement Agreement, and to exercise all other rights and remedies available to it and the Lenders under the Credit Documents, as defined in the LC Reimbursement Agreement, and under applicable law.

Credit Ratings

NW Natural's credit ratings are a factor of liquidity, potentially affecting access to the capital markets including the commercial paper market. NW Natural's credit ratings also have an impact on the cost of funds, and may have an impact on the need to post collateral under financial derivative contracts.

The following table summarizes NW Natural's current credit ratings:

	S&P	Moody's
Commercial paper (short-term debt)	A-1	P-2
Senior secured (long-term debt)	AA-	A2
Senior unsecured (long-term debt)	n/a	Baa1
Corporate credit rating	A+	n/a
Ratings outlook	Negative	Stable

In October 2023, S&P revised NW Natural's ratings outlook from "stable" to "negative." Also in October 2023, S&P initiated a rating on NW Holdings of A+ with a negative outlook.

The above credit ratings and ratings outlook are dependent upon a number of factors, both qualitative and quantitative, and are subject to change at any time. The disclosure of or reference to these credit ratings is not a recommendation to buy, sell or hold NW Holdings or NW Natural securities. Each rating should be evaluated independently of any other rating.

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC, NW Holdings and NW Natural are required to maintain separate credit ratings, long-term debt ratings, and preferred stock ratings, if any.

Long-Term Debt

Note Purchase Agreement

In December 2023, NW Holdings entered into a Note Purchase Agreement between NW Holdings and the institutional investors named as purchasers therein. The Note Purchase Agreement provides for the issuance of (i) $100.0 million aggregate principal amount of NW Holdings' 5.78% Senior Notes, Series A, due March 7, 2028 (5.78% Notes) and (ii) $50.0 million aggregate principal amount of NW Holdings' 5.84% Senior Notes, Series B, due March 7, 2029 (5.84% Notes) in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act of 1933, as amended. The 5.78% Notes and the 5.84% Notes are expected to be issued on or about March 7, 2024, pursuant to the Note Purchase Agreement. The proceeds from the Note Purchase Agreement are expected to be used to refinance $150.0 million of existing term loans at NW Holdings and NWN Water.

The 5.78% Notes will bear interest at the rate of 5.78% per annum, payable semi-annually on March 7 and September 7 of each year, commencing September 9, 2024, and will mature on March 7, 2028. NW Holdings may, at its option, prepay at any time all, or from time to time any part of, the outstanding 5.78% Notes at a price equal to 100% of the principal amount thereof, plus a "make-whole" premium and accrued and unpaid interest thereon to the date of prepayment; provided, however, in the case of a partial prepayment, NW Holdings must prepay at least 5% of the aggregate principal amount of the 5.78% Notes outstanding. At any time on or after February 7, 2028, NW Holdings may, at its option, prepay all or any part of the 5.78% Notes at 100% of the principal amount thereof, plus accrued and unpaid interest thereon to the date of prepayment, but without the payment of a "make-whole" premium, so long as there is no Default or Event of Default under the Note Purchase Agreement.

The 5.84% Bonds will bear interest at the rate of 5.84% per annum, payable semi-annually on March 7 and September 7 of each year, commencing September 9, 2024, and will mature on March 7, 2029. NW Holdings may, at its option, prepay at any time all, or from time to time any part of, the outstanding 5.84% Notes at a price equal to 100% of the principal amount thereof, plus a "make-whole" premium and accrued and unpaid interest thereon to the date of prepayment; provided, however, in the case of a partial prepayment, NW Holdings must prepay at least 5% of the aggregate principal amount of the 5.84% Notes outstanding. At any time on or after February 7, 2029, NW Holdings may, at its option, prepay all or any part of the 5.84% Notes at 100% of the principal amount thereof, plus accrued and unpaid interest thereon to the date of prepayment, but without the payment of a "make-whole" premium, so long as there is no Default or Event of Default under the Note Purchase Agreement.

Issuance of Long-Term Debt

In August 2023, NW Natural issued and sold $80.0 million aggregate principal amount of its FMBs, 5.18% Series and $50.0 million aggregate principal amount of its FMBs, 5.23% Series. The 5.18% Bonds bear interest at the rate of 5.18% per annum, payable semi-annually on February 4 and August 4 of each year, commencing February 4, 2024, and will mature on August 4, 2034. The 5.23% Bonds bear interest at the rate of 5.23% per annum, payable semi-annually on February 4 and August 4 of each year, commencing February 4, 2024, and will mature on August 4, 2038.

In March 2023, NW Natural issued and sold $100.0 million aggregate principal amount of 5.75% Secured Medium-Term Notes, Series B due 2033 (the Notes). The Notes bear interest at the rate of 5.75% per annum, payable semi-annually on March 15 and September 15 of each year.

In January 2023, NW Natural issued and sold $100.0 million aggregate principal amount of its FMBs, 5.43% Series due January 2053. The 5.43% Bonds bear interest at the rate of 5.43% per annum, payable semi-annually on January 6 and July 6 of each year, commencing July 6, 2023, and will mature on January 6, 2053.

Interest Rate Swap Agreements

NW Holdings and NWN Water entered into interest rate swap agreements with major financial institutions that effectively convert variable-rate debt to a fixed rate. Interest payments made between the effective date and expiration date are hedged by the swap agreements. The notional amount, effective date, expiration date and benchmark rate of the swap agreements are shown in the table below:

In millions	Notional Amount	Effective Date	Expiration Date	Fixed Rate
NW Holdings	$ 100.0	1/17/2023	3/15/2024	4.7 %
NWN Water	$ 55.0	1/19/2023	6/10/2026	3.8 %

Retirement of Long-Term Debt

The following NW Natural debentures were retired in the periods indicated:

	Year Ended December 31,		
In millions	2023	2022	2021
NW Natural First Mortgage Bonds:			
3.542% Series due 2023	$ 50	$ —	$ —
5.620% Series due 2023	40	—	—
9.050% Series due 2021	—	—	10
3.176% Series due 2021	—	—	50
Total	$ 90	$ —	$ 60

In June 2019, NWN Water entered into a two-year term loan agreement for $35.0 million. The loan was repaid in June 2021 upon its maturity date.

Maturities and Interest on Long-Term Debt

Maturities and payment of interest on long-term debt for each of the annual periods through December 31, 2028 and thereafter are as follows:

In millions	Long-term debt maturities	Interest on long-term debt
NW Natural:		
2024	$ —	$ 63.2
2025	30.0	62.9
2026	55.0	60.9
2027	64.7	57.7
2028	10.0	54.8
Thereafter	1,215.0	826.7
NW Natural Total	1,374.7	1,126.2
Other NW Holdings:		
2024	150.9	4.9
2025	0.8	2.7
2026	55.8	1.3
2027	0.9	0.1
2028	0.9	0.1
Thereafter	2.3	0.3
Other NW Holdings Total	211.6	9.4
NW Holdings:		
2024	150.9	68.1
2025	30.8	65.6
2026	110.8	62.2
2027	65.6	57.8
2028	10.9	54.9
Thereafter	1,217.3	827.0
NW Holdings Total	$ 1,586.3	$ 1,135.6

Bankruptcy Ring-fencing Restrictions

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC, NW Natural is required to have one director who is independent from NW Natural management and from NW Holdings and to issue one share of NW Natural preferred stock to an independent third party. NW Natural was in compliance with both of these ring-fencing provisions as of December 31, 2023 and 2022. NW Natural may file a voluntary petition for bankruptcy only if approved unanimously by the Board of Directors of NW Natural, including the independent director, and by the holder of the preferred share.

Cash Flows

Operating Activities

Changes in our operating cash flows are primarily affected by net income or loss, changes in working capital requirements, and other cash and non-cash adjustments to operating results.

In millions	2023	2022	2021
NW Natural cash provided by operating activities	$ 281.9	$ 145.2	$ 141.5
NW Holdings cash provided by operating activities	279.9	147.7	160.4

2023 COMPARED TO 2022. The significant factors contributing to the $136.7 million increase at NW Natural cash flow provided by operating activities were as follows:

- $126.6 million decrease in accounts receivable due to colder weather in December 2022;
- $40.0 million decrease in net deferred gas costs due to the recovery of higher priced gas in 2022;
- $30.6 million decrease in asset optimization revenue sharing bill credits; and
- $19.9 million increase due to a compliance obligation related to the Washington CCA; partially offset by
- $64.9 million decrease in accounts payable resulting from payments of higher priced gas purchased in December 2022; and
- $22.3 million decrease in the decoupling mechanism.

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The $132.3 million increase in cash provided by operating activities at NW Holdings was primarily driven by the factors discussed above.

2022 COMPARED TO 2021. The significant factors contributing to the $3.7 million increase at NW Natural cash flow provided by operating activities were as follows:

- $52.9 million increase in net deferred gas costs as the actual cost of gas during the year ended December 31, 2022 was higher than the rate embedded in the PGA. In addition, for the year ended December 31, 2021, actual gas costs were 21% above the PGA rate due to the 2021 cold weather event; and
- $12.6 million increase in accounts payable primarily due to a larger volume of gas purchased and the higher cost of gas; partially offset by
- $32.0 million increase in asset optimization revenue sharing bill credits to customers due to the 2021 cold weather event; and
- $32.1 million increase in accounts receivable and accrued unbilled revenue resulting from higher balances due to colder weather.

The $12.7 million decrease in NW Holdings cash flow provided by operating activities were driven by the above factors affecting NW Natural, in addition to lower prepaid income taxes in 2022 compared to 2021.

During the years ended December 31, 2023 and 2022, NW Natural did not make any cash contributions to its qualified defined benefit pension plan, compared to $9.6 million in 2021. The American Rescue Plan, which was signed into law on March 11, 2021, includes a provision for pension relief that extends the amortization period for required contributions from 7 to 15 years and provides for the stabilization of interest rates used to calculate future required contributions. The amount and timing of future contributions will depend on market interest rates and investment returns on the plans' assets. See Note 10.

NW Holdings and NW Natural have lease and purchase commitments relating to our operating activities that are financed with cash flows from operations. For information on cash flow requirements related to leases and other purchase commitments, see Note 7 and Note 16.

Investing Activities

In millions	2023	2022	2021
NW Natural cash used in investing activities	$ (290.5)	$ (320.3)	$ (275.7)
NW Holdings cash used in investing activities	(335.5)	(435.5)	(300.1)

2023 COMPARED TO 2022. Cash used in investing activities decreased $29.8 million at NW Natural and $100.0 million at NW Holdings, respectively. The decrease at NW Natural is primarily driven by a decrease in capital expenditures related to two significant information technology projects that were placed into service in the prior year.

The decrease in cash used in investing activities at NW Holdings is driven by lower capital expenditures at NW Natural and less cash used for water and wastewater acquisitions.

2022 COMPARED TO 2021. Cash used in investing activities increased $44.6 million at NW Natural and $135.4 million at NW Holdings, respectively. The increase at NW Natural is primarily driven by an increase in capital expenditures of $40.4 million. The increase at NW Holdings is driven by the increase at NW Natural and $94.3 million in cash paid for water and wastewater acquisitions.

NW Natural capital expenditures for 2024 are expected to be in the range of $350 million to $400 million and for the five-year period from 2024 to 2028 are expected to range from $1.4 billion to $1.6 billion. NW Natural Water is expected to invest approximately $40 million in 2024 related to maintenance capital expenditures for water and wastewater utilities owned as of December 31, 2023, and for the five-year period from 2024 to 2028 capital expenditures are expected to invest approximately $120 million to $140 million.

The timing and amount of the core capital expenditures and projects for 2024 and the next five years could change based on regulation, growth, and cost estimates. Additional investments in our infrastructure during and after 2024 that are not incorporated in the estimates provided above will depend largely on additional regulations, growth, and expansion opportunities. Required funds for the investments are expected to be internally generated or financed with long-term debt or equity, as appropriate.

Financing Activities

In millions	2023	2022	2021
NW Natural cash provided by financing activities	$ 20.4	$ 178.9	$ 139.3
NW Holdings cash provided by financing activities	64.2	301.6	131.4

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2023 COMPARED TO 2022. Cash provided by financing activities decreased $158.5 million at NW Natural attributable to lower cash contributions from NW Holdings and the retirement of short and long-term debt, partially offset by an increase in long-term debt issuances.

Cash provided by financing activities decreased $237.4 million at NW Holdings attributable to lower proceeds from common stock issuances and the retirement of short and long-term debt, partially offset by an increase in long-term debt issuances.

2022 COMPARED TO 2021. Cash provided by financing activities increased $39.6 million at NW Natural primarily driven by $63.4 million in capital contributions by NW Holdings, partially offset by changes in debt.

Cash provided by financing activities increased $170.2 million at NW Holdings primarily due to cash proceeds of $191.1 million from the issuance of common stock and the ATM equity program, partially offset by changes in debt.

Pension Cost and Funding Status of Qualified Retirement Plans

NW Natural's pension costs are determined in accordance with accounting standards for compensation and retirement benefits. See “Application of Critical Accounting Policies and Estimates – *Pensions and Postretirement Benefits*” below. Pension benefit for NW Natural's qualified defined benefit plan, which is allocated between operations and maintenance expenses and capital expenditures, totaled $2.4 million in 2023, a change of $7.8 million from 2022. The fair market value of pension assets in this plan increased to $283.4 million at December 31, 2023 from $280.3 million at December 31, 2022. The increase was due to a gain on plan assets of $28.8 million, partially offset by benefit payments of $25.7 million.

Contributions made to NW Natural's company-sponsored qualified defined benefit pension plan are based on actuarial assumptions and estimates, tax regulations, and funding requirements under federal law. The qualified defined benefit pension plan was underfunded by $109.2 million at December 31, 2023. The American Rescue Plan, which was signed into law on March 11, 2021, includes a provision for pension relief that extends the amortization period for required contributions from 7 to 15 years and provides for the stabilization of interest rates used to calculate future required contributions. As a result, NW Natural did not make any plan contributions during 2023. The amount and timing of future contributions will depend on market interest rates and investment returns on the plan's assets. See Note 10 for information regarding employer contributions and estimated future benefit payments and other pension disclosures.

Contingent Liabilities

Loss contingencies are recorded as liabilities when it is probable that a liability has been incurred and the amount of the loss is reasonably estimable in accordance with accounting standards for contingencies. See “Application of Critical Accounting Policies and Estimates—*Environmental Contingencies*” below. At December 31, 2023, NW Natural's total estimated liability related to environmental sites was $121.6 million. See Note 17 and "Results of Operations—Regulatory Matters—Rate Mechanisms—*Environmental Cost Deferral and Recovery*" above.

NW Holdings is not currently party to any direct claims or litigation, though in the future it may be subject to claims and litigation arising in the ordinary course of business.

New Accounting Pronouncements

For a description of recent accounting pronouncements that may have an impact on our financial condition, results of operations, or cash flows, see Note 2.

APPLICATION OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing financial statements in accordance with U.S. GAAP, management exercises judgment to assess the potential outcomes and related accounting impacts in the selection and application of accounting principles, including making estimates and assumptions that affect reported amounts of assets, liabilities, revenues, expenses, and related disclosures in the financial statements. Management considers critical accounting policies to be those which are most important to the representation of financial condition and results of operations and which require management’s most difficult and subjective or complex judgments, including accounting estimates that could result in materially different amounts if reported under different conditions or used different assumptions. Our most critical estimates and judgments for both NW Holdings and NW Natural include accounting for:

- regulatory accounting;
- revenue recognition;
- derivative instruments and hedging activities;
- pensions and postretirement benefits;
- income taxes;
- environmental contingencies; and

- impairment of long-lived assets and goodwill.

Management has discussed its current estimates and judgments used in the application of critical accounting policies with the Audit Committees of the Boards of NW Holdings and NW Natural. Within the context of critical accounting policies and estimates,

management is not aware of any reasonably likely events or circumstances that would result in materially different amounts being reported.

Regulatory Accounting

The NGD segment is regulated by the OPUC and WUTC, which establish the rates designed to recover specific costs of providing regulatory services, and, to a certain extent, set forth special accounting treatment for certain regulatory transactions for which NW Natural records regulatory assets and liabilities. In general, the same accounting principles as non-regulated companies reporting under U.S. GAAP are used. However, authoritative guidance for regulated operations (regulatory accounting) requires different accounting treatment for regulated companies to show the effects of such regulation. For example, NW Natural accounts for the cost of gas using a PGAdeferral and cost recovery mechanism, which is submitted for approval annually to the OPUC and WUTC. See "Results of Operations—Regulatory Matters—Rate Mechanisms—*Purchased Gas Adjustment*" above. There are other expenses and revenues that the OPUC or WUTC may require NW Natural to defer for recovery or refund in future periods. Regulatory accounting requires NW Natural to account for these types of deferred expenses (or deferred revenues) as regulatory assets (or regulatory liabilities) on the balance sheet. When the recovery of these regulatory assets from, or refund of regulatory liabilities to, customers is approved, NW Natural recognizes the expense or revenue on the income statement at the same time the adjustment to amounts is included in rates charged to customers.

The conditions that must be satisfied to adopt the accounting policies and practices of regulatory accounting include:
- an independent regulator sets rates;
- the regulator sets the rates to cover specific costs of delivering service; and
- the service territory lacks competitive pressures to reduce rates below the rates set by the regulator.

Because NW Natural's NGD operations satisfy all three conditions, NW Natural continues to apply regulatory accounting to NGD operations. Future accounting changes, regulatory changes, or changes in the competitive environment could require NW Natural to discontinue the application of regulatory accounting for some or all of our regulated businesses. This would require the write-off of those regulatory assets and liabilities that would no longer be probable of recovery from or refund to customers.

Based on current accounting and regulatory competitive conditions, NW Natural believes it is reasonable to expect continued application of regulatory accounting for NGD activities. Further, it is reasonable to expect the recovery or refund of NW Natural's regulatory assets and liabilities at December 31, 2023 through future customer rates. If it is determined that all or a portion of these regulatory assets or liabilities no longer meet the criteria for continued application of regulatory accounting, then NW Natural would be required to write-off the net unrecoverable balances against earnings in the period such determination is made. The net balance in regulatory asset and liability accounts was a net liability of $268.2 million and a net liability of $479.3 million as of December 31, 2023 and 2022, respectively. See Note 2 for more detail on regulatory balances.

Revenue Recognition

Revenues, which are derived primarily from the sale, transportation, and storage of natural gas, are recognized upon the delivery of gas commodity or services rendered to customers.

Accrued Unbilled Revenue

For a description of the policy regarding accrued unbilled revenue, most of which relates to the NGD business at NW Natural, see Note 2. The following table presents changes in key metrics if the estimated percentage of unbilled volume at December 31 was adjusted up or down by 1%:

	2023	
In millions	Up 1%	Down 1%
Unbilled revenue increase (decrease)[(1)]	$ 1.2	$ (1.2)
Margin increase (decrease)[(1)]	0.2	(0.2)
Net income before tax increase (decrease)[(1)]	0.1	(0.1)

(1) Includes impact of regulatory mechanisms including decoupling mechanism and excludes the impact of unbilled revenue from water services.

Derivative Instruments and Hedging Activities

NW Holdings and NW Natural have financial derivative policies that set forth guidelines for using financial derivative instruments to support prudent risk management strategies. These policies specifically prohibit the use of derivatives for speculative purposes. Financial derivative contracts are utilized to hedge most of our natural gas sale requirements. These contracts include swaps, options, and combinations of option contracts. NW Natural primarily uses these derivative financial instruments to manage commodity price variability. A small portion of NW Natural's derivative hedging strategy involves foreign currency exchange contracts.

Derivative instruments are recorded on the balance sheet at fair value. If certain regulatory conditions are met, then the derivative instrument fair value is recorded together with an offsetting entry to a regulatory asset or liability account pursuant to regulatory

accounting, and no unrealized gain or loss is recognized in current income or loss. See "*Regulatory Accounting*" above for additional information. The gain or loss from the fair value of a derivative instrument subject to regulatory deferral is

included in the recovery from, or refund to, NGD business customers in future periods. If a derivative contract is not subject to regulatory deferral, then the accounting treatment for unrealized gains and losses is recorded in accordance with accounting standards for derivatives and hedging which is either in current income or loss or in accumulated other comprehensive income or loss (AOCI or AOCL). Derivative contracts outstanding at December 31, 2023, 2022 and 2021 were measured at fair value using models or other market accepted valuation methodologies derived from observable market data. Estimates of fair value may change significantly from period-to-period depending on market conditions, notional amounts, and prices. These changes may have an impact on results of operations, but the impact would generally be mitigated due to the majority of derivative activities being subject to regulatory deferral treatment. For more information on derivative activity and associated regulatory treatment, see Note 2 and Note 15.

The following table summarizes the amount of gains realized from commodity price transactions for the last three years:

In millions	2023	2022	2021
NGD business net gain on commodity swaps	$ 125.5	$ 107.8	$ 50.9

Realized gains and losses from commodity hedges shown above were recorded in cost of gas and were, or will be, included in annual PGA rates.

NW Holdings and NWN Water also use financial derivatives to hedge interest rate risk in the form of pay-fixed interest rate swaps. Unrealized gains and losses related to these interest rate swap agreements qualify for cash flow hedge accounting and are recorded in AOCI on the consolidated balance sheet.

Pensions and Postretirement Benefits

NW Natural maintains a qualified non-contributory defined benefit pension plan, non-qualified supplemental pension plans for eligible executive officers and certain key employees, and other postretirement employee benefit plans covering certain non-union employees. NW Natural also has a qualified defined contribution plan (Retirement K Savings Plan) for all eligible employees. Only the qualified defined benefit pension plan and Retirement K Savings Plan have plan assets, which are held in qualified trusts to fund the respective retirement benefits. The qualified defined benefit retirement plan for union and non-union employees was closed to new participants several years ago. Non-union and union employees hired or re-hired after December 31, 2006 and 2009, respectively, and employees of certain NW Holdings subsidiaries are provided an enhanced Retirement K Savings Plan benefit. The postretirement Welfare Benefit Plan for non-union employees was also closed to new participants several years ago.

Net periodic pension and postretirement benefit costs (retirement benefit costs) and projected benefit obligations (benefit obligations) are determined using a number of key assumptions, including discount rates, rate of compensation increases, retirement ages, mortality rates and an expected long-term return on plan assets. See Note 10.

The vested benefit obligation for the defined benefit pension plan is the actuarial present value of the vested benefits to which the employee is entitled based on the employee's expected date of separation or retirement based on valuation assumptions.

Accounting standards also require balance sheet recognition of unamortized actuarial gains and losses and prior service costs in AOCI or AOCL, net of tax. However, the retirement benefit costs related to qualified defined benefit pension and postretirement benefit plans are generally recovered in rates charged to NGD customers, which are set based on accounting standards for pensions and postretirement benefit expenses. As such, NW Natural received approval from the OPUC to recognize the unamortized actuarial gains and losses and prior service costs as a regulatory asset or regulatory liability based on expected rate recovery, rather than including it as AOCI or AOCL under common equity. See "*Regulatory Accounting"* above and Note 2, "*Industry Regulation.*"

Anumber of factors, as discussed above, are considered in developing pension and postretirement benefit assumptions. For the December 31, 2023 measurement date, NW Natural reviewed and updated:

- the weighted-average discount rate assumptions for pensions decreased from 5.18% for 2022 to 4.98% for 2023, and the weighted-average discount rate assumptions for other postretirement benefits decreased from 5.19% for 2022 to 4.98% for 2023. The new rate assumptions were determined for each plan based on a matching of benchmark interest rates to the estimated cash flows, which reflect the timing and amount of future benefit payments. Benchmark interest rates are drawn from the FTSE Above Median Curve, which consists of high quality bonds rated AA- or higher by S&P or Aa3 or higher by Moody's;
- the expected annual rate of future compensation is separately determined for bargaining unit and non-bargaining unit employees. The rate assumption ranges from 3.2% to 4.6% in 2024, 4.7% to 5.8% in 2025 and 4.0% to 4.7% thereafter;
- the expected long-term return on qualified defined benefit plan assets remained the same at 7.50% in 2022 and 2023; and
- other key assumptions, which were based on actual plan experience and actuarial recommendations.

At December 31, 2023, the net pension liability (benefit obligations less market value of plan assets) for the defined benefit pension plan increased $7.9 million compared to 2022. The increase in the net pension liability is primarily due to the $11.0

million increase to the pension benefit obligation, partially offset by the $3.1 million increase in plan assets. The liability for non-qualified plans increased $1.0 million and the liability for other postretirement benefits increased $1.6 million in 2023.

The expected long-term rate of return on assets is based on a forward-looking capital markets model along with the defined benefit pension plan current and target asset allocation. The model inputs are based on future expected long-term total returns and historical volatilities for various asset classes, along with their historical correlations. The model considers current investment-grade yields for fixed income investments, and the same plus a risk premium for riskier assets such as common stocks.

NW Natural believes its pension assumptions are appropriate based on plan design and an assessment of market conditions. The following shows the sensitivity of retirement benefit costs and benefit obligations to changes in certain actuarial assumptions:

Dollars in millions	Change in Assumption	Impact on 2023 Retirement Benefit Costs	Impact on Retirement Benefit Obligations at Dec. 31, 2023
Discount rate:	(0.25)%		
Qualified defined benefit plans		$ (0.2)	$ 10.8
Non-qualified plans		—	0.1
Other postretirement benefits		—	0.5
Expected long-term return on plan assets:	(0.25)%		
Qualified defined benefit plans		0.9	N/A

Income Taxes

Valuation Allowances

Deferred tax assets are recognized to the extent that these assets are believed to be more likely than not to be realized. In making such a determination, available positive and negative evidence is considered, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. NW Holdings and NW Natural have determined that all recorded deferred tax assets are more likely than not to be realized as of December 31, 2023. See Note 11.

Uncertain Tax Benefits

The calculation of tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in the jurisdictions in which we operate. A tax benefit from a material uncertain tax position will only be recognized when it is more likely than not that the position, or some portion thereof, will be sustained upon examination, including resolution of any related appeals or litigation processes, on the basis of the technical merits. NW Holdings and NW Natural participate in the Compliance Assurance Process (CAP) with the Internal Revenue Service (IRS). Under the CAP program companies work with the IRS to identify and resolve material tax matters before the federal income tax return is filed each year. No reserves for uncertain tax benefits were recorded during 2023, 2022, or 2021. See Note 11.

Tax Legislation

When significant proposed or enacted changes in income tax rules occur, we consider whether there may be a material impact to our financial position, results of operations, cash flows, or whether the changes could materially affect existing assumptions used in making estimates of tax related balances.

The final tangible property regulations applicable to all taxpayers were issued on September 13, 2013 and were generally effective for taxable years beginning on or after January 1, 2014. In April 2023, the IRS published Revenue Procedure 2023-15 that provides a safe harbor method of income tax accounting for determining when expenditures for natural gas transmission and distribution property must be capitalized or are allowable as repair deductions. We continue to evaluate this new safe harbor but do not believe that the safe harbor method is materially different from NW Natural's current repairs methodology or that this additional guidance will have a material effect on our financial statements.

Regulatory Matters

Regulatory tax assets and liabilities are recorded to the extent it is probable they will be recoverable from, or refunded to, customers in the future. At December 31, 2023 and 2022, NW Natural had net regulatory income tax assets of $8.0 million and $10.2 million, respectively, representing future rate recovery of deferred tax liabilities resulting from differences in NGD plant financial statement and tax bases and NGD plant removal costs. These regulatory assets are currently being recovered through customer rates. At December 31, 2023 and 2022, regulatory income tax assets of $4.9 million and $2.9 million, respectively, were recorded by NW Natural, representing probable future rate recovery of deferred tax liabilities resulting from the equity portion of AFUDC.

At December 31, 2023 and 2022, regulatory liability balances, representing the estimated net benefit to NGD customers resulting from the change in deferred taxes as a result of the Tax Cut and Jobs Act (TCJA), of $174.2 million and $181.4 million,

respectively, were recorded by NW Natural. These balances include a gross up for income taxes of $46.1 million and $48.0 million, respectively.

Environmental Contingencies

Environmental liabilities are accounted for in accordance with accounting standards under the loss contingency guidance when it is probable that a liability has been incurred and the amount of the loss is reasonably estimable. Amounts recorded for environmental contingencies take numerous factors into consideration, including, among other variables, changes in enacted laws, regulatory orders, estimated remediation costs, interest rates, insurance proceeds, participation by other parties, timing of payments, and the input of legal counsel and third-party experts. Accordingly, changes in any of these variables or other factual circumstances could have a material impact on the amounts recorded for our environmental liabilities. For a complete discussion of environmental accounting policies refer to Note 2. For a discussion of current environmental sites and liabilities refer to Note 17. In addition, for information regarding the regulatory treatment of these costs and NW Natural's regulatory recovery mechanism, see "Results of Operations—Regulatory Matters—Rate Mechanisms—*Environmental Cost Deferral and Recovery*" above.

Impairment of Long-Lived Assets and Goodwill

Long-Lived Assets

We review the carrying value of long-lived assets whenever events or changes in circumstances indicate the carrying amount of the assets might not be recoverable. Factors that would necessitate an impairment assessment of long-lived assets include a significant adverse change in the extent or manner in which the asset is used, a significant adverse change in legal factors or business climate that could affect the value of the asset, or a significant decline in the observable market value or expected future cash flows of the asset, among others.

When such factors are present, we assess the recoverability by determining whether the carrying value of the asset will be recovered through expected future cash flows. An asset is determined to be impaired when the carrying value of the asset exceeds the expected undiscounted future cash flows from the use and eventual disposition of the asset. If an impairment is indicated, we record an impairment loss for the difference between the carrying value and the fair value of the long-lived assets. Fair value is estimated using appropriate valuation methodologies, which may include an estimate of discounted cash flows.

Goodwill and Business Combinations

In a business combination, goodwill is initially measured as any excess of the acquisition-date fair value of the consideration transferred over the acquisition-date fair value of the net identifiable assets acquired.

The carrying value of goodwill is reviewed annually during the fourth quarter, or whenever events or changes in circumstance indicate that such carrying values may not be recoverable.

NW Holdings' policy for goodwill assessments begins with a qualitative analysis in which events and circumstances are evaluated, including macroeconomic conditions, industry and market conditions, regulatory environments, and the overall financial performance of the reporting unit. If the qualitative assessment indicates that the carrying value may be at risk of recoverability, a quantitative evaluation is performed to measure the carrying value against the fair value of the reporting unit. This evaluation may involve the assessment of future cash flows and other subjective factors for which uncertainty exists and could impact the estimation of future cash flows. These factors include, but are not limited to, the amount and timing of future cash flows, future growth rates, and the discount rate. Unforeseen events and changes in circumstances or market conditions could adversely affect these estimates, which could result in an impairment charge. A qualitative assessment was performed during the fourth quarter of 2023 which indicated a quantitative assessment was not required; thus, no goodwill impairment was recorded. See Note 2 and Note 14 for additional information.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at fair value at the acquisition date, and the fair value of any non-controlling interest in the acquiree. Acquisition-related costs are expensed as incurred. When NW Natural acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. When there is substantial judgment or uncertainty around the fair value of acquired assets, we may engage a third party expert to assist in determining the fair values of certain assets or liabilities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

NW Holdings and NW Natural are exposed to various forms of market risk including commodity supply risk, commodity price risk, interest rate risk, foreign currency risk, credit risk and weather risk. The following describes NW Holdings' and NW Natural's exposure to these risks, as applicable.

Commodity Supply Risk
NW Natural enters into spot, short-term, and long-term natural gas supply contracts, along with associated pipeline transportation contracts, to manage commodity supply risk. NW Natural has arranged for physical delivery of an adequate supply of gas, including gas in its Mist storage facility and other off-system storage facilities, to meet expected requirements of core NGD customers. NW Natural's long-term gas supply contracts are primarily index-based and subject to monthly re-pricing, a strategy that is intended to substantially mitigate credit exposure to physical gas counterparties. Absolute notional amounts under physical gas contracts related to open positions on derivative instruments were 572 million therms and 463 million therms as of December 31, 2023 and 2022, respectively.

Commodity Price Risk
Natural gas commodity prices are subject to market fluctuations due to unpredictable factors including weather, pipeline transportation congestion, drilling technologies, market speculation, and other factors that affect supply and demand. Commodity price risk is primarily hedged with financial swaps, storage and physical gas reserves from a long-term investment in working interests in gas leases operated by Jonah Energy. These hedges are generally included in NW Natural's annual PGAfiling for recovery, subject to a regulatory prudence review. Notional amounts under financial derivative contracts were $405.7 million and $359.5 million as of December 31, 2023 and 2022, respectively. The fair value of financial swaps, based on market prices at December 31, 2023, was an unrealized loss of $115.5 million, which would result in cash outflows of $89.6 million in 2024, $22.9 million in 2025, and $3.0 million in 2026.

Interest Rate Risk
NW Holdings and NW Natural are exposed to interest rate risk primarily associated with debt financing needed to fund capital requirements, including future contractual obligations and maturities of long-term and short-term debt. Interest rate risk is primarily managed through the issuance of fixed-rate debt with varying maturities. NW Holdings and NW Natural may also enter into financial derivative instruments, including interest rate swaps, options and other hedging instruments, to manage and mitigate interest rate exposure. NW Holdings and NWN Water entered into interest rate swaps transactions for a total notional amount of $155 million to manage variable interest rate risk in December 2022. Unrealized gains related to these interest rate swap agreements totaled $0.2 million and $0.1 million, net of tax, as of December 31, 2023 and 2022, respectively.

Foreign Currency Risk
The costs of certain pipeline fees are subject to changes in the value of the Canadian currency in relation to the U.S. currency. Foreign currency forward contracts are used to hedge against fluctuations in exchange rates for NW Natural's commodity-related demand and reservation charges paid in Canadian dollars. Notional amounts under foreign currency forward contracts were $11.9 million and $7.6 million as of December 31, 2023 and 2022, respectively. If all of the foreign currency forward contracts had been settled on December 31, 2023, a gain of $0.2 million would have been realized. See Note 15.

Credit Risk
Credit Exposure to Natural Gas Suppliers
Certain gas suppliers have either relatively low credit ratings or are not rated by major credit rating agencies. To manage this supply risk, NW Natural purchases gas from a number of different suppliers at liquid exchange points. NW Natural evaluates and monitors suppliers' creditworthiness and maintains the ability to require additional financial assurances, including deposits, letters of credit, or surety bonds, in case a supplier defaults. In the event of a supplier's failure to deliver contracted volumes of gas, the NGD business would need to replace those volumes at prevailing market prices, which may be higher or lower than the original transaction prices. NW Natural expects these costs would be subject to its PGAsharing mechanism discussed above. Since most of NW Natural's commodity supply contracts are priced at the daily or monthly market index price tied to liquid exchange points, and NW Natural has adequate storage flexibility, NW Natural believes it is unlikely a supplier default would have a material adverse effect on its financial condition or results of operations.

Credit Exposure to Financial Derivative Counterparties
NW Natural did not have any credit exposure related to commodity swap contracts based on the estimated fair value at December 31, 2023. NW Natural does not have credit exposure to financial commodity swap derivative counterparties when forward gas prices are lower than our hedge prices, which was the case with all financial commodity swap counterparties at December 31, 2023. NW Natural's credit exposure also includes interest rate swap and foreign exchange forward counterparties, neither of which were significant at December 31, 2023. NW Natural's financial derivatives policy requires counterparties to have at least an investment-grade credit rating at the time the derivative instrument is entered into and specific limits on the notional amount and duration based

on each counterparty's credit rating. NW Natural actively monitors and manages derivative credit exposure and places counterparties on hold for trading purposes or requires cash collateral, letters of credit, or guarantees as circumstances warrant.

The following table summarizes NW Natural's overall financial swap and option credit exposure, based on estimated fair value, and the corresponding counterparty credit ratings. The table uses credit ratings from S&P and Moody's, reflecting the higher of the S&P or Moody's rating or a middle rating if the entity is split-rated with more than one rating level difference:

	Financial Derivative Position by Credit Rating Unrealized Fair Value Gain (Loss)	
In millions	2023	2022
AA/Aa	$ (100.7)	$ 77.9
A/A	(14.8)	72.7
Total	$ (115.5)	$ 150.6

In most cases, NW Natural also mitigates the credit risk of financial derivatives by having master netting arrangements with counterparties which provide for making or receiving net cash settlements. Transactions of the same type in the same currency that have settlement on the same day with a single counterparty are netted and a single payment is delivered or received depending on which party is due funds.

Additionally, NW Natural has master contracts in place with each derivative counterparty, most of which include provisions for posting or calling for collateral. Generally, NW Natural can obtain cash or marketable securities as collateral with one day's notice. Various collateral management strategies are used to reduce liquidity risk. The collateral provisions vary by counterparty but are not expected to result in the significant posting of collateral, if any. NW Natural has performed stress tests on the gas portfolio and concluded the liquidity risk from collateral calls is not material. Derivative credit exposure is primarily with investment grade counterparties rated AA-/Aa3 or higher. Contracts are diversified across counterparties, business types and countries to reduce credit and liquidity risk.

At December 31, 2023, financial derivative commodity credit risk on a volumetric basis was geographically concentrated 24% in the United States and 76% in Canada, based on counterparties' location. At December 31, 2022, financial derivative commodity credit risk on a volumetric basis was geographically concentrated 28% in the United States and 71% in Canada with our counterparties.

Credit Exposure to Insurance Companies

Credit exposure to insurance companies for loss or damage claims could be material. NW Holdings and NW Natural regularly monitor the financial condition of insurance companies who provide general liability insurance policy coverage to NW Holdings, NW Natural, their predecessors, and their subsidiaries.

Weather Risk

NW Natural has a weather normalization mechanism in Oregon; however, it is exposed to weather risk primarily from NGD business operations. A large percentage of NGD margin is volume driven, and current rates are based on an assumption of average weather. NW Natural's weather normalization mechanism in Oregon is for residential and small commercial customers, which is intended to stabilize the recovery of NGD business fixed costs and reduce fluctuations in customers' bills due to colder or warmer than average weather. Customers in Oregon are allowed to opt out of the weather normalization mechanism. As of December 31, 2023, approximately 7% of Oregon customers had opted out. In addition to the Oregon customers opting out, Washington residential and commercial customers account for approximately 12% of our total customer base and are not covered by weather normalization. The combination of Oregon and Washington customers not covered by a weather normalization mechanism is 19% of all residential and commercial customers. See "Results of Operations—Regulatory Matters—Rate Mechanisms—*WARM*" above.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Supplemental Schedules Omitted

All other schedules are omitted because of the absence of the conditions under which they are required or because the required information is included elsewhere in the financial statements.

NW HOLDINGS MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

NW Holdings management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. NW Holdings' internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). NW Holdings' internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions involving company assets;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures are being made only in accordance with authorizations of management and the NW Holdings Board of Directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of the unauthorized acquisition, use, or disposition of NW Holdings' assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements or fraud. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

NW Holdings management assessed the effectiveness of NW Holdings' internal control over financial reporting as of December 31, 2023. In making this assessment, NW Holdings management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework* (2013).

Based on NW Holdings management's assessment and those criteria, NW Holdings management has concluded that it maintained effective internal control over financial reporting as of December 31, 2023.

The effectiveness of internal control over financial reporting as of December 31, 2023 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears in this annual report.

/s/ David H. Anderson
David H. Anderson
Chief Executive Officer

/s/ Brody J. Wilson
Brody J. Wilson
Chief Financial Officer, Chief Accounting Officer, Vice President, Treasurer

February 23, 2024

NW NATURAL MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

NW Natural management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. NW Natural's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). NW Natural's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions involving company assets;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures are being made only in accordance with authorizations of management and the NW Natural Board of Directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of the unauthorized acquisition, use, or disposition of NW Natural's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements or fraud. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

NW Natural management assessed the effectiveness of NW Natural's internal control over financial reporting as of December 31, 2023. In making this assessment, NW Natural management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework* (2013).

Based on NW Natural management's assessment and those criteria, NW Natural management has concluded that it maintained effective internal control over financial reporting as of December 31, 2023.

/s/ David H. Anderson
David H. Anderson
Chief Executive Officer

/s/ Brody J. Wilson
Brody J. Wilson
Chief Financial Officer, Chief Accounting Officer, Vice President, Treasurer

February 23, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Northwest Natural Holding Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Northwest Natural Holding Company and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of comprehensive income (loss), of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes and financial statement schedules listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

Acompany's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Acompany's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Regulatory Matters

As described in Note 2 to the consolidated financial statements, there were $511.7 million of regulatory assets and $780.9 million of regulatory liabilities as of December 31, 2023. The Company's principal business is to operate as a holding company for Northwest Natural Gas Company ("NW Natural") and its other subsidiaries. NW Natural's principal business is the distribution of natural gas, which is regulated; the accounting records and practices of the regulated businesses conform to the requirements and uniform system of accounts prescribed by regulatory authorities. Customer rates are regulated and have approved cost-based rates which are intended to allow the Company to earn a return on invested capital. As disclosed by management, regulatory accounting requires management to account for deferred expenses (or deferred revenues) as regulatory assets (or regulatory liabilities) on the balance sheet. When the recovery of these regulatory assets from, or refund of regulatory liabilities to, customers is approved, management recognizes the expense or revenue on the income statement at the same time the adjustment to amounts is included in rates charged to customers.

The principal considerations for our determination that performing procedures relating to the Company's accounting for the effects of regulatory matters is a critical audit matter are the high degree of auditor effort in performing procedures and evaluating audit evidence related to the recovery of regulatory assets and the settlement of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment of rates cases and other proceedings, including the probability of recovery of regulatory assets and the settlement of regulatory liabilities and related accounting and disclosure impacts. These procedures also included, among others (i) evaluating the reasonableness of management's assessment regarding the probability of recovery of regulatory assets and settlement of regulatory liabilities, (ii) evaluating the sufficiency of the disclosures in the consolidated financial statements, and (iii) testing, on a sample basis, the regulatory assets and liabilities, including those subject to rate cases and other proceedings, by considering the provisions and formulas outlined in rate orders, other regulatory correspondence, and the application of relevant regulatory precedents.

/s/ PricewaterhouseCoopers LLP
Portland, Oregon
February 23, 2024

We have served as the Company's auditor since 1997.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholder of Northwest Natural Gas Company:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Northwest Natural Gas Company and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of comprehensive income (loss), of shareholder's equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Regulatory Matters

As described in Note 2 to the consolidated financial statements, there were $511.7 million of regulatory assets and $779.9 million of regulatory liabilities as of December 31, 2023. The Company's principal business is the distribution of natural gas, which is regulated; the accounting records and practices of the regulated businesses conform to the requirements and uniform system of accounts prescribed by regulatory authorities. Customer rates are regulated and have approved cost-based rates which are intended to allow the Company to earn a return on invested capital.As disclosed by management, regulatory accounting requires management to account for deferred expenses (or deferred revenues) as regulatory assets (or regulatory liabilities) on the balance sheet. When the recovery of these regulatory assets from, or refund of regulatory liabilities to, customers is approved, management recognizes the expense or revenue on the income statement at the same time the adjustment to amounts is included in rates charged to customers.

The principal considerations for our determination that performing procedures relating to the Company's accounting for the effects of regulatory matters is a critical audit matter are the high degree of auditor effort in performing audit procedures and evaluating audit evidence obtained related to the recovery of regulatory assets and the settlement of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment of rates cases and other proceedings, including the probability of recovery of regulatory assets and the settlement of regulatory liabilities and related accounting and disclosure impacts. These procedures also included, among others (i) evaluating

the reasonableness of management's assessment regarding the probability of recovery of regulatory assets and settlement of regulatory liabilities, (ii) evaluating the sufficiency of the disclosures in the consolidated financial statements,

and (iii) testing, on a sample basis, the regulatory assets and liabilities, including those subject to rate cases and other proceedings, by considering the provisions and formulas outlined in rate orders, other regulatory correspondence, and the application of relevant regulatory precedents.

/s/ PricewaterhouseCoopers LLP
Portland, Oregon
February 23, 2024

We have served as the Company's auditor since 1997.

NORTHWEST NATURAL HOLDING COMPANY

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

In thousands, except per share data	Year Ended December 31, 2023	2022	2021
Operating revenues	$ 1,197,475	$ 1,037,353	$ 860,400
Operating expenses:			
Cost of gas	499,837	429,635	292,314
Operations and maintenance	273,766	224,667	204,227
Environmental remediation	12,899	12,389	9,938
General taxes	46,248	41,031	38,633
Revenue taxes	48,671	41,826	34,740
Depreciation	125,581	116,707	113,534
Other operating expenses	5,532	3,621	3,897
Total operating expenses	1,012,534	869,876	697,283
Income from operations	184,941	167,477	163,117
Other income (expense), net	17,855	1,203	(12,559)
Interest expense, net	76,566	53,247	44,486
Income before income taxes	126,230	115,433	106,072
Income tax expense	32,362	29,130	27,406
Net income	93,868	86,303	78,666
Other comprehensive income (loss):			
Change in employee benefit plan liability, net of taxes of $443 for 2023, $(1,511) for 2022, and $(219) for 2021	(1,233)	4,195	593
Amortization of non-qualified employee benefit plan liability, net of taxes of $(148) for 2023, $(286) for 2022, and $(320) for 2021	410	795	905
Unrealized gain on interest rate swaps, net of taxes of $(21) for 2023 and $(47) for 2022	59	129	—
Comprehensive income	$ 93,104	$ 91,422	$ 80,164
Average common shares outstanding:			
Basic	36,213	33,934	30,702
Diluted	36,265	33,984	30,752
Earnings per share of common stock:			
Basic	$ 2.59	$ 2.54	$ 2.56
Diluted	2.59	2.54	2.56

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY
CONSOLIDATED BALANCE SHEETS

In thousands	As of December 31, 2023	2022
Assets:		
Current assets:		
Cash and cash equivalents	$ 32,920	$ 29,270
Accounts receivable	121,341	168,906
Accrued unbilled revenue	83,138	89,048
Allowance for uncollectible accounts	(3,455)	(3,296)
Regulatory assets	178,270	117,491
Derivative instruments	11,380	194,412
Inventories	112,571	87,096
Other current assets	65,275	61,286
Total current assets	601,440	744,213
Non-current assets:		
Property, plant, and equipment	4,556,609	4,261,566
Less: Accumulated depreciation	1,198,555	1,147,166
Total property, plant, and equipment, net	3,358,054	3,114,400
Regulatory assets	333,443	340,432
Derivative instruments	431	5,045
Other investments	102,951	95,704
Operating lease right of use asset, net	71,308	73,429
Assets under sales-type leases	129,882	134,302
Goodwill	163,344	149,283
Other non-current assets	106,239	91,518
Total non-current assets	4,265,652	4,004,113
Total assets	$ 4,867,092	$ 4,748,326

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONSOLIDATED BALANCE SHEETS

In thousands, except share information	As of December 31, 2023	2022
Liabilities and equity:		
Current liabilities:		
Short-term debt	$ 89,780	$ 258,200
Current maturities of long-term debt	150,865	90,697
Accounts payable	145,361	180,667
Taxes accrued	15,454	15,625
Interest accrued	15,836	10,169
Regulatory liabilities	84,962	248,582
Derivative instruments	98,661	28,728
Operating lease liabilities	2,333	1,514
Other current liabilities	93,626	64,552
Total current liabilities	696,878	898,734
Long-term debt	1,425,435	1,246,167
Deferred credits and other non-current liabilities:		
Deferred tax liabilities	382,673	366,022
Regulatory liabilities	695,896	689,578
Pension and other postretirement benefit liabilities	158,116	149,143
Derivative instruments	28,055	20,838
Operating lease liabilities	77,167	78,965
Other non-current liabilities	119,034	123,438
Total deferred credits and other non-current liabilities	1,460,941	1,427,984
Commitments and contingencies (see Note 16 and Note 17)		
Equity:		
Common stock - no par value; authorized 100,000,000 shares; issued and outstanding 37,631,212 and 35,524,590 at December 31, 2023 and 2022, respectively	890,976	805,253
Retained earnings	399,911	376,473
Accumulated other comprehensive loss	(7,049)	(6,285)
Total equity	1,283,838	1,175,441
Total liabilities and equity	$ 4,867,092	$ 4,748,326

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

In thousands	Common Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Equity
Balance at December 31, 2020	$ 565,112	$ 336,523	$ (12,902)	$ 888,733
Comprehensive income (loss)	—	78,666	1,498	80,164
Dividends on common stock, $1.92 per share	—	(59,410)	—	(59,410)
Stock-based compensation	3,615	—	—	3,615
Shares issued pursuant to equity based plans	4,543	—	—	4,543
Issuance of common stock, net of issuance costs	17,501	—	—	17,501
Balance at December 31, 2021	590,771	355,779	(11,404)	935,146
Comprehensive income (loss)	—	86,303	5,119	91,422
Dividends on common stock, $1.93 per share	—	(65,609)	—	(65,609)
Stock-based compensation	3,228	—	—	3,228
Shares issued pursuant to equity based plans	2,978	—	—	2,978
Issuance of common stock, net of issuance costs	208,276	—	—	208,276
Balance at December 31, 2022	805,253	376,473	(6,285)	1,175,441
Comprehensive income (loss)	—	93,868	(764)	93,104
Dividends on common stock, $1.94 per share	—	(70,430)	—	(70,430)
Shares issued in connection with business combinations	12,884	—	—	12,884
Stock-based compensation	3,598	—	—	3,598
Shares issued pursuant to equity based plans	2,328	—	—	2,328
Issuance of common stock, net of issuance costs	66,913	—	—	66,913
Balance at December 31, 2023	$ 890,976	$ 399,911	$ (7,049)	$ 1,283,838

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands	Year Ended December 31, 2023	2022	2021
Operating activities:			
Net income	$ 93,868	$ 86,303	$ 78,666
Adjustments to reconcile net income to cash provided by operations:			
Depreciation	125,581	116,707	113,534
Regulatory amortization of gas reserves	3,217	5,589	13,897
Deferred income taxes	8,966	17,410	14,617
Qualified defined benefit pension plan (benefit) expense	(2,430)	5,351	16,556
Contributions to qualified defined benefit pension plans	—	—	(9,590)
Deferred environmental expenditures, net	(26,052)	(18,160)	(18,187)
Environmental remediation expense	12,899	12,389	9,938
Asset optimization revenue sharing bill credits	(10,471)	(41,102)	(9,053)
Other	22,972	21,558	20,622
Changes in assets and liabilities:			
Receivables, net	50,977	(76,454)	(44,128)
Inventories	(24,105)	(29,269)	(14,571)
Income and other taxes	(1,246)	6,908	3,292
Accounts payable	(39,958)	24,508	12,118
Deferred gas costs	52,371	12,334	(40,541)
Asset optimization revenue sharing	22,637	28,937	44,458
Decoupling mechanism	(11,415)	10,922	(5,206)
Cloud-based software	(16,307)	(23,908)	(7,407)
Other, net	18,445	(12,351)	(18,662)
Cash provided by operating activities	279,949	147,672	160,353
Investing activities:			
Capital expenditures	(327,347)	(338,602)	(293,892)
Acquisitions, net of cash acquired	(7,533)	(94,279)	(1,289)
Purchase of equity method investment	(1,000)	(1,000)	(14,450)
Proceeds from sale of equity method investment	—	—	7,000
Other	383	(1,579)	2,508
Cash used in investing activities	(335,497)	(435,460)	(300,123)

	Year Ended December 31,		
	2023	2022	2021
Financing activities:			
Proceeds from common stock issued, net	66,495	208,561	17,501
Long-term debt issued	330,000	290,000	185,000
Long-term debt retired	(90,000)	—	(95,000)
Proceeds from term loan due within one year	—	—	100,000
Repayment of term loan	—	—	(100,000)
Repayments of commercial paper, maturities greater than three months	—	—	(195,025)
Changes in other short-term debt, net	(168,540)	(131,300)	280,000
Cash dividend payments on common stock	(67,340)	(62,771)	(55,919)
Payment of financing fees	(2,200)	(912)	(3,899)
Other	(4,207)	(1,946)	(1,222)
Cash provided by financing activities	64,208	301,632	131,436
Increase (decrease) in cash, cash equivalents and restricted cash	8,660	13,844	(8,334)
Cash, cash equivalents and restricted cash, beginning of period	40,964	27,120	35,454
Cash, cash equivalents and restricted cash, end of period	$ 49,624	$ 40,964	$ 27,120
Supplemental disclosure of cash flow information:			
Interest paid, net of capitalization	$ 80,197	$ 50,823	$ 43,719
Income taxes paid, net of refunds	24,263	2,779	10,555
Non-cash activities:			
Shares issued in connection with business combinations	$ 12,884	$ —	$ —
Debt assumed in connection with business combinations	3,131	—	—

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

In thousands	Year Ended December 31, 2023	2022	2021
Operating revenues	$ 1,158,623	$ 1,014,339	$ 843,057
Operating expenses:			
Cost of gas	500,061	429,861	292,538
Operations and maintenance	244,669	204,845	188,762
Environmental remediation	12,899	12,389	9,938
General taxes	44,980	40,151	38,150
Revenue taxes	48,432	41,627	34,600
Depreciation	119,514	112,957	110,504
Other operating expenses	2,423	3,135	3,332
Total operating expenses	972,978	844,965	677,824
Income from operations	185,645	169,374	165,233
Other income (expense), net	15,358	(436)	(12,745)
Interest expense, net	60,594	46,338	42,983
Income before income taxes	140,409	122,600	109,505
Income tax expense	35,672	31,036	28,333
Net income	104,737	91,564	81,172
Other comprehensive income (loss):			
Change in employee benefit plan liability, net of taxes of $443 for 2023, $(1,511) for 2022, and $(219) for 2021	(1,233)	4,195	593
Amortization of non-qualified employee benefit plan liability, net of taxes of $(148) for 2023, $(286) for 2022, and $(320) for 2021	410	795	905
Comprehensive income	$ 103,914	$ 96,554	$ 82,670

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY

CONSOLIDATED BALANCE SHEETS

In thousands	As of December 31, 2023	2022
Assets:		
Current assets:		
Cash and cash equivalents	$ 19,841	$ 12,977
Accounts receivable	117,216	165,607
Accrued unbilled revenue	81,524	87,482
Receivables from affiliates	824	634
Allowance for uncollectible accounts	(3,228)	(3,079)
Regulatory assets	178,270	117,491
Derivative instruments	11,184	194,236
Inventories	110,855	86,207
Other current assets	60,138	57,269
Total current assets	576,624	718,824
Non-current assets:		
Property, plant, and equipment	4,393,759	4,148,547
Less: Accumulated depreciation	1,181,962	1,137,231
Total property, plant, and equipment, net	3,211,797	3,011,316
Regulatory assets	333,418	340,407
Derivative instruments	373	5,045
Other investments	86,145	80,110
Operating lease right of use asset, net	70,728	72,720
Assets under sales-type leases	129,882	134,302
Other non-current assets	102,410	89,994
Total non-current assets	3,934,753	3,733,894
Total assets	$ 4,511,377	$ 4,452,718

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY
CONSOLIDATED BALANCE SHEETS

In thousands	As of December 31, 2023	2022
Liabilities and equity:		
Current liabilities:		
Short-term debt	$ 16,780	$ 170,200
Current maturities of long-term debt	—	89,942
Accounts payable	138,111	177,590
Payables to affiliates	14,850	9,175
Taxes accrued	15,293	15,426
Interest accrued	15,111	8,900
Regulatory liabilities	84,912	248,553
Derivative instruments	98,661	28,728
Operating lease liabilities	2,128	1,363
Other current liabilities	89,371	62,019
Total current liabilities	475,217	811,896
Long-term debt	1,364,732	1,035,935
Deferred credits and other non-current liabilities:		
Deferred tax liabilities	371,867	362,353
Regulatory liabilities	694,947	688,599
Pension and other postretirement benefit liabilities	158,116	149,143
Derivative instruments	28,055	20,838
Operating lease liabilities	76,757	78,345
Other non-current liabilities	109,066	114,527
Total deferred credits and other non-current liabilities	1,438,808	1,413,805
Commitments and contingencies (see Note 16 and Note 17)		
Equity:		
Common stock	644,903	614,903
Retained earnings	594,954	582,593
Accumulated other comprehensive loss	(7,237)	(6,414)
Total equity	1,232,620	1,191,082
Total liabilities and equity	$ 4,511,377	$ 4,452,718

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY

CONSOLIDATED STATEMENTS OF SHAREHOLDER'S EQUITY

In thousands	Common Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Equity
Balance at December 31, 2020	$ 319,506	$ 528,580	$ (12,902)	$ 835,184
Comprehensive income (loss)	—	81,172	1,498	82,670
Dividends on common stock	—	(56,056)	—	(56,056)
Capital contribution from parent	116,009	—	—	116,009
Balance at December 31, 2021	435,515	553,696	(11,404)	977,807
Comprehensive income (loss)	—	91,564	4,990	96,554
Dividends on common stock	—	(62,667)	—	(62,667)
Capital contributions from parent	179,388	—	—	179,388
Balance at December 31, 2022	614,903	582,593	(6,414)	1,191,082
Comprehensive income (loss)	—	104,737	(823)	103,914
Dividends on common stock	—	(92,376)	—	(92,376)
Capital contributions from parent	30,000	—	—	30,000
Balance at December 31, 2023	$ 644,903	$ 594,954	$ (7,237)	$ 1,232,620

See Notes to Consolidated Financial Statements

NORTHWEST NATURAL GAS COMPANY

CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands	Year Ended December 31, 2023	2022	2021
Operating activities:			
Net income	$ 104,737	$ 91,564	$ 81,172
Adjustments to reconcile net income to cash provided by operations:			
Depreciation	119,514	112,957	110,504
Regulatory amortization of gas reserves	3,217	5,589	13,897
Deferred income taxes	2,855	16,288	13,223
Qualified defined benefit pension plan (benefit) expense	(2,430)	5,351	16,556
Contributions to qualified defined benefit pension plans	—	—	(9,590)
Deferred environmental expenditures, net	(26,052)	(18,160)	(18,187)
Environmental remediation expense	12,899	12,389	9,938
Asset optimization revenue sharing bill credits	(10,471)	(41,102)	(9,053)
Other	22,341	20,448	18,517
Changes in assets and liabilities:			
Receivables, net	51,391	(75,177)	(43,030)
Inventories	(23,884)	(28,890)	(14,427)
Income and other taxes	4,124	6,729	(10,405)
Accounts payable	(43,531)	21,375	8,728
Deferred gas costs	52,371	12,334	(40,541)
Asset optimization revenue sharing	22,637	28,937	44,458
Decoupling mechanism	(11,415)	10,922	(5,206)
Cloud-based software	(16,307)	(23,908)	(7,407)
Other, net	19,872	(12,455)	(17,653)
Cash provided by operating activities	281,868	145,191	141,494
Investing activities:			
Capital expenditures	(290,845)	(318,686)	(278,237)
Other	384	(1,579)	2,508
Cash used in investing activities	(290,461)	(320,265)	(275,729)
Financing activities:			
Long-term debt issued	330,000	140,000	130,000
Long-term debt retired	(90,000)	—	(60,000)
Proceeds from term loan due within one year	—	—	100,000
Repayment of term loan	—	—	(100,000)
Repayment of commercial paper, maturities greater than three months	—	—	(195,025)
Changes in other short-term debt, net	(153,420)	(75,300)	209,000
Cash contributions received from parent	30,000	179,388	116,009
Cash dividend payments on common stock	(92,376)	(62,667)	(56,056)
Payment of financing fees	(2,080)	(843)	(2,818)
Other	(1,682)	(1,665)	(1,782)
Cash provided by financing activities	20,442	178,913	139,328
Increase in cash, cash equivalents and restricted cash	11,849	3,839	5,093
Cash, cash equivalents and restricted cash, beginning of period	24,671	20,832	15,739
Cash, cash equivalents and restricted cash, end of period	$ 36,520	$ 24,671	$ 20,832
Supplemental disclosure of cash flow information:			
Interest paid, net of capitalization	$ 64,054	$ 44,813	$ 42,395
Income taxes paid, net of refunds	27,745	5,990	26,451

See Notes to Consolidated Financial Statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND PRINCIPLES OF CONSOLIDATION

The accompanying consolidated financial statements represent the respective, consolidated financial results of NW Holdings and NW Natural and all respective companies that each registrant directly or indirectly controls, either through majority ownership or otherwise. This is a combined report of NW Holdings and NW Natural, which includes separate consolidated financial statements for each registrant.

NW Natural's regulated natural gas distribution activities are reported in the natural gas distribution (NGD) segment. The NGD segment is NW Natural's core operating business and serves residential, commercial, and industrial customers in Oregon and southwest Washington. The NGD segment is the only reportable segment for NW Holdings and NW Natural. All other activities, water, wastewater and water services businesses, and other investments are aggregated and reported as other at their respective registrant.

NW Holdings and NW Natural consolidate all entities in which they have a controlling financial interest. Investments in corporate joint ventures and partnerships that NW Holdings does not directly or indirectly control, and for which it is not the primary beneficiary, include NNG Financial's investment in Kelso-Beaver Pipeline and NWN Water's investment in Avion Water Company, Inc., which are accounted for under the equity method. NW Natural RNG Holding Company, LLC holds investments in Lexington Renewable Energy, LLC and Dakota City Renewable Energy LLC, which are also accounted for under the equity method. See Note 13 for activity related to equity method investments. NW Holdings and its direct and indirect subsidiaries are collectively referred to herein as NW Holdings, and NW Natural and its direct and indirect subsidiaries are collectively referred to herein as NW Natural. The consolidated financial statements of NW Holdings and NW Natural are presented after elimination of all intercompany balances and transactions.

Notes to the consolidated financial statements reflect the activity of continuing operations for both NW Holdings and NW Natural for all periods presented, unless otherwise noted. Certain reclassifications have been made to conform prior period information to the current presentation. The reclassifications did not have a material effect on our consolidated financial statements.

2. SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect reported amounts in the consolidated financial statements and accompanying notes. Actual amounts could differ from those estimates, and changes would most likely be reported in future periods. Management believes the estimates and assumptions used are reasonable.

Industry Regulation

NW Holdings' principal business is to operate as a holding company for NW Natural and its other subsidiaries. NW Natural's principal business is the distribution of natural gas, which is regulated by the OPUC and WUTC. NW Natural also has natural gas storage services, which are regulated by the FERC, and to a certain extent by the OPUC and WUTC. Additionally, certain of NW Holdings' subsidiaries own water businesses, which are regulated by the public utility commission in the state in which the water utility is located, which is currently Oregon, Washington, Idaho, Texas and Arizona. Wastewater businesses, to the extent they are regulated, are generally regulated by the public utility commissions in the state in which the wastewater utility is located, which is currently Texas and Arizona. Accounting records and practices of the regulated businesses conform to the requirements and uniform system of accounts prescribed by these regulatory authorities in accordance with U.S. GAAP. The businesses in which customer rates are regulated have approved cost-based rates which are intended to allow such businesses to earn a reasonable return on invested capital.

In applying regulatory accounting principles, NW Holdings and NW Natural capitalize or defer certain costs and revenues as regulatory assets and liabilities pursuant to orders of the applicable state public utility commission, which provide for the recovery of revenues or expenses from, or refunds to, utility customers in future periods, including a return or a carrying charge in certain cases.

Amounts NW Natural deferred as regulatory assets and liabilities were as follows:

	Regulatory Assets	
In thousands	2023	2022
NW Natural:		
Current:		
Unrealized loss on derivatives[1]	$ 98,661	$ 28,728
Gas costs	9,301	61,223
Environmental costs[2]	9,950	7,392
Decoupling[3]	2,288	—
Pension balancing[4]	7,131	7,131
Income taxes	2,208	2,208
Washington Climate Commitment Act compliance	20,537	—
COVID-19 deferrals and expenses, net	9,685	789
Other[5]	18,509	10,020
Total current	$ 178,270	$ 117,491
Non-current:		
Unrealized loss on derivatives[1]	$ 28,055	$ 20,838
Pension balancing[4]	27,460	32,997
Income taxes	10,731	10,943
Pension and other postretirement benefit liabilities	114,010	101,413
Environmental costs[2]	118,619	104,253
Gas costs	1,917	22,355
Decoupling[3]	1,017	—
COVID-19 deferrals and expenses, net	1,080	14,555
Other[5]	30,529	33,053
Total non-current	333,418	340,407
Other (NW Holdings)	25	25
Total non-current -NW Holdings	$ 333,443	$ 340,432

	Regulatory Liabilities	
In thousands	2023	2022
NW Natural:		
Current:		
Gas costs	$ 6,375	$ 4,121
Unrealized gain on derivatives[1]	11,184	194,236
Decoupling[3]	7,612	14,026
Income taxes[6]	4,726	7,166
Asset optimization revenue sharing	31,583	26,368
Washington Climate Commitment Act proceeds	17,199	—
Other[5]	6,233	2,636
Total current - NW Natural	84,912	248,553
Other (NW Holdings)	50	29
Total current - NW Holdings	$ 84,962	$ 248,582
Non-current:		
Gas costs	$ 8,556	$ 12,644
Unrealized gain on derivatives[1]	373	5,045
Decoupling[3]	2,118	3,814
Income taxes[6]	169,485	174,212
Accrued asset removal costs[7]	496,235	467,742
Asset optimization revenue sharing	2,325	8,401
Other[5]	15,855	16,741
Total non-current - NW Natural	694,947	688,599
Other (NW Holdings)	949	979
Total non-current -NW Holdings	$ 695,896	$ 689,578

(1) Unrealized gains or losses on derivatives are non-cash items and, therefore, do not earn a rate of return or a carrying charge. These amounts are recoverable through natural gas distribution rates as part of the annual Purchased Gas Adjustment (PGA) mechanism w hen realized at settlement.
(2) Refer to the Environmental Cost Deferral and Recovery table in Note 17 for a description of environmental costs.
(3) This deferral represents the margin adjustment resulting from differences betw een actual and expected volumes.
(4) Balance represents deferred net periodic benefit costs as approved by the OPUC.
(5) Balances consist of deferrals and amortizations under approved regulatory mechanisms and typically earn a rate of return or carrying charge.
(6) Balance represents excess deferred income tax benefits subject to regulatory flow -through. See Note 11.
(7) Estimated costs of removal on certain regulated properties are collected through rates. See "Accounting Policies—*Plant, Property, and Accrued Asset Removal Costs*" below.

The amortization period for NW Natural's regulatory assets and liabilities ranges from less than one year to an indeterminable period. Regulatory deferrals for gas costs payable are generally amortized over 12 months beginning each November 1 following the gas contract year during which the deferred gas costs are recorded. Similarly, most other regulatory deferred accounts are amortized over 12 months. However, certain regulatory account balances, such as income taxes, environmental costs, pension liabilities, and accrued asset removal costs, are large and tend to be amortized over longer periods once NW Natural has agreed upon an amortization period with the respective regulatory agency.

We believe all costs incurred and deferred at December 31, 2023 are prudent. All regulatory assets are reviewed annually for recoverability, or more often if circumstances warrant. If we should determine that all or a portion of these regulatory assets no longer meet the criteria for continued application of regulatory accounting, then NW Holdings and NW Natural would be required to write-off the net unrecoverable balances in the period such determination is made.

Regulatory interest income of $6.5 million and $7.0 million and regulatory interest expense of $2.9 million and $2.0 million was recognized within other income (expense), net for the years ended December 31, 2023 and 2022, respectively.

Environmental Regulatory Accounting
See Note 17 for information about the SRRM and OPUC orders regarding implementation.

New Accounting Standards

NW Natural and NW Holdings consider the applicability and impact of all accounting standards updates (ASUs) issued by the Financial Accounting Standards Board (FASB). ASUs not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on consolidated financial position or results of operations.

Recently Issued Accounting Pronouncements

JOINT VENTURE FORMATIONS. In August 2023, the FASB issued ASU 2023-05, which requires a joint venture to initially measure all contributions received upon its formation at fair value. The standard is effective for all joint venture entities with a formation date on or after January 1, 2025, with early adoption permitted. The adoption of this standard is not anticipated to have a material impact on our results of operations, liquidity or capital resources.

SEGMENT REPORTING. In November 2023, the FASB issued ASU 2023-07, which requires additional disclosures about significant segment expenses. The disclosures are required beginning with our annual report for the year ending December 31, 2024. The adoption of this standard is not anticipated to have a material impact on our results of operations, liquidity or capital resources.

IMPROVEMENTS TO INCOME TAX DISCLOSURES. In December 2023, the FASB issued ASU 2023-09, which requires additional disclosures about income taxes. The disclosures are required beginning with our annual report for the year ending December 31, 2025. The adoption of this standard is not anticipated to have a material impact on our results of operations, liquidity or capital resources.

Recent Securities and Exchange Commission (SEC) Final Rules

RECOVERY OF ERRONEOUSLY AWARDED COMPENSATION. In October 2022, the SEC adopted the final rule under SEC Release No. 33-11126, Listing Standards for Recovery of Erroneously Awarded Compensation, which directs the national securities exchanges and associations that list securities to establish listing standards requiring each issuer to develop and implement a clawback policy to recoup incentive-based compensation erroneously awarded to executive officers. The policy is included as an exhibit to our annual report for the year ending December 31, 2023.

INSIDER TRADING ARRANGEMENTS. In December 2022, the SEC adopted the final rule under SEC Release No. 33-11138, Insider Trading Arrangements and Related Disclosures, which requires new disclosures regarding insider trading policies and procedures, the use of certain insider trading plans and director and executive compensation regarding equity compensation awards made close in time to disclosure of material nonpublic information. The policy will be included as an exhibit to our annual report for the year ending December 31, 2024.

CYBERSECURITY DISCLOSURES. In July 2023, the SEC issued a final rule under SEC Release No. 33-11216, Cybersecurity Risk Management, Strategy, Governance, and Incident Disclosure, which requires new disclosures regarding material cybersecurity incidents and require periodic disclosures about registrant's processes to assess, identify, and manage material cybersecurity risks, management's role in assessing and managing material cybersecurity risks, and the board of directors' oversight of cybersecurity risks. The disclosures were required beginning with our annual report for the year ending December 31, 2023.

Accounting Policies

The accounting policies discussed below apply to both NW Holdings and NW Natural.

Plant, Property, and Accrued Asset Removal Costs

Plant and property are stated at cost, including capitalized labor, materials, and overhead. In accordance with regulatory accounting standards, the cost of acquiring and constructing long-lived plant and property generally includes an allowance for funds used during construction (AFUDC) or capitalized interest. AFUDC represents the regulatory financing cost incurred when debt and equity funds are used for construction (see "*AFUDC*" below). When constructed assets are subject to market-based rates rather than cost-based rates, the financing costs incurred during construction are included in capitalized interest in accordance with U.S. GAAP, not as regulatory financing costs under AFUDC.

In accordance with long-standing regulatory treatment, our depreciation rates consist of three components: one based on the average service life of the asset, a second based on the estimated salvage value of the asset, and a third based on the asset's estimated cost of removal. We collect, through rates, the estimated cost of removal on certain regulated properties through depreciation expense, with a corresponding offset to accumulated depreciation. These removal costs are non-legal obligations as defined by regulatory accounting guidance. Therefore, we have included these costs as non-current regulatory liabilities rather than as accumulated depreciation on our consolidated balance sheets. In the rate setting process, the liability for removal costs is treated as a reduction to the net rate base on which the NGD business has the opportunity to earn its allowed rate of return.

The costs of NGD plant retired or otherwise disposed of are removed from NGD plant and charged to accumulated depreciation for recovery or refund through future rates. Gains from the sale of regulated assets are generally deferred and refunded to customers. For assets not related to NGD, we record a gain or loss upon the disposal of the property, and the gain or loss is recorded in operating income or loss in the consolidated statements of comprehensive income.

The provision for depreciation of NGD property, plant, and equipment is recorded under the group method on a straight-line basis with rates computed in accordance with depreciation studies approved by regulatory authorities. The weighted-average depreciation rate for NGD assets in service was approximately 3.0% for 2023, 2022 and 2021, reflecting the approximate weighted-average economic life of the property. This includes 2023 weighted-average depreciation rates for the following asset categories: 2.5% for transmission and distribution plant, 2.2% for gas storage facilities, 6.7% for general plant, and 5.3% for intangible and other fixed assets.

AFUDC. Certain additions to NGD plant include AFUDC, which represents the net cost of debt and equity funds used during construction. AFUDC is calculated using actual interest rates for debt and authorized rates for ROE, if applicable. If short-term debt balances are less than the total balance of construction work in progress, then a composite AFUDC rate is used to represent interest on all debt funds, shown as a reduction to interest charges, and on ROE funds, shown as other income. While cash is not immediately recognized from recording AFUDC, it is realized in future years through rate recovery resulting from the higher NGD cost of service. Our composite AFUDC rate was 7.5% in 2023, 2.8% in 2022, and 0.7% in 2021.

IMPAIRMENT OF LONG-LIVED ASSETS. We review the carrying value of long-lived assets whenever events or changes in circumstances indicate the carrying amount of the assets may not be recoverable. Factors that would necessitate an impairment assessment of long-lived assets include a significant adverse change in the extent or manner in which the asset is used, a significant adverse change in legal factors or business climate that could affect the value of the asset, or a significant decline in the observable market value or expected future cash flows of the asset, among others.

When such factors are present, we assess the recoverability by determining whether the carrying value of the asset will be recovered through expected future cash flows. An asset is determined to be impaired when the carrying value of the asset exceeds the expected undiscounted future cash flows from the use and eventual disposition of the asset. If an impairment is indicated, we record an impairment loss for the difference between the carrying value and the fair value of the long-lived assets. Fair value is estimated using appropriate valuation methodologies, which may include an estimate of discounted cash flows.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand plus highly liquid investment accounts with original maturity dates of three months or less. These investments are readily convertible to cash with fair value approximating cost.

At December 31, 2023, NW Holdings had outstanding checks of $7.5 million, substantially all of which is recorded at NW Natural, and at December 31, 2022, NW Holdings had $5.8 million outstanding checks. These balances are included in accounts payable in the NW Holdings and NW Natural balance sheets.

Restricted Cash

Restricted cash is primarily comprised of funds from public purpose charges for programs that assist low-income customers with bill payments or energy efficiency. These balances are included in other current assets in the NW Holdings and NW Natural balance sheets. There were no transfers between restricted cash and cash and cash equivalents during the years ended December 31, 2023 and 2022.

The following table provides a reconciliation of the cash, cash equivalents and restricted cash balances at NW Holdings as of December 31, 2023 and 2022:

	December 31,	
In thousands	2023	2022
Cash and cash equivalents	$ 32,920	$ 29,270
Restricted cash included in other current assets	16,704	11,694
Cash, cash equivalents and restricted cash	$ 49,624	$ 40,964

The following table provides a reconciliation of the cash, cash equivalents and restricted cash balances at NW Natural as of December 31, 2023 and 2022:

	December 31,	
In thousands	2023	2022
Cash and cash equivalents	$ 19,841	$ 12,977
Restricted cash included in other current assets	16,679	11,694
Cash, cash equivalents and restricted cash	$ 36,520	$ 24,671

Revenue Recognition and Accrued Unbilled Revenue

Revenues, derived primarily from the sale and transportation of natural gas, are recognized upon delivery of gas or water, or service to customers. Revenues include accruals for gas or water delivered but not yet billed to customers based on estimates of deliveries from meter reading dates to month end (accrued unbilled revenue). Accrued unbilled revenue is dependent upon a number of factors that require management's judgment, including total natural gas receipts and deliveries, customer use of natural gas or water by billing cycle, and weather factors. Accrued unbilled revenue is reversed the following month when actual billings occur. NW Holdings' accrued unbilled revenue at December 31, 2023 and 2022 was $83.1 million and $89.0 million, respectively, substantially all of which is accrued unbilled revenue at NW Natural.

Revenues not related to NGD are derived primarily from Interstate Storage Services, asset management activities at the Mist gas storage facility, and other investments and business activities. At the Mist underground storage facility, revenues are primarily firm service revenues in the form of fixed monthly reservation charges. In addition, we also have asset management service revenue from an independent energy marketing company that optimizes commodity, storage, and pipeline capacity release transactions. Under this agreement, guaranteed asset management revenue is recognized using a straight-line, pro-rata methodology over the term of each contract. Revenues earned above the guaranteed amount are recognized as they are earned.

Revenue Taxes

Revenue-based taxes are primarily franchise taxes, which are collected from customers and remitted to taxing authorities. Revenue taxes are included in operating expenses in the statements of comprehensive income for NW Holdings and NW Natural. Revenue taxes at NW Holdings were $48.7 million, $41.8 million, and $34.7 million for 2023, 2022, and 2021, respectively.

Accounts Receivable and Allowance for Uncollectible Accounts

Accounts receivable consist primarily of amounts due for natural gas sales and transportation services to NGD customers, plus amounts due for gas storage services. NW Holdings and NW Natural establish allowances for uncollectible accounts (allowance) for trade receivables, including accrued unbilled revenue, based on the aging of receivables, collection experience of past due account balances including payment plans, and historical trends of write-offs as a percent of revenues. A specific allowance is established and recorded for large individual customer receivables when amounts are identified as unlikely to be partially or fully recovered. Inactive accounts are written-off against the allowance after they are 120 days past due or when deemed uncollectible. Differences between the estimated allowance and actual write-offs will occur based on a number of factors, including changes in economic conditions, customer creditworthiness, and natural gas prices. The allowance for uncollectible accounts is adjusted quarterly, as necessary, based on information currently available.

ALLOWANCE FOR TRADE RECEIVABLES. The payment term of our NGD receivables is generally 15 days. For these short-term receivables, it is not expected that forecasted economic conditions would significantly affect the loss estimates under stable economic conditions. For extreme situations like a financial crisis, natural disaster, and the economic slowdown caused by the COVID-19 pandemic, we enhanced our review and analysis.

For the residential and commercial uncollectible provision, we primarily followed our standard methodology, which includes assessing historical write-off trends and current information on delinquent accounts. Beginning October 1, 2022, new collection rules from the OPUC applied to residential and commercial customers. This included enhanced protections for low-income customers, a return to pre-pandemic time payment arrangements terms, revised disconnection rules during the heating season, and other items. As a result of these Oregon rule changes and our recent collection process experience, we augmented our provision review for accounts in the following categories: closed or inactive accounts aged less than 120 days, accounts on payment plans, and all other open accounts not on payment plans. For industrial accounts, we continue to assess the provision on an account-by-account basis with specific reserves taken as necessary. NW Natural will continue to closely monitor and evaluate our accounts receivable and the provision for uncollectible accounts.

The following table presents the activity related to the NW Holdings provision for uncollectible accounts by pool, substantially all of which is related to NW Natural's accounts receivable:

	As of December 31, 2022	Year ended December 31, 2023		As of December 31, 2023
In thousands	Beginning Balance	Provision recorded, net of adjustments	Write-offs recognized, net of recoveries	Ending Balance
Allowance for uncollectible accounts:				
Residential	$ 2,155	$ 2,743	$ (2,501)	$ 2,397
Commercial	400	454	(353)	501
Industrial	188	(122)	(1)	65
Accrued unbilled and other	336	47	(118)	265
Total NW Natural	3,079	3,122	(2,973)	3,228
Other - NW Holdings	217	10	—	227
Total NW Holdings	$ 3,296	$ 3,132	$ (2,973)	$ 3,455

ALLOWANCE FOR NET INVESTMENTS IN SALES-TYPE LEASES. NW Natural currently holds two net investments in sales-type leases, with substantially all of the net investment balance related to the North Mist natural gas storage agreement with Portland General Electric (PGE) which is billed under an OPUC-approved rate schedule. See Note 7 for more information on the North Mist lease. Due to the nature of this service, PGE may recover the costs of the lease through general rate cases. Therefore, we expect the risk of loss due to the credit of this lessee to be remote. As such, no allowance for uncollectibility was recorded for our sales-type lease receivables. NW Natural will continue monitoring the credit health of the lessees and the overall economic environment, including the economic factors closely tied to the financial health of our current and future lessees.

Inventories

NGD gas inventories, which consist of natural gas in storage for NGD customers, are stated at the lower of weighted-average cost or net realizable value. The regulatory treatment of these inventories provides for cost recovery in customer rates. NGD gas inventories injected into storage are priced in inventory based on actual purchase costs, and those withdrawn from storage are charged to cost of gas during the period they are withdrawn at the weighted-average inventory cost.

Gas storage inventories mainly consist of natural gas received as fuel-in-kind from storage customers. Gas storage inventories are valued at the lower of average cost or net realizable value. Cushion gas is not included in inventory balances, is recorded at original cost, and is classified as a long-term plant asset.

Materials and supplies inventories consist of inventories both related to and unrelated to NGD and are stated at the lower of average cost or net realizable value.

NW Natural's NGD and gas storage inventories totaled $47.2 million and $61.9 million at December 31, 2023 and 2022, respectively. At December 31, 2023 and 2022, NW Holdings' materials and supplies inventories, which are comprised primarily of NW Natural's materials and supplies, totaled $25.6 million and $23.5 million, respectively.

During 2023 and 2022, NW Natural entered into certain agreements to purchase renewable thermal certificates (RTCs). RTCs are initially recorded at cost and subsequently assessed for impairment based on the lower-of-cost or market model. NW Natural's RTCs inventory totaled $0.5 million and $1.7 million at December 31, 2023 and 2022, respectively.

Greenhouse Gas Allowances

NW Natural is subject to greenhouse gas (GHG) emission reduction requirements under the Washington Climate Commitment Act (CCA) regulations and is likely to be subject to GHG emission reductions under a separate program in Oregon upon conclusion of the new ODEQ rulemaking. The new rulemaking was commenced upon the judicial invalidation of the prior rules promulgated by the ODEQ and is expected to take approximately 12 months.

Under Washington's CCA, emission reduction compliance mechanisms include: 1) allowances distributed at no cost by the state, 2) purchasing allowances at state-run auctions or secondary markets, 3) purchasing carbon offsets, and 4) supplying alternative gaseous fuels, such as renewable natural gas and hydrogen.

NW Natural will account for all purchased Washington allowances as inventory at the lower of cost or market. Any compliance instruments or allowances that are acquired through government allocations at no cost will be accounted for as inventory at no cost. As of December 31, 2023, NW Natural had $39.3 million of emissions allowances for compliance in Washington recorded as inventory.

The CCA allows for the sale of compliance instruments or allowances, and as a result, should NW Natural sell these it will recognize revenue when title to the instrument or allowance is transferred to a counterparty, and NW Natural will recognize expense at the time of recognition of the related sale. In September and December 2023, NW Natural consigned no-cost allowances to Washington auctions and received $10.0 million and $7.1 million, respectively, in cash, which proceeds were recorded as a regulatory liability for the benefit of customers.

We measure the compliance obligation, which is based on emissions, at the carrying value of inventory held plus the fair value of any additional emission allowances NW Natural would need to purchase to satisfy the obligations. Under the Washington program, NW Natural has recognized a $19.9 million liability as of December 31, 2023. We expect that the costs to comply with the Washington program will be recovered from utility customers through rates. As a result, NW Natural recognized $20.5 million of deferred costs as of December 31, 2023.

Gas Reserves

Gas reserves are payments to acquire and produce natural gas reserves. Gas reserves are stated at cost, adjusted for regulatory amortization, with the associated deferred tax benefits recorded as liabilities on the balance sheet. The current portion is calculated based on expected gas deliveries within the next fiscal year. NW Natural recognizes regulatory amortization of this asset on a volumetric basis calculated using the estimated gas reserves and the estimated therms extracted and sold each month. The amortization of gas reserves is recorded to cost of gas along with gas production revenues and production costs. See Note 13.

Derivatives

NW Natural's derivatives are measured at fair value and recognized as either assets or liabilities on the balance sheet. Changes in the fair value of the derivatives are recognized in earnings unless specific regulatory or hedge accounting criteria are met. Accounting for derivatives and hedges provides an exception for contracts intended for normal purchases and normal sales for which physical delivery is probable. In addition, certain derivative contracts are approved by regulatory authorities for recovery or refund through customer rates. Accordingly, the changes in fair value of these approved contracts are deferred as regulatory assets or liabilities pursuant to regulatory accounting principles. NW Natural's financial derivatives generally qualify for deferral under regulatory accounting. NW Natural's index-priced physical derivative contracts also qualify for regulatory deferral accounting treatment.

Derivative contracts entered into for NGD requirements after the annual PGA rate has been set and maturing during the PGA year are subject to the PGA incentive sharing mechanism. In Oregon, NW Natural participates in a PGA sharing mechanism under which it is required to select either an 80% or 90% deferral of higher or lower gas costs such that the impact on current earnings from the gas cost sharing is either 20% or 10% of gas cost differences compared to PGA prices, respectively. For each of the PGA years in Oregon beginning November 1, 2023, 2022, and 2021, NW Natural selected the 90% deferral of gas cost differences. In Washington, 100% of the differences between the PGA prices and actual gas costs are deferred. See Note 15.

NW Holdings and NW Natural have financial derivative policies that set forth guidelines for using selected derivative products to support prudent risk management strategies within designated parameters. NW Natural's objective for using derivatives is to decrease the volatility of gas prices, interest rates, and cash flows without speculative risk. The use of derivatives is permitted only after the risk exposures have been identified, are determined to exceed acceptable tolerance levels, and are determined necessary to support normal business activities. NW Natural does not enter into derivative instruments for trading purposes. All commodity and foreign exchange derivatives are currently held at NW Natural, and interest rate swaps are held at NW Holdings and NWN Water.

Fair Value

In accordance with fair value accounting, we use the following fair value hierarchy for determining inputs for our debt, pension plan assets, and derivative fair value measurements:

- Level 1: Valuation is based on quoted prices for identical instruments traded in active markets;
- Level 2: Valuation is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market; and
- Level 3: Valuation is generated from model-based techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect our own estimates of assumptions market participants would use in valuing the asset

or liability.

In addition, the fair value for certain pension trust investments is determined using Net Asset Value per share (NAV) as a practical expedient, and therefore they are not classified within the fair value hierarchy. These investments primarily consist of institutional investment products.

When developing fair value measurements, it is our policy to use quoted market prices whenever available or to maximize the use of observable inputs and minimize the use of unobservable inputs when quoted market prices are not available. Fair values are primarily developed using industry-standard models that consider various inputs including: (a) quoted future prices for commodities; (b) forward currency prices; (c) time value; (d) volatility factors; (e) current market and contractual prices for underlying instruments; (f) market interest rates and yield curves; (g) credit spreads; and (h) other relevant economic measures. NW Natural considers liquid points for natural gas hedging to be those points for which there are regularly published prices in a nationally recognized publication or where the instruments are traded on an exchange.

Goodwill and Business Combinations

NW Holdings, through its wholly-owned subsidiary NWN Water and NWN Water's wholly-owned subsidiaries, has completed various acquisitions that resulted in the recognition of goodwill. Goodwill is measured as the excess of the acquisition-date fair value of the consideration transferred over the acquisition-date fair value of the net identifiable assets assumed. Adjustments are recorded during the measurement period to finalize the allocation of the purchase price. The carrying value of goodwill is reviewed annually during the fourth quarter, or whenever events or changes in circumstance indicate that such carrying values may not be recoverable. The goodwill assessment policy begins with a qualitative analysis in which events and circumstances are evaluated, including macroeconomic conditions, industry and market conditions, regulatory environments, and overall financial performance of the reporting unit. If the qualitative assessment indicates that the carrying value may be at risk of recoverability, a quantitative evaluation is performed to measure the carrying value of the goodwill against the fair value of the reporting unit. The reporting unit is determined primarily based on current operating segments and the level of review provided by the Chief Operating Decision Maker (CODM) and/or segment management on the operating segment's financial results. Reporting units are evaluated periodically for changes in the corporate environment.

As of December 31, 2023 and 2022, NW Holdings had goodwill of $163.3 million and $149.3 million, respectively. All of NW Holdings' goodwill was acquired through the business combinations completed by NWN Water and its wholly-owned subsidiaries. No impairment charges were recorded as a result of the fourth quarter goodwill impairment assessment.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at fair value at the acquisition date, and the fair value of any non-controlling interest in the acquiree. Acquisition-related costs are expensed as incurred. When NW Natural acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. When there is substantial judgment or uncertainty around the fair value of acquired assets, we may engage a third party expert to assist in determining the fair values of certain assets or liabilities.

Income Taxes

We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the enactment date period unless, for NW Natural, a regulatory order specifies deferral of the effect of the change in tax rates over a longer period of time.

For NW Natural, deferred income tax assets and liabilities are also recognized for temporary differences where the deferred income tax benefits or expenses have previously been flowed through in the ratemaking process of the NGD business. Regulatory tax assets and liabilities are recorded on these deferred tax assets and liabilities to the extent it is believed they will be recoverable from or refunded to customers in future rates.
Investment tax credits associated with rate regulated plant additions are deferred for financial statement purposes and amortized over the estimated useful lives of the related plant.

NW Holdings files consolidated or combined income tax returns that include NW Natural. Income tax expense is allocated on a separate company basis incorporating certain consolidated return considerations. Subsidiary income taxes payable or receivable are generally settled with NW Holdings, the common agent for income tax matters.

Interest and penalties related to unrecognized tax benefits, if any, are recognized within income tax expense and accrued interest and penalties are recognized within the related tax liability line in the consolidated balance sheets. No accrued interest or penalties for uncertain tax benefits have been recorded. See Note 11.

Environmental Contingencies
Loss contingencies are recorded as liabilities when it is probable a liability has been incurred and the amount of the loss is reasonably estimable in accordance with accounting standards for contingencies. Estimating probable losses requires an analysis of uncertainties that often depend upon judgments about potential actions by third parties. Accruals for loss contingencies are recorded based on an analysis of potential results.

With respect to environmental liabilities and related costs, estimates are developed based on a review of information available from numerous sources, including completed studies and site specific negotiations. NW Natural's policy is to accrue the full amount of such liability when information is sufficient to reasonably estimate the amount of probable liability. When information is not available to reasonably estimate the probable liability, or when only the range of probable liabilities can be estimated and no amount within the range is more likely than another, it is our policy to accrue at the low end of the range. Accordingly, due to numerous uncertainties surrounding the course of environmental remediation and the preliminary nature of several site investigations, in some cases, it may not be possible to reasonably estimate the high end of the range of possible loss. In those cases, the nature of the potential loss and the fact that the high end of the range cannot be reasonably estimated is disclosed. See Note 17.

Unconsolidated Affiliates
NW Holdings, NW Natural and NWN Water have equity interests in businesses which we account for under the equity method as we do not exercise control of the major operating and financial policies. The business transactions with our equity method investments are not significant. We regularly assess the profitability and valuation of our investments for any potential impairment. See Note 13.

Cloud Computing Arrangements
Implementation costs associated with its cloud computing arrangements are capitalized consistent with costs capitalized for internal-use software. Capitalized implementation costs are included in other assets in the consolidated balance sheets. The implementation costs are amortized over the term of the related hosting agreement, including renewal periods that are reasonably certain to be exercised. Amortization expense of implementation costs are recorded as operations and maintenance expenses in the consolidated statements of comprehensive income. The implementation costs are included within operating activities in the consolidated statements of cash flows.

Subsequent Events
We monitor significant events occurring after the balance sheet date and prior to the issuance of the financial statements to determine the impacts, if any, of events on the financial statements to be issued.

3. EARNINGS PER SHARE

Basic earnings or loss per share are computed using NW Holdings' net income or loss and the weighted average number of common shares outstanding for each period presented. Diluted earnings per share are computed in the same manner, except using the weighted average number of common shares outstanding plus the effects of the assumed exercise of stock options and the payment of estimated stock awards from other stock-based compensation plans that are outstanding at the end of each period presented. Anti-dilutive stock awards are excluded from the calculation of diluted earnings or loss per common share.

NW Holdings' diluted earnings or loss per share are calculated as follows:

In thousands, except per share data	2023	2022	2021
Net income	$ 93,868	$ 86,303	$ 78,666
Average common shares outstanding - basic	36,213	33,934	30,702
Additional shares for stock-based compensation plans (See Note 8)	52	50	50
Average common shares outstanding - diluted	36,265	33,984	30,752
Earnings per share of common stock:			
Basic	$ 2.59	$ 2.54	$ 2.56
Diluted	2.59	2.54	2.56
Additional information:			
Anti-dilutive shares	1	2	7

4. SEGMENT INFORMATION

We primarily operate in one reportable business segment, which is NW Natural's local gas distribution business and is referred to as the NGD segment. NW Natural and NW Holdings also have investments and business activities not specifically related to the NGD segment, which are aggregated and reported as other and described below for each entity.

No individual customer accounts for over 10% of NW Holdings' or NW Natural's operating revenues.

Natural Gas Distribution
NW Natural's local gas distribution segment (NGD) is a regulated utility principally engaged in the purchase, sale, and delivery of natural gas and related services to customers in Oregon and southwest Washington. The NGD business is responsible for building and maintaining a safe and reliable pipeline distribution system, purchasing sufficient gas supplies from producers and marketers, contracting for firm and interruptible transportation of gas over interstate pipelines to bring gas from the supply basins into its service territory, and re-selling the gas to customers subject to rates, terms, and conditions approved by the OPUC or WUTC. NGD also includes taking customer-owned gas and transporting it from interstate pipeline connections, or city gates, to the customers' end-use facilities for a fee, which is approved by the OPUC or WUTC. Approximately 88% of NGD customers are located in Oregon and 12% in Washington. On an annual basis, residential and commercial customers typically account for around 60% of total NGD volumes delivered and around 90% of NGD margin. Industrial customers largely account for the remaining volumes and NGD margin. Asmall amount of the margin is also derived from miscellaneous services, gains or losses from an incentive gas cost sharing mechanism, and other service fees.

Industrial sectors served by the NGD business include: pulp, paper, and other forest products; the manufacture of electronic, electrochemical and electrometallurgical products; the processing of farm and food products; the production of various mineral products; metal fabrication and casting; the production of machine tools, machinery, and textiles; the manufacture of asphalt, concrete, and rubber; printing and publishing; nurseries; and government and educational institutions.

In addition to NW Natural's local gas distribution business, the NGD segment also includes the portion of the Mist underground storage facility used to serve NGD customers, North Mist gas storage, NWN Gas Reserves, which is a wholly-owned subsidiary of Energy Corp, and NW Natural RNG Holding Company, LLC, a holding company established to invest in the development and procurement of regulated renewable natural gas for NW Natural.

NW Natural
NW Natural's activities in Other include Interstate Storage Services and third-party asset management services for the Mist facility in Oregon, appliance retail center operations, and corporate operating and non-operating revenues and expenses that cannot be allocated to NGD operations.

Earnings from Interstate Storage Services assets are primarily related to firm storage capacity revenues. Earnings from the Mist facility also include revenue, net of amounts shared with NGD customers, from management of NGD assets at Mist and upstream pipeline capacity when not needed to serve NGD customers. Under the Oregon sharing mechanism, NW Natural retains 80% of the pre-tax income from these services when the costs of the capacity were not included in NGD rates, or 10% of the pre-tax income when the costs have been included in these rates. The remaining 20% and 90%, respectively, are recorded to a deferred regulatory account for crediting back to NGD customers.

NW Holdings
NW Holdings' activities in Other include all remaining activities not associated with NW Natural, specifically NWN Water, which consolidates the water and wastewater utility operations and water services businesses; NWN Water's equity investment in Avion Water Company, Inc.; NWN Gas Storage, a wholly-owned subsidiary of NWN Energy; other pipeline assets in NNG Financial; and NW Natural Renewables Holdings, LLC and its non-regulated renewable natural gas activities. Other also includes corporate revenues and expenses that cannot be allocated to other operations, including certain business development activities.

Segment Information Summary
Inter-segment transactions were immaterial for the periods presented. The following table presents summary financial information concerning the reportable segment and other operations.

In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
2023					
Operating revenues	$ 1,136,400	$ 22,223	$ 1,158,623	$ 38,852	$ 1,197,475
Depreciation	118,417	1,097	119,514	6,067	125,581
Income (loss) from operations	170,591	15,054	185,645	(704)	184,941
Net income (loss)	94,042	10,695	104,737	(10,869)	93,868
Capital expenditures	285,998	4,847	290,845	36,502	327,347
Total assets at December 31, 2023	4,458,117	53,260	4,511,377	355,715	4,867,092
2022					
Operating revenues	$ 989,752	$ 24,587	$ 1,014,339	$ 23,014	$ 1,037,353
Depreciation	111,871	1,086	112,957	3,750	116,707
Income (loss) from operations	152,839	16,535	169,374	(1,897)	167,477
Net income (loss)	79,690	11,874	91,564	(5,261)	86,303
Capital expenditures	315,979	2,707	318,686	19,916	338,602
Total assets at December 31, 2022	4,392,699	60,019	4,452,718	295,608	4,748,326
2021					
Operating revenues	$ 816,887	$ 26,170	$ 843,057	$ 17,343	$ 860,400
Depreciation	109,475	1,029	110,504	3,030	113,534
Income (loss) from operations	147,902	17,331	165,233	(2,116)	163,117
Net income (loss)	68,988	12,184	81,172	(2,506)	78,666
Capital expenditures	275,267	2,970	278,237	15,655	293,892
Total assets at December 31, 2021	3,846,112	52,260	3,898,372	166,232	4,064,604

Natural Gas Distribution Margin

NGD margin is the primary financial measure used by the CODM, consisting of NGD operating revenues, reduced by the associated cost of gas, environmental remediation expense, and revenue taxes. The cost of gas purchased for NGD customers is generally a pass-through cost in the amount of revenues billed to regulated NGD customers. Environmental remediation expense represents collections received from customers through environmental recovery mechanisms in Oregon and Washington as well as adjustments for the Oregon environmental earnings test when applicable. This is offset by environmental remediation expense presented in operating expenses. Revenue taxes are collected from NGD customers and remitted to taxing authorities. The collections from customers are offset by the expense recognition of the obligation to the taxing authority. By subtracting cost of gas, environmental remediation expense, and revenue taxes from NGD operating revenues, NGD margin provides a key metric used by the CODM in assessing the performance of the NGD segment.

The following table presents additional segment information concerning NGD margin:

In thousands	2023	2022	2021
NGD margin calculation:			
NGD operating revenues	$ 1,117,498	$ 970,124	$ 797,800
Other regulated services	18,902	19,628	19,087
Total NGD operating revenues	1,136,400	989,752	816,887
Less: NGD cost of gas	500,061	429,861	292,538
Environmental remediation expense	12,899	12,389	9,938
Revenue taxes	48,432	41,627	34,600
NGD margin	$ 575,008	$ 505,875	$ 479,811

5. COMMON STOCK

As of December 31, 2023 and 2022, NW Holdings had 100 million shares of common stock authorized. As of December 31, 2023, NW Holdings had 306,757 shares reserved for issuance of common stock under the Employee Stock Purchase Plan (ESPP) and 325,201 shares reserved for issuance under the Dividend Reinvestment and Direct Stock Purchase Plan (DRPP). At NW Holdings' election, shares sold through the DRPP may be purchased in the open market or through original issuance of shares reserved for issuance under the DRPP.

In August 2021, NW Holdings initiated an at-the-market (ATM) equity program by entering into an equity distribution agreement under which NW Holdings may issue and sell from time to time shares of common stock, no par value, having an aggregate gross sales

price of up to $200 million. NW Holdings is under no obligation to offer and sell common stock under the ATM equity program, which expires in August 2024. Any shares of common stock offered under the ATM equity program are registered on

NW Holdings' universal shelf registration statement filed with the SEC. During the year ended December 31, 2023, NW Holdings issued and sold 1,646,325 shares of common stock pursuant to the ATM equity program resulting in cash proceeds of $66.4 million, net of fees and commissions paid to agents of $1.2 million. As of December 31, 2023, NW Holdings had $43.5 million of equity available for issuance under the program. The ATM equity program was initiated to raise funds for general corporate purposes, including equity contributions to NW Holdings' subsidiaries, NW Natural and NW Natural Water. Contributions to NW Natural and NW Natural Water will be used for general corporate purposes.

Stock Repurchase Program

NW Holdings has a share repurchase program under which it may purchase its common shares on the open market or through privately negotiated transactions. NW Holdings currently has Board authorization to repurchase up to an aggregate of the greater of 2.8 million shares or $100 million. No shares of common stock were repurchased pursuant to this program during the year ended December 31, 2023. Since the plan's inception in 2000 under NW Natural, a total of 2.1 million shares have been repurchased at a total cost of $83.3 million.

The following table summarizes the changes in the number of shares of NW Holdings' common stock issued and outstanding:

In thousands	Shares
Balance, December 31, 2020	30,589
Sales to employees under ESPP	48
Stock-based compensation	49
Equity issuance	376
Sales to shareholders under DRPP	67
Balance, December 31, 2021	31,129
Sales to employees under ESPP	36
Stock-based compensation	42
Equity issuance	4,257
Sales to shareholders under DRPP	61
Balance, December 31, 2022	35,525
Sales to employees under ESPP	13
Stock-based compensation	39
Equity issuance	1,658
Sales to shareholders under DRPP	69
Shares issued in connection with business combinations	327
Balance, December 31, 2023	37,631

6. REVENUE

The following table presents disaggregated revenue from continuing operations:

	Year ended December 31, 2023				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
Natural gas sales	$ 1,109,223	$ —	$ 1,109,223	$ —	$ 1,109,223
Gas storage revenue, net	—	12,041	12,041	—	12,041
Asset management revenue, net	—	5,942	5,942	—	5,942
Appliance retail center revenue	—	4,240	4,240	—	4,240
Other revenue	2,929	—	2,929	38,852	41,781
Revenue from contracts with customers	1,112,152	22,223	1,134,375	38,852	1,173,227
Alternative revenue	8,198	—	8,198	—	8,198
Leasing revenue	16,050	—	16,050	—	16,050
Total operating revenues	$ 1,136,400	$ 22,223	$ 1,158,623	$ 38,852	$ 1,197,475

	Year ended December 31, 2022				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
Natural gas sales	$ 989,654	$ —	$ 989,654	$ —	$ 989,654
Gas storage revenue, net	—	11,792	11,792	—	11,792
Asset management revenue, net	—	6,965	6,965	—	6,965
Appliance retail center revenue	—	5,830	5,830	—	5,830
Other revenue	2,510	—	2,510	23,014	25,524
Revenue from contracts with customers	992,164	24,587	1,016,751	23,014	1,039,765
Alternative revenue	(19,605)	—	(19,605)	—	(19,605)
Leasing revenue	17,193	—	17,193	—	17,193
Total operating revenues	$ 989,752	$ 24,587	$ 1,014,339	$ 23,014	$ 1,037,353

	Year ended December 31, 2021				
In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)	NW Holdings
Natural gas sales	$ 783,027	$ —	$ 783,027	$ —	$ 783,027
Gas storage revenue, net	—	10,830	10,830	—	10,830
Asset management revenue, net	—	9,387	9,387	—	9,387
Appliance retail center revenue	—	5,953	5,953	—	5,953
Other revenue	1,615	—	1,615	17,343	18,958
Revenue from contracts with customers	784,642	26,170	810,812	17,343	828,155
Alternative revenue	14,694	—	14,694	—	14,694
Leasing revenue	17,551	—	17,551	—	17,551
Total operating revenues	$ 816,887	$ 26,170	$ 843,057	$ 17,343	$ 860,400

NW Natural's revenue represents substantially all of NW Holdings' revenue and is recognized for both registrants when the obligation to customers is satisfied and in the amount expected to be received in exchange for transferring goods or providing services. Revenue from contracts with customers contains one performance obligation that is generally satisfied over time, using the output method based on time elapsed, due to the continuous nature of the service provided. The transaction price is determined by a set price agreed upon in the contract or dependent on regulatory tariffs. Customer accounts are settled on a monthly basis or paid at time of sale and based on historical experience. It is probable that we will collect substantially all of the consideration to which we are entitled. We evaluated the probability of collection in accordance with the current expected credit losses standard.

NW Holdings and NW Natural do not have any material contract assets, as net accounts receivable and accrued unbilled revenue balances are unconditional and only involve the passage of time until such balances are billed and collected. NW Holdings and NW Natural do not have any material contract liabilities.

Revenue taxes are included in operating revenues with an equal and offsetting expense recognized in operating expenses in the consolidated statements of comprehensive income. Revenue-based taxes are primarily franchise taxes, which are collected from NGD customers and remitted to taxing authorities.

Natural Gas Distribution

Natural Gas Sales

NW Natural's primary source of revenue is providing natural gas to customers in the NGD service territory, which includes residential, commercial, industrial and transportation customers. NGD revenue is generally recognized over time upon delivery of the gas commodity or service to the customer, and the amount of consideration received and recognized as revenue is dependent on the Oregon and Washington tariffs. Customer accounts are to be paid in full each month, and there is no right of return or warranty for services provided. Revenues include firm and interruptible sales and transportation services, franchise taxes recovered from the customer, late payment fees, service fees, and accruals for gas delivered but not yet billed (accrued unbilled revenue). The accrued unbilled revenue balance is based on estimates of deliveries during the period from the last meter reading and management judgment is required for a number of factors used in this calculation, including customer use and weather factors.

We applied the significant financing practical expedient and have not adjusted the consideration NW Natural expects to receive from NGD customers for the effects of a significant financing component as all payment arrangements are settled annually. Due to the election of the right to invoice practical expedient, we do not disclose the value of unsatisfied performance obligations.

Alternative Revenue
Weather normalization (WARM) and decoupling mechanisms are considered to be alternative revenue programs. Alternative revenue programs are considered to be contracts between NW Natural and its regulator and are excluded from revenue from contracts with customers.

Leasing Revenue
Leasing revenue primarily consists of revenues from NW Natural's North Mist Storage contract with Portland General Electric (PGE) in support of PGE's gas-fired electric power generation facilities under an initial 30-year contract with options to extend, totaling up to an additional 50 years upon mutual agreement of the parties. The facility is accounted for as a sales-type lease with regulatory accounting deferral treatment. The investment is included in rate base under an established cost-of-service tariff schedule, with revenues recognized according to the tariff schedule and as such, profit upon commencement was deferred and will be amortized over the lease term. Leasing revenue also contains rental revenue from small leases of property owned by NW Natural to third parties. The majority of these transactions are accounted for as operating leases and the revenue is recognized over the term of the lease agreement. Lease revenue is excluded from revenue from contracts with customers. See Note 7 for additional information.

NW Natural Other
Gas Storage Revenue
NW Natural's other revenue includes gas storage activity, which includes Interstate Storage Services used to store natural gas for customers. Gas storage revenue is generally recognized over time as the gas storage service is provided to the customer and the amount of consideration received and recognized as revenue is dependent on set rates defined per the storage agreements. Noncash consideration in the form of dekatherms of natural gas is received as consideration for providing gas injection services to gas storage customers. This noncash consideration is measured at fair value using the average spot rate. Customer accounts are generally paid in full each month, and there is no right of return or warranty for services provided. Revenues include firm and interruptible storage services, net of the profit sharing amount refunded to NGD customers.

Asset Management Revenue
Revenues include the optimization of storage assets and pipeline capacity and are provided net of the profit sharing amount refunded to NGD customers. Certain asset management revenues received are recognized over time using a straight-line approach over the term of each contract, and the amount of consideration received and recognized as revenue is dependent on a variable pricing model. Variable revenues earned above guaranteed amounts are estimated and recognized at the end of each period using the most likely amount approach. Additionally, other asset management revenues may be based on a fixed rate. Generally, asset management accounts are settled on a monthly basis.

As of December 31, 2023, unrecognized revenue for the fixed component of the transaction price related to gas storage and asset management revenue was approximately $78.1 million. Of this amount, approximately $19.9 million will be recognized in 2024, $19.0 million in 2025, $14.9 million in 2026, $7.4 million in 2027, and $16.9 million thereafter. The amounts presented here are calculated using current contracted rates.

Appliance Retail Center Revenue
NW Natural owns and operates an appliance store that is open to the public, where customers can purchase natural gas home appliances. Revenue from the sale of appliances is recognized at the point in time in which the appliance is transferred to the third party responsible for delivery and installation services and when the customer has legal title to the appliance. It is required that the sale be paid for in full prior to transfer of legal title. The amount of consideration received and recognized as revenue varies with changes in marketing incentives and discounts offered to customers.

NW Holdings Other
NW Holdings' primary source of other revenue is providing water and wastewater services to customers. Water and wastewater service revenue is generally recognized over time upon delivery of the water commodity or service to the customer, and the amount of consideration received and recognized as revenue is dependent on the tariffs established in the state we operate. Customer accounts are to be paid in full each month, and there is no right of return or warranty for services provided.

We applied the significant financing practical expedient and have not adjusted the consideration we expect to receive from water distribution and wastewater collection customers for the effects of a significant financing component as all payment arrangements are settled annually. Due to the election of the right to invoice practical expedient, we do not disclose the value of unsatisfied performance obligations.

7. LEASES

Lease Revenue

Leasing revenue primarily consists of NW Natural's North Mist natural gas storage agreement with PGE which is billed under an OPUC-approved rate schedule and includes an initial 30-year term beginning May 2019 with options to extend, totaling up to an additional 50 years upon mutual agreement of the parties. Under U.S. GAAP, this agreement is classified as a sales-type lease and qualifies for regulatory accounting deferral treatment. The investment in the storage facility is included in rate base under a separately established cost-of-service tariff, with revenues recognized according to the tariff schedule. As such, the selling profit that was calculated upon commencement as part of the sale-type lease recognition was deferred and will be amortized over the lease term. Billing rates under the cost-of-service tariff will be updated annually to reflect current information including depreciable asset levels, forecasted operating expenses, and the results of regulatory proceedings, as applicable, and revenue received under this agreement is recognized as operating revenue on the consolidated statements of comprehensive income. There are no variable payments or residual value guarantees. The lease does not contain an option to purchase the underlying assets.

NW Natural also maintains a sales-type lease for specialized compressor facilities to provide high pressure compressed natural gas (CNG) services. Lease payments are outlined in an OPUC-approved rate schedule over a 10-year term. There are no variable payments or residual value guarantees. The selling profit computed upon lease commencement was not significant.

Our lessor portfolio also contains small leases of property owned by NW Natural to third parties. These transactions are accounted for as operating leases and the revenue is recognized over the term of the lease agreement.

The components of lease revenue at NW Natural were as follows:

	Year ended December 31,		
In thousands	2023	2022	2021
Lease revenue			
Operating leases	$ 76	$ 74	$ 80
Sales-type leases	15,974	17,119	17,471
Total lease revenue	$ 16,050	$ 17,193	$ 17,551

Additionally, lease revenue of $0.6 million, $0.6 million and $0.5 million was recognized for each of the years ended December 31, 2023, 2022, and 2021, respectively, related to operating leases associated with non-utility property rentals. Lease revenue related to these leases was presented in other income (expense), net on the consolidated statements of comprehensive income as it is non-operating income.

Total future minimum lease payments to be received under non-cancelable leases at December 31, 2023 are as follows:

In thousands	Operating	Sales-Type	Total
NW Natural:			
2024	$ 603	$ 15,867	$ 16,470
2025	599	15,306	15,905
2026	36	14,901	14,937
2027	22	14,521	14,543
2028	—	13,983	13,983
Thereafter	—	208,316	208,316
Total minimum lease payments	$ 1,260	282,894	$ 284,154
Less: imputed interest		153,806	
Total leases receivable		$ 129,088	
Other NW Holdings:			
2024	$ 52	$ —	$ 52
2025	53	—	53
2026	56	—	56
2027	57	—	57
2028	58	—	58
Thereafter	800	—	800
Total minimum lease payments	$ 1,076	$ —	$ 1,076
NW Holdings:			
2024	$ 655	$ 15,867	$ 16,522
2025	652	15,306	15,958
2026	92	14,901	14,993
2027	79	14,521	14,600
2028	58	13,983	14,041
Thereafter	800	208,316	209,116
Total minimum lease payments	$ 2,336	282,894	$ 285,230
Less: imputed interest		153,806	
Total leases receivable		$ 129,088	

The total leases receivable above is reported under the NGD segment and the short- and long-term portions are included within other current assets and assets under sales-type leases on the consolidated balance sheets, respectively. The total amount of unguaranteed residual assets was $5.5 million and $5.1 million at December 31, 2023 and 2022, respectively, and is included in assets under sales-type leases on the consolidated balance sheets. Additionally, under regulatory accounting, the revenues and expenses associated with these agreements are presented on the consolidated statements of comprehensive income such that their presentation aligns with similar regulated activities at NW Natural.

Lease Expense

Operating Leases

We have operating leases for land, buildings and equipment. Our primary lease is for NW Natural's headquarters and operations center. Our leases have remaining lease terms of nine months to 16 years. Many of our lease agreements include options to extend the lease, which we do not include in our minimum lease terms unless they are reasonably certain to be exercised. Short-term leases with a term of 12 months or less are not recorded on the balance sheet.

As most of our leases do not provide an implicit rate and are entered into by NW Natural, we use an estimated discount rate representing the rate we would have incurred to finance the funds necessary to purchase the leased asset and is based on information available at the lease commencement date in determining the present value of lease payments.

The components of lease expense, a portion of which is capitalized, were as follows:

	Year ended December 31, 2023		
In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Operating lease expense	$ 7,244	$ 176	$ 7,420
Short-term lease expense	925	—	925

	Year ended December 31, 2022		
In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Operating lease expense	$ 7,003	$ 31	$ 7,034
Short-term lease expense	880	—	880

	Year ended December 31, 2021		
In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Operating lease expense	$ 6,859	$ 58	$ 6,917
Short-term lease expense	1,220	—	1,220

Supplemental balance sheet information related to operating leases as of December 31, 2023 is as follows:

In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Operating lease right of use assets	$ 70,728	$ 580	$ 71,308
Operating lease liabilities - current liabilities	$ 2,128	$ 205	$ 2,333
Operating lease liabilities - non-current liabilities	76,757	410	77,167
Total operating lease liabilities	$ 78,885	$ 615	$ 79,500

Supplemental balance sheet information related to operating leases as of December 31, 2022 is as follows:

In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Operating lease right of use assets	$ 72,720	$ 709	$ 73,429
Operating lease liabilities - current liabilities	$ 1,363	$ 151	$ 1,514
Operating lease liabilities - non-current liabilities	78,345	620	78,965
Total operating lease liabilities	$ 79,708	$ 771	$ 80,479

The weighted-average remaining lease terms and weighted-average discount rates for the operating leases at NW Natural were as follows:

	2023	2022
Weighted-average remaining lease term (years)	16.2	17.2
Weighted-average discount rate	7.3 %	7.3 %

Headquarters and Operations Center Lease

NW Natural commenced a 20-year operating lease agreement in March 2020 for a new headquarters and operations center in Portland, Oregon. There is an option to extend the term of the lease for two additional periods of seven years. There is a material timing difference between the minimum lease payments and expense recognition as calculated under operating lease accounting rules. OPUC issued an order allowing us to align our expense recognition with cash payments for ratemaking purposes. We recorded the difference between the minimum lease payments and the aggregate of the imputed interest on the finance lease obligation and amortization of the right-of-use asset as a regulatory asset on our balance sheet. The balance of the regulatory asset was $8.0 million and $6.9 million as of December 31, 2023 and 2022, respectively.

Maturities of operating lease liabilities at December 31, 2023 were as follows:

In thousands	NW Natural	Other (NW Holdings)	NW Holdings
2024	$ 7,484	$ 183	$ 7,667
2025	7,362	176	7,538
2026	7,361	153	7,514
2027	7,538	107	7,645
2028	7,719	6	7,725
Thereafter	101,272	6	101,278
Total lease payments	138,736	631	139,367
Less: imputed interest	59,851	16	59,867
Total lease obligations	78,885	615	79,500
Less: current obligations	2,128	205	2,333
Long-term lease obligations	$ 76,757	$ 410	$ 77,167

As of December 31, 2023, there were no finance lease liabilities at NW Natural.

Cash Flow Information

Supplemental cash flow information related to leases was as follows:

	Year ended December 31, 2023		
In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Cash paid for amounts included in the measurement of lease liabilities			
Operating cash flows from operating leases	$ 7,434	$ 176	$ 7,610
Finance cash flows from finance leases	369	—	369
Right of use assets obtained in exchange for lease obligations			
Operating leases	$ 659	$ —	$ 659
Finance leases	369	101	470

	Year ended December 31, 2022		
In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Cash paid for amounts included in the measurement of lease liabilities			
Operating cash flows from operating leases	$ 6,993	$ 64	$ 7,057
Finance cash flows from finance leases	524	—	524
Right of use assets obtained in exchange for lease obligations			
Operating leases	$ 309	$ 668	$ 977
Finance leases	270	—	270

	Year ended December 31, 2021		
In thousands	NW Natural	Other (NW Holdings)	NW Holdings
Cash paid for amounts included in the measurement of lease liabilities			
Operating cash flows from operating leases	$ 6,840	$ 58	$ 6,898
Finance cash flows from finance leases	801	—	801
Right of use assets obtained in exchange for lease obligations			
Operating leases	$ 223	$ —	$ 223
Finance leases	314	—	314

Finance Leases

NW Natural also leases building storage spaces for use as a gas meter room in order to provide natural gas to multifamily or mixed use developments. These contracts are accounted for as finance leases and typically involve a one-time upfront payment with no remaining liability. The right of use asset for finance leases was $2.6 million and $2.3 million at December 31, 2023 and 2022, respectively.

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8. STOCK-BASED COMPENSATION

Stock-based compensation plans are designed to promote stock ownership in NW Holdings by employees and officers of NW Holdings and its affiliates. These compensation plans include a Long Term Incentive Plan (LTIP) and an ESPP.

Long Term Incentive Plan

The LTIP is intended to provide a flexible, competitive compensation program for eligible officers and key employees. Under the LTIP, shares of NW Holdings common stock are authorized for equity incentive grants in the form of stock, restricted stock, restricted stock units, stock options, or performance shares. An aggregate of 1,100,000 shares were authorized for issuance as of December 31, 2023. Shares awarded under the LTIP may be purchased on the open market or issued as original shares.

Of the 1,100,000 shares of common stock authorized for LTIP awards at December 31, 2023, there were 180,755 shares available for issuance under any type of award. This assumes market, performance, and service-based grants currently outstanding are awarded at the target level. There were no outstanding grants of restricted stock or stock options under the LTIP at December 31, 2023 or 2022. The LTIP stock awards are compensatory awards for which compensation expense is based on the fair value of stock awards, with expense being recognized over the performance and vesting period of the outstanding awards. Forfeitures are recognized as they occur.

Performance Shares

LTIP performance shares incorporate a combination of market, performance, and service-based factors. The following table summarizes performance share expense information:

Dollars in thousands	Shares[1]	Expense During Award Year[2]	Total Expense for Award
Estimated award:			
2021-2023 grant[3]	40,719	$ 1,581	$ 1,581
Actual award:			
2020-2022 grant	29,472	$ 888	$ 888
2019-2021 grant	37,430	$ 1,323	$ 1,323

(1) In addition to common stock shares, a participant also receives a dividend equivalent cash payment equal to the number of shares of common stock received on the award payout multiplied by the aggregate cash dividends paid per share during the performance period.

(2) Amount represents the expense recognized in the third year of the vesting period noted above. For the 2019-2021, 2020-2022, and 2021-2023 grants, mutual understanding of the award's key terms was established in the third year of the vesting period, triggering full expense recognition in 2021, 2022, and 2023, respectively.

(3) This represents the estimated number of shares to be awarded as of December 31, 2023 as certain performance share measures have been achieved. Amounts are subject to change with final payout amounts authorized by the Board of Directors in February 2024.

The aggregate number of performance shares granted and outstanding at the target and maximum levels were as follows:

Dollars in thousands	Performance Share Awards Outstanding		2023
Performance Period	Target	Maximum	Expense
2021-23	48,030	96,060	$ 1,581
2022-24	—	—	—
2023-25	—	—	—
Total	48,030	96,060	$ 1,581

Performance share awards are based on the achievement of a three-year ROIC threshold that must be met and a cumulative EPS factor, which can be modified by a TSR factor relative to a specified peer group (2021-2023, 2022-2024, and 2023-2025 performance share awards) over the three-year performance period. The performance period allows for one of the performance factors to remain variable until the first quarter of the third year of the award period. As the performance factor will not be approved until the first quarter of 2024 and 2025, there is not a mutual understanding of the awards' key terms and conditions between NW Natural and the participants as of December 31, 2023, and therefore, no expense was recognized for the 2022-2024 and 2023-2025 performance period. NW Natural will calculate the grant date fair value and recognize expense once the final performance factor has been approved. If the target is achieved for the 2022-2024 and 2023-2025 awards, NW Holdings would grant for accounting purposes 49,100 and 52,765 shares in the first quarter of 2024 and 2025, respectively.

Compensation expense is recognized in accordance with accounting standards for stock-based compensation and calculated based on performance levels achieved and an estimated fair value using the Monte-Carlo method. Due to there not being a mutual understanding of the 2022-2024 and 2023-2025 awards' key terms and conditions as noted above, the grant date fair value has not

yet been determined and no non-vested shares existed at December 31, 2023. The weighted-average grant-date fair value of non-vested shares associated with the 2021-2023 awards was $49.17 per share at December 31, 2023. The

weighted-average grant date fair value of shares vested during the year was $49.17 per share and there were no performance shares granted during the year and no unrecognized compensation expense for accounting purposes as of December 31, 2023.

Restricted Stock Units

In 2012, RSUs began being granted under the LTIP instead of stock options under the Restated SOP. Generally, the RSUs awarded are forfeitable and include a performance-based threshold as well as a vesting period of four years from the grant date. The majority of our RSU grants obligate NW Holdings, upon vesting, to issue the RSU holder one share of common stock. The grant may also include a cash payment equal to the total amount of dividends paid per share between the grant date and vesting date of that portion of the RSU depending on the structure of the award agreement. The fair value of an RSU is equal to the closing market price of NW Holdings' common stock on the grant date. During 2023, total RSU expense was $1.9 million compared to $2.1 million in 2022 and $2.0 million in 2021. As of December 31, 2023, there was $3.1 million of unrecognized compensation cost from grants of RSUs, which is expected to be recognized over a period extending through 2027.

Information regarding the RSU activity is summarized as follows:

	Number of RSUs	Weighted - Average Price Per RSU
Nonvested, December 31, 2020	82,464	$ 59.40
Granted	38,160	49.16
Vested	(31,733)	60.06
Forfeited	(1,164)	46.82
Nonvested, December 31, 2021	87,727	54.87
Granted	48,212	46.50
Vested	(33,054)	55.90
Forfeited	(3,037)	56.34
Nonvested, December 31, 2022	99,848	50.44
Granted	45,532	48.24
Vested	(36,393)	56.65
Forfeited	(11,696)	49.98
Nonvested, December 31, 2023	97,291	$ 49.80

Employee Stock Purchase Plan

NW Holdings' ESPP allows employees of NW Holdings, NW Natural and certain designated subsidiaries to purchase common stock at 85% of the closing price on the trading day immediately preceding the initial offering date, which is set annually. For the 2023-2024 ESPP period, each eligible employee may purchase up to $21,224 worth of stock through payroll deductions over a period defined by the Board of Directors, with shares issued at the end of the subscription period.

Stock-Based Compensation Expense

Stock-based compensation expense is recognized as operations and maintenance expense or is capitalized as part of construction overhead at the entity at which the award recipient is employed. The following table summarizes the NW Holdings' financial statement impact, substantially all of which was recorded at NW Natural, of stock-based compensation under the LTIP and ESPP:

In thousands	2023	2022	2021
Operations and maintenance expense, for stock-based compensation	$ 3,293	$ 2,877	$ 3,272
Income tax benefit	(872)	(762)	(866)
Net stock-based compensation effect on net income	2,421	2,115	2,406
Amounts capitalized for stock-based compensation	$ 305	$ 351	$ 344

9. DEBT

Short-Term Debt

The primary source of short-term liquidity for NW Holdings is cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time.

The primary source of short-term liquidity for NW Natural is from the sale of commercial paper, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time. In addition to issuing commercial paper or entering into bank loans to meet working capital requirements, including seasonal requirements to finance gas purchases and accounts receivable, short-term debt may also be used to temporarily fund capital requirements. For NW Natural, commercial paper and bank loans are periodically refinanced through the sale of long-term debt or equity contributions from NW Holdings. Commercial paper, when outstanding, is sold through two commercial banks under an issuing and paying agency agreement and is supported by one or more unsecured revolving credit facilities. See "*Credit Agreements*" below.

At December 31, 2023 and 2022, NW Natural's short-term debt consisted of the following:

	December 31, 2023		December 31, 2022	
In millions	Balance Outstanding	Weighted Average Interest Rate[(1)]	Balance Outstanding	Weighted Average Interest Rate[(1)]
NW Natural:				
Commercial paper	$ 16.8	5.5 %	$ 170.2	4.6 %
Other (NW Holdings):				
Credit agreement	73.0	6.4 %	88.0	5.3 %
NW Holdings	$ 89.8		$ 258.2	

(1) Weighted average interest rate on outstanding short-term debt

The carrying cost of commercial paper approximates fair value using Level 2 inputs. See Note 2 for a description of the fair value hierarchy. At December 31, 2023, NW Natural's commercial paper had a maximum remaining maturity of 5 days and an average remaining maturity of 4 days.

Credit Agreements

NW Holdings

In November 2021, NW Holdings entered into an amended and restated $200.0 million credit agreement, with a feature that allows NW Holdings to request increases in the total commitment amount, up to a maximum of $300.0 million. The maturity date of the agreement is November 3, 2026, with an available extension of commitments for two additional one-year periods, subject to lender approval. Interest charges on the NW Holdings credit agreement were indexed to the London Interbank Offered Rate (LIBOR) through January 31, 2023. The agreement was amended to replace LIBOR with the secured overnight financing rate (SOFR) beginning February 2023. The SOFR is subject to a 10 basis point spread adjustment.

The NW Holdings credit agreement permits the issuance of letters of credit in an aggregate amount of up to $40.0 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. The credit agreement requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at December 31, 2023 and 2022.

The NW Holdings credit agreement also requires NW Holdings to maintain debt ratings (which are defined by a formula using NW Natural's credit ratings in the event NW Holdings does not have a credit rating) with Standard & Poor's (S&P) and Moody's Investors Service, Inc. (Moody's) and notify the lenders of any change in its senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Holdings' debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreements are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreements when ratings are changed. NW Holdings maintains a credit rating with S&P of A+ and does not currently maintain ratings with Moody's.

There was $73.0 million and $88.0 million of outstanding balances under the NW Holdings agreement at December 31, 2023 and 2022, respectively. No letters of credit were issued or outstanding under the NW Holdings agreement at December 31, 2023 and 2022.

NW Natural

In November 2021, NW Natural entered into an amended and restated credit agreement for unsecured revolving loans totaling $400.0 million, with a feature that allows NW Natural to request increases in the total commitment amount, up to a maximum of $600.0 million. The maturity date of the agreement is November 3, 2026 with an available extension of commitments for two additional one-year periods, subject to lender approval. The credit agreement permits the issuance of letters of credit in an

aggregate amount of up to $60.0 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. Interest charges on the NW Natural credit agreement were indexed to the LIBOR through January 31, 2023. The agreement was amended to replace LIBOR with the SOFR beginning February 2023. The SOFR is subject to a 10 basis point spread adjustment.

NW Natural's credit agreement requires NW Natural to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Natural was in compliance with this covenant at December 31, 2023 and 2022.

The NW Natural credit agreement also requires NW Natural to maintain credit ratings with S&P and Moody's and notify the lenders of any change in NW Natural's senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Natural's debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreement are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreement when ratings are changed.

There was one letter of credit outstanding at December 31, 2023 under NW Natural's credit agreement and no letters of credit outstanding at December 31, 2022. In December 2023, NW Natural issued a $15 million letter of credit through its existing credit agreement, which expired January 5, 2024.

Letters of Credit Facility

In January 2024, NW Natural entered into an Uncommitted Letter of Credit and Reimbursement Agreement (LC Reimbursement Agreement), pursuant to which NW Natural agreed to reimburse each Lender acting as an issuing bank (Issuing Bank) thereunder for disbursements in respect of letters of credit (Letters of Credit) issued pursuant to the LC Reimbursement Agreement from time to time. The Company expects to use Letters of Credit issued under the facility created by the LC Reimbursement Agreement (LC Facility) primarily to support its participation in Washington Climate Commitment Act cap-and-invest program auctions.

Although there is no expressly stated maximum amount of Letters of Credit that can be issued or outstanding under the LC Facility, under current regulatory authority from the OPUC, the aggregate sum of Letters of Credit outstanding and available to be drawn under the LC Reimbursement Agreement may not exceed $100 million at any one time. The Issuing Banks have no commitment to issue Letters of Credit under the LC Facility and will have the discretion to limit and condition the terms for the issuance of Letters of Credit (including maximum face amounts) in their sole discretion.

The LC Reimbursement Agreement requires NW Natural to maintain certain ratings with S&P and Moody's. NW Natural must also notify the Administrative Agent and Lenders of any change in the S&P or Moody's Ratings, although any such change is not an event of default.

The LC Reimbursement Agreement prohibits NW Natural from permitting Consolidated Indebtedness to be greater than 70% of Total Capitalization, each as defined therein and calculated as of the end of each fiscal quarter of NW Natural. Failure to comply with this financial covenant would constitute an Event of Default under the LC Reimbursement Agreement. The occurrence of this or any other Event of Default would entitle the Administrative Agent to require cash collateral for the LC Exposure, as defined in the LC Reimbursement Agreement, and to exercise all other rights and remedies available to it and the Lenders under the Credit Documents, as defined in the LC Reimbursement Agreement, and under applicable law.

Long-Term Debt

At December 31, 2023 and 2022, NW Holdings long-term debt consisted of the following:

	December 31, 2023		December 31, 2022	
In millions	Balance Outstanding	Weighted Average Interest Rate[(1)]	Balance Outstanding	Weighted Average Interest Rate[(1)]
NW Natural first mortgage bonds	$ 1,374.7	4.7 %	$ 1,134.7	4.5 %
NW Holdings credit agreement	100.0	5.5 %	100.0	4.2 %
NWN Water credit agreement	50.0	5.8 %	50.0	4.2 %
NWN Water term loan	55.0	4.7 %	55.0	2.5 %
Other long-term debt	6.6		6.2	
Long-term debt, gross	1,586.3		1,345.9	
Less: unamortized debt issuance costs	10.0		9.0	
Less: current maturities	150.9		90.7	
Total long-term debt	$ 1,425.4		$ 1,246.2	

(1) Weighted average interest rate for the years ended December 31, 2023 and 2022.

NW Natural Long-Term Debt

NW Natural's issuance of First Mortgage Bonds (FMBs), which includes NW Natural's medium-term notes, under the Mortgage and Deed of Trust (Mortgage) is limited by eligible property, adjusted net earnings, and other provisions of the Mortgage. The Mortgage constitutes a first mortgage lien on certain gas properties owned from time to time by NW Natural, including substantially all of NW Natural's NGD property.

In August 2023, NW Natural issued and sold $80.0 million aggregate principal amount of its FMBs, 5.18% Series and $50.0 million aggregate principal amount of its FMBs, 5.23% Series. The 5.18% Bonds bear interest at the rate of 5.18% per annum, payable semi-annually on February 4 and August 4 of each year, commencing February 4, 2024, and will mature on August 4, 2034. The 5.23% Bonds bear interest at the rate of 5.23% per annum, payable semi-annually on February 4 and August 4 of each year, commencing February 4, 2024, and will mature on August 4, 2038.

In March 2023, NW Natural issued and sold $100.0 million aggregate principal amount of 5.75% Secured Medium-Term Notes, Series B due 2033 (the Notes). The Notes bear interest at the rate of 5.75% per annum, payable semi-annually on March 15 and September 15 of each year.

In January 2023, NW Natural issued and sold $100.0 million aggregate principal amount of its FMBs, 5.43% Series due January 2053. The 5.43% Bonds bear interest at the rate of 5.43% per annum, payable semi-annually on January 6 and July 6 of each year, commencing July 6, 2023, and will mature on January 6, 2053.

NW Holdings Note Purchase Agreement

In December 2023, NW Holdings entered into a Note Purchase Agreement between NW Holdings and the institutional investors named as purchasers therein. The Note Purchase Agreement provides for the issuance of (i) $100.0 million aggregate principal amount of NW Holdings' 5.78% Senior Notes, Series A, due March 7, 2028 (5.78% Notes) and (ii) $50.0 million aggregate principal amount of NW Holdings' 5.84% Senior Notes, Series B, due March 7, 2029 (5.84% Notes) in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act of 1933, as amended. The 5.78% Notes and the 5.84% Notes are expected to be issued on or about March 7, 2024, pursuant to the Note Purchase Agreement. The proceeds from the Note Purchase Agreement are expected to be used to refinance $150.0 million of existing term loans at NW Holdings and NWN Water.

The 5.78% Notes will bear interest at the rate of 5.78% per annum, payable semi-annually on March 7 and September 7 of each year, commencing September 9, 2024, and will mature on March 7, 2028. NW Holdings may, at its option, prepay at any time all, or from time to time any part of, the outstanding 5.78% Notes at a price equal to 100% of the principal amount thereof, plus a "make-whole" premium and accrued and unpaid interest thereon to the date of prepayment; provided, however, in the case of a partial prepayment, NW Holdings must prepay at least 5% of the aggregate principal amount of the 5.78% Notes outstanding. At any time on or after February 7, 2028, NW Holdings may, at its option, prepay all or any part of the 5.78% Notes at 100% of the principal amount thereof, plus accrued and unpaid interest thereon to the date of prepayment, but without the payment of a "make-whole" premium, so long as there is no Default or Event of Default under the Note Purchase Agreement.

The 5.84% Bonds will bear interest at the rate of 5.84% per annum, payable semi-annually on March 7 and September 7 of each year, commencing September 9, 2024, and will mature on March 7, 2029. NW Holdings may, at its option, prepay at any time all, or from time to time any part of, the outstanding 5.84% Notes at a price equal to 100% of the principal amount thereof, plus a "make-whole" premium and accrued and unpaid interest thereon to the date of prepayment; provided, however, in the case of a partial prepayment, NW Holdings must prepay at least 5% of the aggregate principal amount of the 5.84% Notes outstanding. At any time on or after February 7, 2029, NW Holdings may, at its option, prepay all or any part of the 5.84% Notes at 100% of the principal amount thereof, plus accrued and unpaid interest thereon to the date of prepayment, but without the payment of a "make-whole" premium, so long as there is no Default or Event of Default under the Note Purchase Agreement.

Interest Rate Swap Agreements

NW Holdings and NWN Water entered into interest rate swap agreements with major financial institutions that effectively convert variable-rate debt to a fixed rate. Interest payments made between the effective date and expiration date are hedged by the swap agreements. The notional amount, effective date, expiration date and benchmark rate of the swap agreements are shown in the table below:

In millions	Notional Amount	Effective Date	Expiration Date	Fixed Rate
NW Holdings	$ 100.0	1/17/2023	3/15/2024	4.7 %
NWN Water	$ 55.0	1/19/2023	6/10/2026	3.8 %

Maturities and Outstanding Long-Term Debt

Retirement of long-term debt for each of the annual periods through December 31, 2028 and thereafter are as follows:

In thousands	NW Natural	Other (NW Holdings)	NW Holdings
2024	$ —	$ 150,868	$ 150,868
2025	30,000	824	30,824
2026	55,000	55,852	110,852
2027	64,700	881	65,581
2028	10,000	866	10,866
Thereafter	1,215,000	2,353	1,217,353
Total	$ 1,374,700	$ 211,644	$ 1,586,344

The following table presents debt outstanding at NW Natural as of December 31:

In thousands	2023	2022
NW Natural:		
First Mortgage Bonds:		
3.542% Series due 2023	$ —	$ 50,000
5.620% Series due 2023	—	40,000
7.720% Series due 2025	20,000	20,000
6.520% Series due 2025	10,000	10,000
7.050% Series due 2026	20,000	20,000
3.211% Series due 2026	35,000	35,000
7.000% Series due 2027	20,000	20,000
2.822% Series due 2027	25,000	25,000
6.650% Series due 2027	19,700	19,700
6.650% Series due 2028	10,000	10,000
3.141% Series due 2029	50,000	50,000
7.740% Series due 2030	20,000	20,000
7.850% Series due 2030	10,000	10,000
5.820% Series due 2032	30,000	30,000
5.660% Series due 2033	40,000	40,000
5.750% Series due 2033	100,000	—
5.180% Series due 2034	80,000	—
5.250% Series due 2035	10,000	10,000
5.230% Series due 2038	50,000	—
4.000% Series due 2042	50,000	50,000
4.136% Series due 2046	40,000	40,000
3.685% Series due 2047	75,000	75,000
4.110% Series due 2048	50,000	50,000
3.869% Series due 2049	90,000	90,000
3.600% Series due 2050	150,000	150,000
3.078% Series due 2051	130,000	130,000
4.780% Series due 2052	140,000	140,000
5.430% Series due 2053	100,000	—
Long-term debt, gross	1,374,700	1,134,700
Less: current maturities	—	90,000
Total long-term debt	$ 1,374,700	$ 1,044,700

Fair Value of Long-Term Debt

NW Holdings' and NW Natural's outstanding debt does not trade in active markets. The fair value of debt is estimated using the value of outstanding debt at natural gas distribution companies with similar credit ratings, terms, and remaining maturities to NW Holdings' and NW Natural's debt that actively trade in public markets. Substantially all outstanding debt at NW Holdings is comprised of NW Natural debt. These valuations are based on Level 2 inputs as defined in the fair value hierarchy. See Note 2.

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The following table provides an estimate of the fair value of long-term debt, including current maturities of long-term debt, using market prices in effect on the valuation date:

	December 31,	
In thousands	2023	2022
NW Natural:		
Gross long-term debt	$ 1,374,700	$ 1,134,700
Unamortized debt issuance costs	(9,968)	(8,823)
Carrying amount	1,364,732	1,125,877
Estimated fair value[(1)]	1,236,559	944,383
NW Holdings:		
Gross long-term debt	$ 1,586,344	$ 1,345,851
Unamortized debt issuance costs	(10,044)	(8,987)
Carrying amount	1,576,300	1,336,864
Estimated fair value[(1)]	1,447,941	1,148,395

(1) Estimated fair value does not include unamortized debt issuance costs.

10. PENSION AND OTHER POSTRETIREMENT BENEFIT COSTS

NW Natural maintains a qualified non-contributory defined benefit pension plan (Pension Plan) for all eligible employees, non-qualified supplemental pension plans for eligible executive officers and other key employees, and other postretirement employee benefit plans. NW Natural also has a qualified defined contribution plan (Retirement K Savings Plan) for all eligible employees. The Pension Plan and Retirement K Savings Plan have plan assets, which are held in qualified trusts to fund retirement benefits.

Effective January 1, 2007 and 2010, the Pension Plan and postretirement benefits for non-union employees and union employees, respectively, were closed to new participants. Non-union and union employees hired or re-hired after December 31, 2006 and 2009, respectively, and employees of NW Natural subsidiaries are provided an enhanced Retirement K Savings Plan benefit.

The following table provides a reconciliation of the changes in NW Natural's benefit obligations and fair value of plan assets, as applicable, for NW Natural's pension and other postretirement benefit plans, excluding the Retirement K Savings Plan, and a summary of the funded status and amounts recognized in NW Holdings' and NW Natural's consolidated balance sheets as of December 31:

	Postretirement Benefit Plans			
	Pension Benefits		Other Benefits	
In thousands	2023	2022	2023	2022
Reconciliation of change in benefit obligation:				
Obligation at January 1	$ 413,413	$ 542,618	$ 19,880	$ 27,223
Service cost	3,922	5,933	105	193
Interest cost	21,019	14,593	1,067	724
Net actuarial gain (loss)	15,066	(122,168)	2,208	(6,234)
Benefits paid	(27,970)	(27,563)	(1,793)	(2,026)
Obligation at December 31	425,450	413,413	21,467	19,880
Reconciliation of change in plan assets:				
Fair value of plan assets at January 1	280,304	399,217	—	—
Actual return on plan assets	28,841	(93,703)	—	—
Employer contributions	2,269	2,353	1,793	2,026
Benefits paid	(27,970)	(27,563)	(1,793)	(2,026)
Fair value of plan assets at December 31	283,444	280,304	—	—
Funded status at December 31	$ (142,006)	$ (133,109)	$ (21,467)	$ (19,880)

At December 31, 2023, the net liability (benefit obligations less market value of plan assets) for the Pension Plan increased $7.9 million compared to 2022. The increase in the net pension liability is primarily due to the $11.0 million increase to the pension benefit obligation, partially offset by the $3.1 million increase in plan assets. The liability for non-qualified plans increased $1.0 million, and the liability for other postretirement benefits increased $1.6 million in 2023.

NW Natural's Pension Plan had a projected benefit obligation of $392.6 million and $381.6 million at December 31, 2023 and 2022, respectively, and fair values of plan assets of $283.4 million and $280.3 million, respectively. The plan had an accumulated benefit obligation of $363.5 million and $353.4 million at December 31, 2023 and 2022, respectively.

The following table presents amounts realized through regulatory assets or in other comprehensive loss (income) for the years ended December 31:

	Regulatory Assets						Other Comprehensive Loss (Income)		
	Pension Benefits			Other Postretirement Benefits			Pension Benefits		
In thousands	2023	2022	2021	2023	2022	2021	2023	2022	2021
Net actuarial (gain) loss	$ 10,318	$ 2,833	$ (32,258)	$ 2,208	$ (6,234)	$ (688)	$ 1,630	$ (5,706)	$ (812)
Amortization of:									
Prior service credit	—	—	—	—	333	468	—	—	—
Actuarial loss	—	(11,531)	(21,250)	—	(426)	(645)	(713)	(1,081)	(1,225)
Total	$ 10,318	$ (8,698)	$ (53,508)	$ 2,208	$ (6,327)	$ (865)	$ 917	$ (6,787)	$ (2,037)

The following table presents amounts recognized in regulatory assets and accumulated other comprehensive loss (AOCL) at December 31:

	Regulatory Assets				AOCL	
	Pension Benefits		Other Postretirement Benefits		Pension Benefits	
In thousands	2023	2022	2023	2022	2023	2022
Prior service credit	$ —	$ —	$ —	$ —	$ —	$ —
Net actuarial loss (gain)	112,558	102,240	1,382	(826)	9,634	8,717
Total	$ 112,558	$ 102,240	$ 1,382	$ (826)	$ 9,634	$ 8,717

The following table presents amounts recognized by NW Holdings and NW Natural in AOCL and the changes in AOCL related to NW Natural's non-qualified employee benefit plans:

	Year ended December 31,	
In thousands	2023	2022
Beginning balance	$ (6,414)	$ (11,404)
Amounts reclassified to AOCL	(1,676)	5,706
Amounts reclassified from AOCL:		
Amortization of actuarial losses	558	1,081
Total reclassifications before tax	(1,118)	6,787
Tax benefit (expense)	295	(1,797)
Total reclassifications for the period	(823)	4,990
Ending balance	$ (7,237)	$ (6,414)

In 2024, NW Natural will amortize $5.2 million in estimated costs from regulatory assets to net periodic benefit costs.

The assumed discount rates for NW Natural's Pension Plan and other postretirement benefit plans were determined independently based on the FTSE Above Median Curve (discount rate curve), which uses high quality corporate bonds rated AA- or higher by S&P or Aa3 or higher by Moody's. The discount rate curve was applied to match the estimated cash flows in each of the plans to reflect the timing and amount of expected future benefit payments for these plans.

The assumed expected long-term rate of return on plan assets for the Pension Plan was developed using a weighted-average of the expected returns for the target asset portfolio. In developing the expected long-term rate of return assumption, consideration was given to the historical performance of each asset class in which the plan's assets are invested and the target asset allocation for plan assets.

The investment strategy and policies for Pension Plan assets held in the retirement trust fund were approved by the NW Natural Retirement Committee, which is composed of senior management with the assistance of an outside investment consultant. The policies set forth the guidelines and objectives governing the investment of plan assets. Plan assets are invested for total return with appropriate consideration for liquidity, portfolio risk, and return expectations. All investments are expected to satisfy the prudent investments rule under the Employee Retirement Income Security Act of 1974. The approved asset classes may include cash and short-term investments, fixed income, common stock and convertible securities, absolute and real return strategies, and real estate.

Plan assets may be invested in separately managed accounts or in commingled or mutual funds. Investment re-balancing takes place periodically as needed, or when significant cash flows occur, in order to maintain the allocation of assets

within the stated target ranges. The retirement trust fund for the Pension Plan is not currently invested in NW Holdings or NW Natural securities.

The following table presents the Pension Plan asset target allocation at December 31, 2023:

Asset Category	Target Allocation
Long government/credit	20 %
U.S. large cap equity	18
Non-U.S. equity	18
Absolute return strategies	12
U.S. small/mid cap equity	10
Real estate funds	7
High yield bonds	5
Emerging markets equity	5
Emerging market debt	5

Non-qualified supplemental defined benefit plan obligations were $32.8 million and $31.8 million at December 31, 2023 and 2022, respectively. These plans are not subject to regulatory deferral, and the changes in actuarial gains and losses, prior service costs, and transition assets or obligations are recognized in AOCL, net of tax until they are amortized as a component of net periodic benefit cost. These are unfunded, non-qualified plans with no plan assets; however, a significant portion of the obligations is indirectly funded with company and trust-owned life insurance and other assets.

Other postretirement benefit plans are unfunded plans but are subject to regulatory deferral. The actuarial gains and losses, prior service costs, and transition assets or obligations for these plans are recognized as a regulatory asset.

Net periodic benefit costs consist of service costs, interest costs, the expected returns on plan assets, and the amortization of gains and losses and prior service costs. The gains and losses are the sum of the actuarial and asset gains and losses throughout the year and are amortized over the average remaining service period of active participants. The asset gains and losses are based in part on a market-related valuation of assets. The market-related valuation reflects differences between expected returns and actual investment returns with the differences recognized over a two-year period from the year in which they occur, thereby reducing year-to-year net periodic benefit cost volatility.

The service cost component of net periodic benefit cost for NW Natural pension and other postretirement benefit plans is recognized in operations and maintenance expense in the consolidated statements of comprehensive income. The other non-service cost components are recognized in other income (expense), net in the consolidated statements of comprehensive income. The following table provides the components of net periodic benefit cost for NW Natural's pension and other postretirement benefit plans for the years ended December 31:

	Pension Benefits			Other Postretirement Benefits		
In thousands	2023	2022	2021	2023	2022	2021
Service cost	$ 3,922	$ 5,933	$ 6,981	$ 105	$ 193	$ 238
Interest cost	21,018	14,593	13,448	1,067	724	684
Expected return on plan assets	(25,723)	(25,698)	(24,232)	—	—	—
Amortization of prior service credit	—	—	—	—	(333)	(468)
Amortization of net actuarial loss	713	12,612	22,475	—	426	645
Net periodic (benefit) cost	(70)	7,440	18,672	1,172	1,010	1,099
Amount allocated to construction	(1,684)	(2,621)	(3,015)	(36)	(76)	(93)
Net periodic (benefit) cost charged to expense	(1,754)	4,819	15,657	1,136	934	1,006
Amortization of regulatory balancing account	7,131	7,131	7,131	—	—	—
Net amount charged to expense	$ 5,377	$ 11,950	$ 22,788	$ 1,136	$ 934	$ 1,006

Net periodic benefit costs are reduced by amounts capitalized to NGD plant. In addition, a certain amount of net periodic benefit costs were recorded to the regulatory balancing account, representing net periodic pension expense for the Pension Plan above the amount set in rates, as approved by the OPUC, from 2011 through October 31, 2018. Total amortization of the regulatory balancing account of $7.1 million was recognized in each of the years ended December 31, 2023 and 2022, of which $2.6 million was charged to operations and maintenance expense and $4.5 million was charged to other income (expense).

The following table provides the assumptions used in measuring periodic benefit costs and benefit obligations for the years ended December 31:

	Pension Benefits			Other Postretirement Benefits		
	2023	2022	2021	2023	2022	2021
Assumptions for net periodic benefit cost:						
Weighted-average discount rate	5.14 %	2.71 %	2.40 %	5.19 %	2.72 %	2.34 %
Rate of increase in compensation	4.00-5.00%	3.50 %	3.50 %	n/a	n/a	n/a
Expected long-term rate of return	7.50 %	7.00 %	7.25 %	n/a	n/a	n/a
Assumptions for year-end funded status:						
Weighted-average discount rate	4.98 %	5.18 %	2.71 %	4.98 %	5.19 %	2.72 %
Rate of increase in compensation[(1)]	4.00-4.73%	4.00-6.00%	3.50 %	n/a	n/a	n/a
Expected long-term rate of return	7.50 %	7.50 %	7.00 %	n/a	n/a	n/a

[(1)] Rate assumption ranges from 3.2% to 4.6% in 2024, 4.7% to 5.8% in 2025 and 4.0% to 4.7% thereafter.

The assumed annual increase in health care cost trend rates used in measuring other postretirement benefits as of December 31, 2023 was 6.50%. These trend rates apply to both medical and prescription drugs. Medical costs and prescription drugs are assumed to decrease gradually each year to a rate of 4.00% by 2029.

Assumed health care cost trend rates can have a significant effect on the amounts reported for the health care plans; however, other postretirement benefit plans have a cap on the amount of costs reimbursable by NW Natural.
Mortality assumptions are reviewed annually and are updated for material changes as necessary. In 2023, mortality rate assumptions remained consistent with 2022, using Pri-2012 mortality tables using scale MP-2021.

The following table provides information regarding employer contributions and benefit payments for NW Natural's Pension Plan, non-qualified pension plans, and other postretirement benefit plans for the years ended December 31, and estimated future contributions and payments:

In thousands	Pension Benefits	Other Benefits
Employer Contributions:		
2022	$ 2,353	$ 2,026
2023	2,269	1,793
2024 (estimated)	22,850	3,233
Benefit Payments:		
2021	$ 25,371	$ 2,050
2022	27,563	2,026
2023	27,970	1,793
Estimated Future Benefit Payments:		
2024	$ 27,288	$ 3,233
2025	36,313	1,652
2026	27,979	1,620
2027	28,300	1,608
2028	28,604	1,583
2029-2033	145,652	7,440

Employer Contributions to Company-Sponsored Defined Benefit Pension Plan
NW Natural makes contributions to its Pension Plan based on actuarial assumptions and estimates, tax regulations, and funding requirements under federal law. The American Rescue Plan, which was signed into law on March 11, 2021, includes a provision for pension relief that extends the amortization period for required contributions from 7 to 15 years and provides for the stabilization of interest rates used to calculate future required contributions. As a result, NW Natural made no cash contributions to its Pension Plan for 2023.

The Pension Plan was underfunded by $109.2 million at December 31, 2023. During 2024, NW Natural expects to make cash contributions of approximately $20.6 million to the Pension Plan.

Multiemployer Pension Plan

In addition to the NW Natural-sponsored Pension Plan presented above, prior to 2014 NW Natural contributed to a multiemployer pension plan for its NGD union employees known as the Western States Office and Professional Employees International Union Pension Fund (Western States Plan). That plan's employer identification number is 94-6076144. Effective December 22, 2013, NW Natural withdrew from the plan, which was a noncash transaction. Vested participants will receive all benefits accrued

through the date of withdrawal. As the plan was underfunded at the time of withdrawal, NW Natural was assessed a withdrawal liability of $8.3 million, plus interest, which requires NW Natural to pay $0.6 million each year to the plan for 20 years beginning in July 2014. The cost of the withdrawal liability was deferred to a regulatory account on the balance sheet.

Payments were $0.6 million for 2023, and as of December 31, 2023, the liability balance was $5.0 million. For 2022 and 2021, contributions to the plan were $0.6 million and $0.4 million, respectively, which was approximately 1% to 4% of the total contributions to the plan by all employer participants in those years.

Defined Contribution Plan

NW Natural's Retirement K Savings Plan is a qualified defined contribution plan under Internal Revenue Code Sections 401(a) and 401(k). NW Natural contributions totaled $10.4 million, $9.6 million, and $8.8 million for 2023, 2022, and 2021, respectively.

Deferred Compensation Plans

NW Natural's supplemental deferred compensation plans for eligible officers and senior managers are non-qualified plans. These plans are designed to enhance the retirement savings of employees and to assist them in strengthening their financial security by providing an incentive to save and invest regularly.

Fair Value

Below is a description of the valuation methodologies used for assets measured at fair value. In cases where NW Natural's Pension Plan is invested through a collective trust fund or mutual fund, the fund's market value is utilized. Market values for investments directly owned are also utilized.

U.S. EQUITY. These are non-published net asset value (NAV) assets. The non-published NAV assets consist of commingled trusts where NAV is not published but the investment can be readily disposed of at NAV or market value. The underlying investments in this asset class includes investments primarily in U.S. common stocks.

INTERNATIONAL/GLOBAL EQUITY. These are Level 1 and non-published NAV assets. The Level 1 asset is a mutual fund, and the non-published NAV assets consist of commingled trusts where the NAV/unit price is not published, but the investment can be readily disposed of at the NAV/unit price. The mutual fund has a readily determinable fair value, including a published NAV, and the commingled trusts are valued at unit price. This asset class includes investments primarily in foreign equity common stocks.

LIABILITY HEDGING. These are non-published NAV assets. The non-published NAV assets consist of commingled trusts where NAV is not published but the investment can be readily disposed of at NAV or market value. The underlying investments in this asset class include long duration fixed income investments primarily in U.S. treasuries, U.S. government agencies, municipal securities, mortgage-backed securities, asset-backed securities, as well as U.S. and international investment-grade corporate bonds.

OPPORTUNISTIC. These are non-published NAV assets. The non-published NAV assets consist of commingled trusts where NAV is not published but the investment can be readily disposed of at NAV or market value. The underlying investments in this asset class include real estate investment trust equities, high yield bonds, floating rate debt, emerging market debt and a commodity index pool.

CASH AND CASH EQUIVALENTS. These are non-published NAV assets. The non-published NAV assets represent mutual funds without published NAV's but the investment can be readily disposed of at the NAV. The mutual funds are valued at the NAV of the shares held by the plan at the valuation date.

The preceding valuation methods may produce a fair value calculation that is not indicative of net realizable value or reflective of future fair values. Although we believe these valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain investments could result in a different fair value measurement at the reporting date.

Commingled trust investments are subject to a redemption notice period of five business days. There were no unfunded commitments for Plan investments as of December 31, 2023 and 2022.

Investment securities are exposed to various financial risks including interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of NW Natural's investment securities will occur in the near term and such changes could materially affect NW Natural's investment account balances and the amounts reported as plan assets available for benefit payments.

The following tables present the fair value of NW Natural's Pension Plan assets, including outstanding receivables and liabilities, of NW Natural's retirement trust fund:

In thousands	December 31, 2023				
Investments	Level 1	Level 2	Level 3	Non-Published NAV[1]	Total
US equity	$ —	$ —	$ —	$ 73,910	$ 73,910
International / Global equity	27,730	—	—	63,767	91,497
Liability hedging	—	—	—	98,408	98,408
Opportunistic	—	—	—	17,148	17,148
Cash and cash equivalents	—	—	—	2,480	2,480
Total investments	$ 27,730	$ —	$ —	$ 255,713	$ 283,443

	December 31, 2022				
Investments	Level 1	Level 2	Level 3	Non-Published NAV[1]	Total
US equity	$ —	$ —	$ —	$ 68,729	$ 68,729
International / Global equity	26,677	—	—	63,827	90,504
Liability hedging	—	—	—	94,823	94,823
Opportunistic	—	—	—	23,903	23,903
Cash and cash equivalents	—	—	—	2,345	2,345
Total investments	$ 26,677	$ —	$ —	$ 253,627	$ 280,304

	December 31,	
	2023	2022
Receivables:		
Accrued interest and dividend income	$ 10,698	$ 7,703
Total receivables	10,698	7,703
Liabilities:		
Due to broker for securities purchased	(10,698)	(7,701)
Total investment in retirement trust	$ 283,443	$ 280,306

[1] The fair value for these investments is determined using Net Asset Value per share (NAV) as of December 31, as a practical expedient, and therefore they are not classified within the fair value hierarchy. These investments primarily consist of institutional investment products, for which the NAV is generally not publicly available.

11. INCOME TAX

The following table provides a reconciliation between income taxes calculated at the statutory federal tax rate and the provision for income taxes reflected in the NW Holdings and NW Natural statements of comprehensive income or loss for December 31:

	NW Holdings			NW Natural		
Dollars in thousands	2023	2022	2021	2023	2022	2021
Income taxes at federal statutory rate	$ 26,508	$ 24,241	$ 22,275	$ 29,486	$ 25,746	$ 22,996
Increase (decrease):						
State income tax, net of federal	10,875	10,139	9,962	11,510	10,504	10,150
Differences required to be flowed-through by regulatory commissions	(3,976)	(4,748)	(4,655)	(3,972)	(4,746)	(4,738)
Other, net	(1,045)	(502)	(176)	(1,352)	(468)	(75)
Total provision for income taxes	$ 32,362	$ 29,130	$ 27,406	$ 35,672	$ 31,036	$ 28,333
Effective tax rate	25.6%	25.2%	25.8%	25.4%	25.3%	25.9%

The NW Holdings and NW Natural effective income tax rates for 2023 compared to 2022 changed primarily as a result of pre-tax income.

The NW Holdings and NW Natural effective income tax rates for 2022 compared to 2021 changed primarily due to lower income tax amortization in 2022 of the 2020 Oregon Corporate Activity Tax (CAT), which was subject to regulatory deferral when it became effective on January 1, 2020 and then amortized in income tax expense as recovery began in late 2020, 2021, and 2022.

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The provision for current and deferred income taxes consists of the following at December 31:

	NW Holdings			NW Natural		
In thousands	2023	2022	2021	2023	2022	2021
Current						
Federal	$ 13,496	$ 5,172	$ 6,508	$ 20,512	$ 7,442	$ 7,570
State	9,901	6,551	6,281	12,304	7,307	7,540
Total current income taxes	23,397	11,723	12,789	32,816	14,749	15,110
Deferred						
Federal	5,100	11,124	8,289	591	10,298	7,915
State	3,865	6,283	6,328	2,265	5,989	5,308
Total deferred income taxes	8,965	17,407	14,617	2,856	16,287	13,223
Income tax provision	$ 32,362	$ 29,130	$ 27,406	$ 35,672	$ 31,036	$ 28,333

The following table summarizes the tax effect of significant items comprising NW Holdings and NW Natural's deferred income tax balances recorded at December 31:

	NW Holdings		NW Natural	
In thousands	2023	2022	2023	2022
Deferred tax liabilities:				
Plant and property	$ 350,802	$ 326,326	$ 340,042	$ 320,121
Leases receivable	35,635	36,873	35,635	36,873
Pension and postretirement obligations	24,830	22,973	24,830	22,973
Income tax regulatory asset	12,939	13,152	12,939	13,152
Lease right of use assets	21,002	21,272	20,849	21,084
Other Intangibles	528	—	—	—
Other	4,432	17,050	4,620	17,314
Total deferred income tax liabilities	450,168	437,646	438,915	431,517
Deferred income tax assets:				
Income tax regulatory liability	46,372	48,270	46,120	48,018
Lease liabilities	21,047	21,306	20,884	21,102
Other intangible assets	—	1,947	—	—
Net operating losses and credits carried forward	76	101	44	44
Total deferred income tax assets	67,495	71,624	67,048	69,164
Total net deferred income tax liabilities	$ 382,673	$ 366,022	$ 371,867	$ 362,353

At December 31, 2023 and 2022, regulatory income tax assets of $8.0 million and $10.2 million, respectively, were recorded by NW Natural, a portion of which is recorded in current assets. These regulatory income tax assets primarily represent future rate recovery of deferred tax liabilities, resulting from differences in NGD plant financial statement and tax bases and NGD plant removal costs, which were previously flowed through for rate making purposes and to take into account the additional future taxes, which will be generated by that recovery. These deferred tax liabilities, and the associated regulatory income tax assets, are currently being recovered through customer rates. At December 31, 2023 and 2022, regulatory income tax assets of $4.9 million and $2.9 million, respectively, were recorded by NW Natural, representing future recovery of deferred tax liabilities resulting from the equity portion of AFUDC.

At December 31, 2023 and 2022, deferred tax assets of $46.1 million and $48.0 million, respectively, were recorded by NW Natural representing the future income tax benefit associated with the excess deferred income tax regulatory liability recorded as a result of the lower federal corporate income tax rate provided for by the TCJA. At December 31, 2023 and 2022, regulatory liability balances representing the benefit of the change in deferred taxes as a result of the TCJA of $174.2 million and $181.4 million, respectively, were recorded by NW Natural.

NW Holdings and NW Natural assess the available positive and negative evidence to estimate if sufficient taxable income will be generated to utilize their respective existing deferred tax assets. Based upon this assessment, NW Holdings and NW Natural determined that it is more likely than not that all of their respective deferred tax assets recorded as of December 31, 2023 will be realized.

The Company estimates it has net operating loss (NOL) carryforwards of $29 thousand for federal taxes and $29 thousand for state taxes at December 31, 2023. The federal NOLs do not expire and we anticipate fully utilizing the state NOL carryforward balances before they begin to expire in 2040. California alternative minimum tax (AMT) credits of $56 thousand are also available. The AMT credits do not expire.

Uncertain tax positions are accounted for in accordance with accounting standards that require an assessment of the anticipated settlement outcome of material uncertain tax positions taken in a prior year, or planned to be taken in the current year. Until such positions are sustained, the uncertain tax benefits resulting from such positions would not be recognized. No reserves for uncertain tax positions were recorded as of December 31, 2023, 2022, or 2021.

The federal income tax returns for tax years 2019 and earlier are closed by statute. The IRS Compliance Assurance Process (CAP) examination of the 2020 and 2021 tax years have been completed. There were no material changes to these returns as filed. The 2022 and 2023 tax years are currently under IRS CAP examination. The 2024 CAP application has been filed. Under the CAP program, NW Holdings and NW Natural work with the IRS to identify and resolve material tax matters before the tax return is filed each year.

As of December 31, 2023, income tax years 2019 through 2022 remain open for examination by the States of California and Texas. Income tax years 2020 through 2022 are open for examination by the States of Arizona, Idaho, Nebraska, and Oregon.

12. PROPERTY, PLANT, AND EQUIPMENT

The following table sets forth the major classifications of property, plant, and equipment and accumulated depreciation of continuing operations at December 31:

In thousands	2023	2022
NW Natural:		
NGD plant in service	$ 4,206,455	$ 3,992,676
NGD construction work in progress	105,166	78,897
Less: Accumulated depreciation	1,159,367	1,115,690
NGD plant, net	3,152,254	2,955,883
Other plant in service	71,175	70,368
Other construction work in progress	10,963	6,606
Less: Accumulated depreciation	22,595	21,541
Other plant, net	59,543	55,433
Total property, plant, and equipment	$ 3,211,797	$ 3,011,316
Other (NW Holdings):		
Other plant in service	$ 147,040	$ 92,979
Other construction work in progress	15,810	20,040
Less: Accumulated depreciation	16,593	9,935
Other plant, net	146,257	103,084
NW Holdings:		
Total property, plant, and equipment	$ 3,358,054	$ 3,114,400
NW Natural:		
Capital expenditures in accrued liabilities	$ 24,168	$ 24,584
NW Holdings:		
Capital expenditures in accrued liabilities	$ 27,879	$ 25,318

Accumulated depreciation does not include the accumulated provision for asset removal costs of $496.2 million and $467.7 million at December 31, 2023 and 2022, respectively. These accrued asset removal costs are reflected on the balance sheet as regulatory liabilities. See Note 2.

NW Holdings
Other plant balances include long-lived assets associated with water and wastewater operations and non-regulated activities not held by NW Natural or its subsidiaries.

NW Natural
Other plant balances include non-utility gas storage assets at the Mist facility and other long-lived assets not related to NGD.
The weighted average depreciation rate for NGD assets was 3.0% in 2023, 2022, and 2021. The weighted average depreciation rate for assets not related to NGD was 1.7% in 2023 and 1.8% in 2022 and 2021.

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13. INVESTMENTS

Investments include gas reserves, financial investments in life insurance policies, and equity method investments. The following table summarizes other investments at December 31:

	NW Holdings		NW Natural	
In thousands	2023	2022	2023	2022
Investments in life insurance policies	$ 45,713	$ 49,358	$ 45,713	$ 49,358
Investments in gas reserves, non-current	20,893	22,970	20,893	22,970
Investments in unconsolidated affiliates	36,345	23,376	19,539	7,782
Total other investments	$ 102,951	$ 95,704	$ 86,145	$ 80,110

Investment in Life Insurance Policies

NW Natural has invested in key person life insurance contracts to provide an indirect funding vehicle for certain long-term employee and director benefit plan liabilities. The amount in the above table is reported at cash surrender value, net of policy loans.

NW Natural Gas Reserves

NW Natural has invested $188 million through the gas reserves program in the Jonah Field located in Wyoming as of December 31, 2023. Gas reserves are stated at cost, net of regulatory amortization, with the associated deferred tax benefits of $4.0 million and $5.2 million, which are recorded as liabilities in the December 31, 2023 and 2022 consolidated balance sheets, respectively. NW Natural's investment is included in NW Holdings' and NW Natural's consolidated balance sheets under other current assets and other investments (non-current portion) with the maximum loss exposure limited to the investment balance. The amount of gas reserves included in other current assets was $2.3 million and $3.4 million as of December 31, 2023 and 2022, respectively. The investment in gas reserves provides long-term price protection and acted to hedge the cost of gas for approximately 3% and 3% of NGD gas supplies for the years ended December 31, 2023 and 2022, respectively.

Investments in Unconsolidated Affiliates

In December 2021, NWN Water purchased a 37.3% ownership stake in Avion Water Company, Inc. (Avion Water), an investor-owned water utility for $14.5 million. In July 2022 and June 2023, NWN Water increased its ownership stake in Avion Water to 43.1% for an additional $1.0 million in each period. In January 2024, NWN Water increased its ownership stake in Avion Water to 45.6% for an additional $1.0 million. Avion Water operates in Bend, Oregon and the surrounding communities, serving approximately 15,000 customer connections and employing 35 people. The carrying value of the equity method investment is $8.6 million higher than the underlying equity in the net assets of the investee at December 31, 2023 due to equity method goodwill. Equity in earnings (loss) of Avion Water is included in other income (expense), net.

In 2020, NW Natural began a partnership with BioCarbN to invest in up to four separate renewable natural gas (RNG) development projects that are designed to access biogas derived from water treatment at Tyson Foods' processing plants, subject to approval by all parties. During the construction phase of the projects, NW Natural determined it is the primary beneficiary and fully consolidates each entity. In January 2022, commissioning of the first project, Lexington Renewable Energy LLC (Lexington), was completed. NW Natural determined it was no longer the primary beneficiary, deconsolidated the variable interest entity and recorded the investment in Lexington as an equity method investment. As of December 31, 2023, NW Natural had an investment balance in Lexington of $7.6 million. NW Natural's share in the earnings (loss) of Lexington is included in cost of gas.

In April 2023, commissioning of the second project, Dakota City Renewable Energy LLC (Dakota City), was completed. NW Natural determined it was no longer the primary beneficiary of Dakota City once the project was commissioned. The investment in the variable interest entity was deconsolidated and recorded as an equity method investment. NW Natural accounts for its interest in Dakota City using the equity method of accounting because NW Natural does not control but has the ability to exercise significant influence over Dakota City's operations after commissioning. There was no gain or loss recognized upon deconsolidation. NW Natural determined the fair value of the investment approximated the carrying value which was primarily comprised of cash and property, plant and equipment. As of December 31, 2023, NW Natural had an investment balance in Dakota City of $11.9 million. NW Natural's share in the earnings (loss) of Dakota City is included in cost of gas.

In January 2024, NW Natural replaced BioCarbN as manager of the Lexington and Dakota City projects.

14. BUSINESS COMBINATIONS

2023 Business Combinations

During the year ended December 31, 2023, NWN Water and its subsidiaries acquired the assets of five businesses qualifying as business combinations. The aggregate fair value of the preliminary total consideration transferred for these acquisitions was $22.8 million, most of which was preliminarily allocated to property, plant, and equipment, and goodwill. These transactions align with NW Holdings' water and wastewater sector strategy as it continues to expand its water and wastewater service territories and included:

- Pedersen Family, LLC in Washington
- King Water Corporation in Washington
- Rose Valley Water Company in Arizona
- Hiland Water in Oregon
- Truxton and Cerbat in Arizona

Intangible Assets

In connection with the acquisition of King Water Corporation, NWN Water recorded long-term customer relationship intangible assets totaling $2.6 million, which will be amortized over 24 years. There was no amortization expense recognized in 2023. Projected amortization expense at NW Holdings for customer relationship intangible assets for each of the next five years is $0.1 million in each period. The amortization will change in future periods if other intangible assets are acquired, impairments are recognized or the preliminary valuations as part of our purchase price allocation is refined.

2022 Business Combinations

Far West Water & Sewer, Inc.

On October 5, 2022, NWN Water completed the acquisition of the water and wastewater utilities of Far West Water & Sewer, Inc. (Far West), which has a combined approximately 25,000 connections in Yuma, Arizona. The acquisition-date fair value of the total consideration transferred, after closing adjustments, was approximately $97.0 million, of which $88.4 million was cash consideration transferred at closing, $8.1 million was contingent consideration, and $0.5 million was deferred consideration.

The contingent consideration is an earnout payment in an amount equal to the product of (i) the amount, if any, by which the average annual System Operating Revenue for the 2026, 2027, and 2028 years exceeds $13.0 million (ii) multiplied by 4 but shall not exceed $12.0 million. As of the acquisition date, the contingent consideration had a fair value of $8.1 million and was included in other non-current liabilities. The fair value as of the acquisition date was determined using a scenario-based technique using management's best estimate of forecast revenue for the years 2026, 2027, and 2028 discounted to present value. The inputs to determine the fair value of the contingent consideration include estimated future revenue and a risk-adjusted discount rate. The fair value measurement is based on significant inputs that are not observable in the market and thus represents a fair value measurement categorized within Level 3 of the fair value hierarchy per ASC Topic 820.

The Far West acquisition met the criteria of a business combination, and as such an allocation of the consideration to the acquired net assets based on their estimated fair value as of the acquisition date was performed. In accordance with U.S. GAAP, the fair value determination involves management judgment in determining the significant estimates and assumptions used and was made using existing regulatory conditions for net assets associated with Far West. The acquisition costs were expensed as incurred.

Goodwill of $69.9 million was recognized from this acquisition. The goodwill recognized is attributable to Far West's regulated water utility service territory, experienced workforce, and the strategic benefits for both the water utility and wastewater services expected from growth in its service territory. No intangible assets aside from goodwill were recognized. The amount of goodwill that is expected to be deductible for income tax purposes is approximately $63.3 million.

The purchase price for the acquisition has been allocated to the net assets acquired as of the acquisition date and is as follows:

In thousands	December 31, 2023
Current assets	$ 1,569
Property, plant and equipment	25,974
Goodwill	69,890
Non-current assets	1,077
Current liabilities	(991)
Non-current liabilities	(9,115)
Total net assets acquired	$ 88,404

The amount of Far West revenues included in NW Holdings' consolidated statements of comprehensive income is $2.9 million for the year ended December 31, 2022. Earnings from Far West activities for the year ended December 31, 2022 were not material to the results of NW Holdings. Far West is referred to as Foothills Utilities following the closure of the acquisition.

Other 2022 Business Combinations
During the year ended December 31, 2022, NWN Water and its subsidiaries acquired the assets of six additional businesses qualifying as business combinations. The aggregate fair value of the consideration transferred for these acquisitions was $8.7 million, most of which was allocated to property, plant and equipment and goodwill. These transactions align with NW Holdings' water and wastewater sector strategy as it continues to expand its water and wastewater service territories and included:

- Belle Oaks Water and Sewer Co., Inc in Texas
- Northwest Water Services, LLC in Washington
- Aquarius Utilities, LLC in Washington
- Valiant Idaho, LLC (The Idaho Club - Sewer) in Idaho
- Caney Creek in Texas
- Water Necessities, Inc. and Rural Water Co. in Texas

2021 Business Combinations
During the year ended December 31, 2021, NWN Water and its subsidiaries completed four acquisitions qualifying as business combinations. The aggregate fair value of the consideration transferred for these acquisitions were not material and are not significant to NW Holdings' results of operations.

Goodwill
NW Holdings allocates goodwill to reporting units based on the expected benefit from the business combination. We perform an annual impairment assessment of goodwill at the reporting unit level, or more frequently if events and circumstances indicate that goodwill might be impaired. An impairment loss is recognized if the carrying value of a reporting unit's goodwill exceeds its fair value.

As a result of all acquisitions completed, total goodwill was $163.3 million as of December 31, 2023 and $149.3 million as of December 31, 2022. The increase in the goodwill balance was primarily due to additions associated with our acquisitions in the water and wastewater sector. All of our goodwill is related to water and wastewater acquisitions and is included in the other category for segment reporting purposes. The annual impairment assessment of goodwill occurs in the fourth quarter of each year. There have been no impairments recognized to date.

15. DERIVATIVE INSTRUMENTS

NW Natural
NW Natural enters into financial derivative contracts to hedge a portion of the NGD segment's natural gas sales requirements. These contracts include swaps, options, and option combinations. These derivative financial instruments are primarily used to manage commodity price variability. A small portion of NW Natural's derivative hedging strategy involves foreign currency forward contracts.

NW Natural enters into these financial derivatives, up to prescribed limits, primarily to hedge price variability related to term physical gas supply contracts. The foreign currency forward contracts are used to hedge the fluctuation in foreign currency exchange rates for pipeline demand charges paid in Canadian dollars.

In the normal course of business, NW Natural also enters into indexed-price physical forward natural gas commodity purchase contracts and options to meet the requirements of NGD customers. These contracts qualify for regulatory deferral accounting treatment.

Notional Amounts
The following table presents the absolute notional amounts related to open positions on NW Natural derivative instruments:

	At December 31,	
In thousands	2023	2022
Natural gas (in therms):		
Financial	948,425	852,435
Physical	571,610	463,254
Foreign exchange	$ 11,926	$ 7,617

Purchased Gas Adjustment (PGA)
Rates and hedging approaches may vary between states due to different rate structures and mechanisms. Under the PGA mechanism in Oregon, derivatives entered into by NW Natural for the procurement or hedging of natural gas for future gas years generally receive regulatory deferral accounting treatment. In general, commodity hedging for the current gas year is completed prior to the start of the gas year, and hedge prices are reflected in the weighted-average cost of gas in the PGA filing. Hedge contracts entered into after the start of the PGA period are subject to the PGA incentive sharing mechanism in Oregon. Under the PGA

mechanism in Washington, NW Natural incorporates a risk-responsive hedging strategy, and receives regulatory deferral accounting treatment for its Washington gas supplies.

NW Natural entered the 2022-23 gas year with total forecasted sales volumes hedged at approximately 84%, including 67% in financial hedges and 17% in physical gas supplies. The total hedged was approximately 85% in Oregon and 79% in Washington. NW Natural entered the 2023-24 gas year with total forecasted sales volume hedged at approximately 82%, including 66% in financial hedges and 16% in physical gas supplies. The total hedged was approximately 85% in Oregon and 55% in Washington.

Unrealized and Realized Gain/Loss

The following table reflects the income statement presentation for the unrealized gains and losses from NW Natural's derivative instruments:

	December 31, 2023		December 31, 2022	
In thousands	Natural gas commodity	Foreign exchange	Natural gas commodity	Foreign exchange
Benefit (expense) to cost of gas	$ (131,833)	$ 168	$ 119,935	$ (165)
Operating revenues (expense)	—	—	—	—
Amounts deferred to regulatory accounts on balance sheet	131,833	(168)	(119,935)	165
Total gain (loss) in pre-tax earnings	$ —	$ —	$ —	$ —

Unrealized Gain/Loss

Outstanding derivative instruments related to regulated NGD operations are deferred in accordance with regulatory accounting standards. The cost of foreign currency forward and natural gas derivative contracts are recognized immediately in the cost of gas; however, costs above or below the amount embedded in the current year PGA are subject to a regulatory deferral tariff and therefore, are recorded as a regulatory asset or liability.

Realized Gain/Loss

NW Natural realized a net gain of $125.5 million and $107.8 million for the years ended December 31, 2023 and 2022, respectively, from the settlement of natural gas financial derivative contracts. Realized gains and losses offset the higher or lower cost of gas purchased, resulting in no incremental amounts to collect or refund to customers.

Credit Risk Management of Financial Derivatives Instruments

No collateral was posted with or by NW Natural counterparties as of December 31, 2023 or 2022. NW Natural attempts to minimize the potential exposure to collateral calls by diversifying counterparties and using credit limits to manage liquidity risk. Counterparties generally allow a certain credit limit threshold before requiring NW Natural to post collateral against unrealized loss positions. Given NW Natural's credit ratings, counterparty credit limits and portfolio diversification, it was not subject to collateral calls in 2023 or 2022. The collateral call exposure is set forth under credit support agreements, which generally contain credit limits. NW Natural could also be subject to collateral call exposure where it has agreed to provide adequate assurance, which is not specific as to the amount of credit limit allowed, but could potentially require additional collateral posting by NW Natural in the event of a material adverse change.

NW Natural's financial derivative instruments are subject to master netting arrangements; however, they are presented on a gross basis in the consolidated balance sheets. NW Natural and its counterparties have the ability to set-off obligations to each other under specified circumstances. Such circumstances may include a defaulting party, a credit change due to a merger affecting either party, or any other termination event.

If netted by counterparty, NW Natural's physical and financial derivative position would result in an asset of $9.0 million and a liability of $124.2 million as of December 31, 2023, and an asset of $153.3 million and a liability of $3.6 million as of December 31, 2022.

NW Natural is exposed to derivative credit and liquidity risk primarily through securing fixed-price natural gas commodity swaps and interest rate swaps with financial counterparties. NW Natural utilizes master netting arrangements with International Swaps and Derivatives Association (ISDA) contracts to minimize these risks including ISDA Credit Support Agreements with counterparties based on their credit ratings. Additionally, NW Natural uses counterparty, industry, sector and country diversification to minimize credit risk. In certain cases, NW Natural may require counterparties to post collateral, guarantees, or letters of credit to maintain its minimum credit requirement standards or for liquidity management purposes.

NW Natural's financial derivatives policy requires counterparties to have an investment-grade credit rating at the time the derivative instrument is entered into, and specifies limits on the contract amount and duration based on each counterparty's credit rating. NW Natural does not speculate in derivatives. Derivatives are used to manage NW Natural's market risk and we hedge exposure above risk tolerance limits. It is required that increases in market risk created by the use of derivatives is offset by the exposures they modify.

We actively monitor NW Natural's derivative credit exposure and place counterparties on hold for trading purposes or require other forms of credit assurance, such as letters of credit, cash collateral, or guarantees as circumstances warrant. The ongoing

assessment of counterparty credit risk includes consideration of credit ratings, credit default swap spreads, bond market credit spreads, financial conditions, government actions, and market news. AMonte Carlo simulation model is used to estimate the

change in credit and liquidity risk from the volatility of natural gas prices. The results of the model are used to establish trading limits. NW Natural's outstanding financial derivatives at December 31, 2023 mature by November 1, 2026.

We could become materially exposed to credit risk with one or more of our counterparties if natural gas prices experience a significant increase. If a counterparty were to become insolvent or fail to perform on its obligations, we could suffer a material loss; however, we would expect such a loss to be eligible for regulatory deferral and rate recovery, subject to a prudence review. All of our existing counterparties currently have investment-grade credit ratings.

Fair Value

In accordance with fair value accounting, NW Natural includes non-performance risk in calculating fair value adjustments. This includes a credit risk adjustment based on the credit spreads of NW Natural counterparties when in an unrealized gain position, or on NW Natural's own credit spread when it is in an unrealized loss position. The inputs in our valuation models include natural gas futures, volatility, credit default swap spreads, and interest rates. Additionally, the assessment of non-performance risk is generally derived from the credit default swap market and from bond market credit spreads. The impact of the credit risk adjustments for all financial derivatives outstanding to the fair value calculation was $0.7 million at December 31, 2023. As of December 31, 2023 and 2022, the net fair value was a liability of $115.2 million and an asset of $149.7 million, respectively, using significant other observable, or Level 2, inputs. No Level 3 inputs were used in our derivative valuations during the years ended December 31, 2023 and 2022.

NW Holdings

NW Holdings and NWN Water entered into interest rate swap agreements with major financial institutions that effectively converted variable-rate debt to a fixed rate. Interest payments made between the effective date and expiration date are hedged by the swap agreements. The notional amount, effective date, expiration date and benchmark rate of the swap agreements are shown in the table below:

In millions	Notional Amount	Effective Date	Expiration Date	Fixed Rate
NW Holdings	$ 100.0	1/17/2023	3/15/2024	4.7 %
NWN Water	$ 55.0	1/19/2023	6/10/2026	3.8 %

Unrealized gains and losses related to these interest rate swap agreements are recorded in AOCI on the consolidated balance sheet and totaled $0.2 million and $0.1 million, net of tax, as of December 31, 2023 and 2022, respectively. There were no amounts reclassified from AOCI to net income during the year ended December 31, 2023 and 2022.

16. COMMITMENTS AND CONTINGENCIES

Gas Purchase Agreements

NW Natural enters into short-term and long-term physical baseload gas purchase agreements. The majority of our gas purchase agreements include year-round, winter-only, summer-only, and monthly purchases.

Pipeline Capacity Purchase and Release Commitments

NW Natural has signed agreements providing for the reservation of firm pipeline capacity under which it is required to make monthly payments for contracted capacity. The pricing component of the monthly payment is established, subject to change, by U.S. or Canadian regulatory bodies, or is established directly with private counterparties, as applicable. In addition, NW Natural has entered into long-term agreements to release firm pipeline capacity. The parties that we release this capacity to make payments directly to the related pipelines.

The aggregate amounts of these agreements at NW Natural were as follows at December 31, 2023:

In thousands	Gas Purchase Agreements[1]	Pipeline Capacity Purchase Agreements	Pipeline Capacity Release Agreements
2024	$ 303,682	$ 78,907	$ 7,543
2025	34,457	81,114	3,455
2026	34,586	66,972	—
2027	33,830	67,123	—
2028	33,980	63,812	—
Thereafter	208,426	377,175	—
Total	648,961	735,103	10,998
Less: Amount representing interest	96,491	183,620	373
Total at present value	$ 552,470	$ 551,483	$ 10,625

[1] Gas purchase agreements include environmental attributes of RNG.

Total fixed charges under capacity purchase agreements were $87.0 million for 2023, $90.2 million for 2022, and $82.9 million for 2021, of which $8.2 million, $8.3 million, and $7.7 million, respectively, related to capacity releases which third parties paid directly to the related pipelines. In addition, per-unit charges are required to be paid based on the actual quantities shipped under the agreements. In certain take-or-pay purchase commitments, annual deficiencies may be offset by prepayments subject to recovery over a longer term if future purchases exceed the minimum annual requirements.

Leases
Refer to Note 7 for a discussion of lease commitments and contingencies.

Environmental Matters
Refer to Note 17 for a discussion of environmental commitments and contingencies.

17. ENVIRONMENTAL MATTERS

NW Natural owns, or previously owned, properties that may require environmental remediation or action. The range of loss for environmental liabilities is estimated based on current remediation technology, enacted laws and regulations, industry experience gained at similar sites, and an assessment of the probable level of involvement and financial condition of other potentially responsible parties (PRPs). When amounts are prudently expended related to site remediation of those sites described herein, NW Natural has recovery mechanisms in place to collect 96.7% of remediation costs allocable to Oregon customers and 3.3% of costs allocable to Washington customers.

These sites are subject to the remediation process prescribed by the Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (ODEQ). The process begins with a remedial investigation (RI) to determine the nature and extent of contamination and then a risk assessment (RA) to establish whether the contamination at the site poses unacceptable risks to humans and the environment. Next, a feasibility study (FS) or an engineering evaluation/cost analysis (EE/CA) evaluates various remedial alternatives. It is at this point in the process when NW Natural is able to estimate a range of remediation costs and record a reasonable potential remediation liability, or make an adjustment to the existing liability. From this study, the regulatory agency selects a remedy and issues a Record of Decision (ROD). After a ROD is issued, NW Natural would seek to negotiate a consent decree or consent judgment for designing and implementing the remedy. NW Natural would have the ability to further refine estimates of remediation liabilities based upon an approved remedial design.

Remediation may include treatment of contaminated media such as sediment, soil and groundwater, removal and disposal of media, institutional controls such as legal restrictions on future property use, or natural recovery. Following construction of the remedy, the EPA and ODEQ also have requirements for ongoing maintenance, monitoring and other post-remediation care that may continue for many years. Where appropriate and reasonably known, NW Natural will provide for these costs in the remediation liabilities described below.

Due to the numerous uncertainties surrounding the course of environmental remediation and the preliminary nature of several site investigations, in some cases, NW Natural may not be able to reasonably estimate the high end of the range of possible loss. In those cases, the nature of the possible loss has been disclosed, as has the fact that the high end of the range cannot be reasonably estimated where a range of potential loss is available. Unless there is an estimate within the range of possible losses that is more likely than other cost estimates within that range, NW Natural records the liability at the low end of this range. It is likely changes in these estimates and ranges will occur throughout the remediation process for each of these sites due to the continued evaluation

and clarification concerning responsibility, the complexity of environmental laws and regulations and the determination by regulators of remediation alternatives. In addition to remediation costs, NW Natural could also be subject to

Natural Resource Damages (NRD) claims. NW Natural will assess the likelihood and probability of each claim and recognize a liability if deemed appropriate. Refer to "*Other Portland Harbor*" below.

Environmental Sites

The following table summarizes information regarding liabilities related to environmental sites, which are recorded in other current liabilities and other noncurrent liabilities in NW Natural's balance sheet at December 31:

	Current Liabilities		Non-Current Liabilities	
In thousands	2023	2022	2023	2022
Portland Harbor site:				
Gasco/Siltronic Sediments	$ 12,428	$ 9,744	$ 42,550	$ 42,120
Other Portland Harbor	3,035	2,634	11,270	11,270
Gasco/Siltronic Upland site	16,304	16,067	34,235	35,457
Front Street site	687	457	939	879
Oregon Steel Mills	—	—	179	179
Total	$ 32,454	$ 28,902	$ 89,173	$ 89,905

Portland Harbor Site

The Portland Harbor is an EPA listed Superfund site that is approximately 10 miles long on the Willamette River and is adjacent to NW Natural's Gasco uplands site. NW Natural is one of over one hundred PRPs, each jointly and severally liable, at the Superfund site. In January 2017, the EPA issued its Record of Decision, which selects the remedy for the clean-up of the Portland Harbor site (Portland Harbor ROD). The Portland Harbor ROD estimates the present value total cost at approximately $1.05 billion with an accuracy between -30% and +50% of actual costs.

NW Natural's potential liability is a portion of the costs of the remedy for the entire Portland Harbor Superfund site. The cost of that remedy is expected to be allocated among more than one hundred PRPs. NW Natural is participating in a non-binding allocation process with other PRPs in an effort to resolve its potential liability. The Portland Harbor ROD does not provide any additional clarification around allocation of costs among PRPs; accordingly, NW Natural has not modified any of the recorded liabilities at this time as a result of the issuance of the Portland Harbor ROD.

NW Natural manages its liability related to the Superfund site as two distinct remediation projects, the Gasco Sediments Site and Other Portland Harbor projects.

GASCO SEDIMENTS. In 2009, NW Natural and Siltronic Corporation entered into a separate Administrative Order on Consent with the EPA to evaluate and design specific remedies for sediments adjacent to the Gasco uplands and Siltronic uplands sites. NW Natural submitted a draft EE/CA to the EPA in May 2012 to provide the estimated cost of potential remedial alternatives for this site. In March 2020, NW Natural and the EPA amended the Administrative Order on Consent to include additional remedial design activities downstream of the Gasco sediments site and in the navigation channel. Siltronic Corporation is not a party to the amended order. NW Natural is completing pre-design studies and has submitted a draft Basis of Design Report. These preliminary design steps do not include a cost estimate for cleanup. No remedial design is more likely than the EE/CA alternatives at this time, and NW Natural expects further design discussion and iteration with the EPA.

The estimated costs for the various sediment remedy alternatives in the draft EE/CA for the additional studies and design work needed before the cleanup can occur, and for regulatory oversight throughout the cleanup range from $55.0 million to $350 million. NW Natural has recorded a liability of $55.0 million for the Gasco sediment clean-up, which reflects the low end of the range. At this time, we believe sediments at the Gasco sediments site represent the largest portion of NW Natural's liability related to the Portland Harbor site discussed above.

In September 2023, the EPA approved the In Situ Stabilization and Solidification (ISS) Work Plan for the ISS field pilot study, which was successfully completed during the fall of 2023. Information obtained from the pilot study will be used to support remedial design of the Gasco sediments project.

OTHER PORTLAND HARBOR. While we believe liabilities associated with the Gasco sediments site represent NW Natural's largest exposure, there are other potential exposures associated with the Portland Harbor ROD, including NRD costs and harborwide remedial design and cleanup costs (including downstream petroleum contamination), for which allocations among the PRPs have not yet been determined.

NW Natural and other parties have signed a cooperative agreement with the Portland Harbor Natural Resource Trustee council to participate in a phased NRD assessment to estimate liabilities to support an early restoration-based settlement of NRD

claims. One member of this Trustee council, the Yakama Nation, withdrew from the council in 2009, and in 2017, filed suit against NW Natural and 29 other parties seeking remedial costs and NRD assessment costs associated with the Portland Harbor site, set forth in the complaint. The complaint seeks recovery of alleged costs totaling $0.3 million in connection with the selection of a

remedial action for the Portland Harbor site as well as declaratory judgment for unspecified future remedial action costs and for costs to assess the injury, loss or destruction of natural resources resulting from the release of hazardous substances at and from the Portland Harbor site. The Yakama Nation has filed two amended complaints addressing certain pleading defects and dismissing the State of Oregon. On the motion of NW Natural and certain other defendants the federal court has stayed the case pending the outcome of the non-binding allocation proceeding discussed above. NW Natural has recorded a liability for NRD claims which is at the low end of the range of the potential liability; the high end of the range cannot be reasonably estimated at this time. The NRD liability is not included in the aforementioned range of costs provided in the Portland Harbor ROD.

Gasco Uplands Site

A predecessor of NW Natural, Portland Gas and Coke Company, owned a former gas manufacturing plant that was closed in 1958 (Gasco site) and is adjacent to the Portland Harbor site described above. The Gasco site has been under investigation by NW Natural for environmental contamination under the ODEQ Voluntary Cleanup Program (VCP). It is not included in the range of remedial costs for the Portland Harbor site noted above. The Gasco site is managed in two parts, the uplands portion and the groundwater source control action.

NW Natural submitted a revised Remedial Investigation Report for the uplands to ODEQ in May 2007. In March 2015, ODEQ approved the Risk Assessment (RA) for this site, enabling commencement of work on the FS in 2016. A draft FS is currently anticipated to be submitted in 2024. NW Natural has recognized a liability for the remediation of the uplands portion of the site which is at the low end of the range of potential liability; the high end of the range cannot be reasonably estimated at this time.
In October 2016, ODEQ and NW Natural agreed to amend their VCP agreement for the Gasco uplands to incorporate a portion of the Siltronic property formerly owned by Portland Gas & Coke between 1939 and 1960 into the Gasco RA and FS. Previously, NW Natural was conducting an investigation of manufactured gas plant constituents on the entire Siltronic uplands for ODEQ. Siltronic will be working with ODEQ directly on environmental impacts to the remainder of its property.

In September 2013, NW Natural completed construction of a groundwater source control system, including a water treatment station, at the Gasco site. NW Natural has estimated the cost associated with the ongoing operation of the system and has recognized a liability which is at the low end of the range of potential cost. NW Natural cannot estimate the high end of the range at this time due to the uncertainty associated with the duration of running the water treatment station, which is highly dependent on the remedy determined for both the upland portion as well as the final remedy for the Gasco sediments site.

Other Sites

In addition to those sites above, NW Natural has environmental exposures at three other sites: Central Service Center, Front Street and Oregon Steel Mills. NW Natural may have exposure at other sites that have not been identified at this time. Due to the uncertainty of the design of remediation, regulation, timing of the remediation and in the case of the Oregon Steel Mills site, pending litigation, liabilities for each of these sites have been recognized at their respective low end of the range of potential liability; the high end of the range could not be reasonably estimated at this time.

FRONT STREET SITE. The Front Street site was the former location of a gas manufacturing plant NW Natural operated (the former Portland Gas Manufacturing site, or PGM). At ODEQ's request, NW Natural conducted a sediment and source control investigation and provided findings to ODEQ. In December 2015, an FS on the former Portland Gas Manufacturing site was completed.

In July 2017, ODEQ issued the PGM ROD. The ROD specifies the selected remedy, which requires a combination of dredging, capping, treatment, and natural recovery. In addition, the selected remedy also requires institutional controls and long-term inspection and maintenance. Construction of the remedy began in July 2020 and was completed in October 2020. The first year of post-construction monitoring was completed in 2021 and demonstrated that the cap was intact and performing as designed. NW Natural has recognized an additional liability of $1.6 million for costs associated with the discovery during construction of World War II-era munitions, design costs, regulatory and permitting issues, and post-construction work.

OREGON STEEL MILLS SITE. Refer to "Legal Proceedings," below.

Environmental Cost Deferral and Recovery

NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recover prudently incurred costs allocable to Oregon customers, subject to an earnings test. On October 21, 2019 the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers beginning November 1, 2019.

The following table presents information regarding the total regulatory asset deferred as of December 31:

In thousands	2023	2022
Deferred costs and interest[1]	$ 57,758	$ 47,666
Accrued site liabilities[2]	121,575	118,763
Insurance proceeds and interest	(50,764)	(54,784)
Total regulatory asset deferral[1]	128,569	111,645
Current regulatory assets[3]	9,950	7,392
Long-term regulatory assets[3]	118,619	104,253

(1) Includes pre-review and post-review deferred costs, amounts currently in amortization, and interest, net of amounts collected from customers.
(2) Excludes 3.3% of the Front Street site liability as the OPUC only allows recovery of 96.7% of costs for those sites allocable to Oregon, including those that historically served only Oregon customers. Amounts excluded from regulatory assets were $53 thousand in 2023 and $43 thousand in 2022.
(3) Environmental costs relate to specific sites approved for regulatory deferral by the OPUC and WUTC. In Oregon, NW Natural earns a carrying charge on cash amounts paid, whereas amounts accrued but not yet paid do not earn a carrying charge until expended. It also accrues a carrying charge on insurance proceeds for amounts owed to customers. In Washington, neither the cash paid nor insurance proceeds received accrue a carrying charge. Current environmental costs represent remediation costs management expects to collect from customers in the next 12 months. Amounts included in this estimate are still subject to a prudence and earnings test review by the OPUC and do not include the $5.0 million tariff rider. The amounts allocable to Oregon are recoverable through NGD rates, subject to an earnings test. See "*Oregon SRRM*" below.

Oregon SRRM

Collections From Oregon Customers

Under the SRRM collection process, there are three types of deferred environmental remediation expense:

- Pre-review - This class of costs represents remediation spend that has not yet been deemed prudent by the OPUC. Carrying costs on these remediation expenses are recorded at NW Natural's authorized cost of capital. NW Natural anticipates the prudence review for annual costs and approval of the earnings test prescribed by the OPUC to occur by the third quarter of the following year.
- Post-review - This class of costs represents remediation spend that has been deemed prudent and allowed after applying the earnings test, but is not yet included in amortization. NW Natural earns a carrying cost on these amounts at a rate equal to the five-year treasury rate plus 100 basis points.
- Amortization - This class of costs represents amounts included in current customer rates for collection and is generally calculated as one-fifth of the post-review deferred balance. NW Natural earns a carrying cost equal to the amortization rate determined annually by the OPUC, which approximates a short-term borrowing rate.

In addition to the collection amount noted above, an order issued by the OPUC provides for the annual collection of $5.0 million from Oregon customers through a tariff rider. As NW Natural collects amounts from customers, it recognizes these collections as revenue and separately amortizes an equal and offsetting amount of its deferred regulatory asset balance through the environmental remediation operating expense line shown separately in the operating expense section of the income statement.

NW Natural received total environmental insurance proceeds of approximately $150 million as a result of settlements from litigation that was dismissed in July 2014. Under a 2015 OPUC order which established the SRRM, one-third of the Oregon allocated proceeds were applied to costs deferred through 2012 with the remaining two-thirds applied to costs at a rate of $5.0 million per year plus interest over the following 20 years. NW Natural accrues interest on the Oregon allocated insurance proceeds in the customer's favor at a rate equal to the five-year treasury rate plus 100 basis points. As of December 31, 2023, NW Natural has applied $100.7 million of insurance proceeds to prudently incurred remediation costs allocated to Oregon.

Environmental Earnings Test

To the extent NW Natural earns at or below its authorized Return on Equity (ROE) as defined by the SRRM, remediation expenses and interest in excess of the $5.0 million tariff rider and $5.0 million insurance proceeds are recoverable through the SRRM. To the extent NW Natural earns more than its authorized ROE in a year, it is required to cover environmental expenses and interest on expenses greater than the $10.0 million with those earnings that exceed its authorized ROE.

Washington ECRM

Washington Deferral

On October 21, 2019, the WUTC issued an order (WUTC Order) establishing the ECRM which allows for recovery of past deferred and future prudently incurred environmental remediation costs allocable to Washington customers through application of insurance proceeds and collections from customers. Environmental remediation expenses relating to sites that previously served both Oregon and Washington customers are allocated between states with Washington customers receiving 3.3% percent of the costs and insurance proceeds.

In accordance with the WUTC Order, insurance proceeds were fully applied to costs incurred between December 2018 and June 2019 that were deemed prudent. Remaining insurance proceeds will be amortized over a 10.5 year period ending December 31,

2029. As of December 31, 2023, approximately $3.9 million of proceeds have been applied to prudently incurred costs.

On an annual basis, NW Natural files for a prudence determination and a request to amortize costs to the extent that remediation expenses exceed the insurance amortization. After insurance proceeds are fully amortized, if in a particular year the request to collect deferred amounts exceeds one percent of Washington normalized revenues, then the excess will be collected over three years with interest.

Legal Proceedings

NW Holdings is not currently party to any direct claims or litigation, though in the future it may be subject to claims and litigation arising in the ordinary course of business.

NW Natural is subject to claims and litigation arising in the ordinary course of business, including the matters discussed above. Although the final outcome of any of these legal proceedings cannot be predicted with certainty, including the matter relating to the Oregon Steel Mills site referenced below, NW Natural and NW Holdings do not expect that the ultimate disposition of any of these matters will have a material effect on their financial condition, results of operations, or cash flows. See also Part II, Item 1, “Legal Proceedings".

Oregon Steel Mills Site

In 2004, NW Natural was served with a third-party complaint by the Port of Portland (the Port) in a Multnomah County Circuit Court case, Oregon Steel Mills, Inc. v. The Port of Portland. The Port alleges that in the 1940s and 1950s petroleum wastes generated by NW Natural's predecessor, Portland Gas & Coke Company, and 10 other third-party defendants, were disposed of in a waste oil disposal facility operated by the United States or Shaver Transportation Company on property then owned by the Port and now owned by Evraz Oregon Steel Mills. The complaint seeks contribution for unspecified past remedial action costs incurred by the Port regarding the former waste oil disposal facility as well as a declaratory judgment allocating liability for future remedial action costs. No date has been set for trial. In August 2017, the case was stayed pending the outcome of the Portland Harbor allocation process or other mediation. Although the final outcome of this proceeding cannot be predicted with certainty, NW Natural and NW Holdings do not expect the ultimate disposition of this matter will have a material effect on NW Natural's or NW Holdings' financial condition, results of operations, or cash flows.

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF NORTHWEST NATURAL HOLDING COMPANY

NORTHWEST NATURAL HOLDING COMPANY

CONDENSED STATEMENTS OF COMPREHENSIVE INCOME
(PARENT COMPANY ONLY)

	Year Ended December 31,		
In thousands	2023	2022	2021
Operating expenses:			
Operations and maintenance	$ 5,145	$ 3,828	$ 4,837
Total operating expenses	5,145	3,828	4,837
Loss from operations	(5,145)	(3,828)	(4,837)
Earnings from investment in subsidiaries, net of tax	106,267	92,727	83,072
Other income (expense), net	(1,156)	60	(143)
Interest expense, net	10,022	4,967	982
Income before income taxes	89,944	83,992	77,110
Income tax benefit	(3,924)	(2,311)	(1,556)
Net income	93,868	86,303	78,666
Other comprehensive income (loss) from subsidiaries, net of tax	(868)	5,108	1,498
Unrealized gain on interest rate swap, net of tax	104	11	—
Comprehensive income	$ 93,104	$ 91,422	$ 80,164

See Notes to Condensed Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONDENSED BALANCE SHEETS
(PARENT COMPANY ONLY)

In thousands	As of December 31, 2023	2022
Assets:		
Current assets:		
Cash and cash equivalents	$ 1,011	$ 7,280
Receivables from affiliates	15,596	9,967
Other current assets	4,160	2,895
Total current assets	20,767	20,142
Non-current assets:		
Investments in subsidiaries	1,456,449	1,357,599
Other investments	32	14
Deferred tax assets	513	520
Other non-current assets	367	486
Total non-current assets	1,457,361	1,358,619
Total assets	$ 1,478,128	$ 1,378,761
Liabilities and equity:		
Current liabilities:		
Short-term debt	$ 73,000	$ 88,000
Current maturities of long-term debt	99,992	—
Accounts payable	968	402
Payables to affiliates	19,897	14,665
Other current liabilities	433	295
Total current liabilities	194,290	103,362
Long-term debt	—	99,958
Total equity	1,283,838	1,175,441
Total liabilities and equity	$ 1,478,128	$ 1,378,761

See Notes to Condensed Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONDENSED STATEMENTS OF CASH FLOWS
(PARENT COMPANY ONLY)

In thousands	Year Ended December 31, 2023	2022	2021
Operating activities:			
Net income	$ 93,868	$ 86,303	$ 78,666
Adjustments to reconcile net income to cash used in operations:			
Equity in earnings of subsidiaries, net of tax	(106,267)	(92,727)	(83,072)
Cash dividends received from subsidiaries	92,375	62,710	56,057
Deferred income taxes	(31)	(141)	(212)
Other	164	142	119
Changes in assets and liabilities:			
Receivables from affiliates	(5,629)	(7,787)	12,558
Income and other taxes	(491)	8,161	1,299
Accounts payable	6,314	(2,499)	3,342
Interest accrued	103	156	57
Other, net	(380)	(211)	(313)
Cash provided by operating activities	80,026	54,107	68,501
Investing activities:			
Contributions to subsidiaries	(76,310)	(241,497)	(142,405)
Return of capital from subsidiaries	3,350	—	26,000
Cash used in investing activities	(72,960)	(241,497)	(116,405)
Financing activities:			
Proceeds from common stock issued, net	66,495	208,561	17,501
Long-term debt issued	—	100,000	—
Changes in other short-term debt, net	(15,000)	(56,000)	71,000
Cash dividend payments on common stock	(67,340)	(62,771)	(55,919)
Other	2,510	4,615	4,320
Cash (used in) provided by financing activities	(13,335)	194,405	36,902
(Decrease) increase in cash and cash equivalents	(6,269)	7,015	(11,002)
Cash, cash equivalents and restricted cash, beginning of period	7,280	265	11,267
Cash, cash equivalents and restricted cash, end of period	$ 1,011	$ 7,280	$ 265

See Notes to Condensed Financial Statements

NOTES TO CONDENSED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION

NW Holdings is an energy services holding company that conducts substantially all of its business operations through its subsidiaries, particularly NW Natural. These condensed financial statements and related footnotes have been prepared in accordance with Rule 12-04, Schedule I of Regulation S-X. These financial statements should be read in conjunction with the consolidated financial statements and notes thereto of NW Holdings included in Item 8 of this Form 10-K. NW Holdings' wholly-owned subsidiaries are recorded based upon its proportionate share of the subsidiaries' net assets (similar to presenting them on the equity method).

Equity earnings of subsidiaries including earnings from NW Natural were $106.3 million, $92.7 million, and $83.1 million for the years ended December 31, 2023, 2022, and 2021 respectively.

There were $95.7 million, $62.7 million and $82.1 million of cash dividends paid to NW Holdings from wholly-owned subsidiaries for the years ended December 31, 2023, 2022 and 2021, respectively.

2. DEBT

For information concerning NW Holdings' debt obligations, see Note 9 to the consolidated financial statements included in Item 8 of this report.

NORTHWEST NATURAL HOLDING COMPANY

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E
		Additions		Deductions	
In thousands (year ended December 31)	Balance at beginning of period	Charged to costs and expenses	Charged to other accounts	Net w rite-offs	Balance at end of period
2023					
Reserves deducted in balance sheet from assets to w hich they apply:					
Allow ance for uncollectible accounts	$ 3,296	$ 2,869	$ 263	$ 2,973	$ 3,455
2022					
Reserves deducted in balance sheet from assets to w hich they apply:					
Allow ance for uncollectible accounts	$ 2,018	$ 1,081	$ 1,810	$ 1,613	$ 3,296
2021					
Reserves deducted in balance sheet from assets to w hich they apply:					
Allow ance for uncollectible accounts	$ 3,219	$ 724	$ (219)	$ 1,706	$ 2,018

NORTHWEST NATURAL GAS COMPANY

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E
		Additions		Deductions	
In thousands (year ended December 31)	Balance at beginning of period	Charged to costs and expenses	Charged to other accounts	Net w rite-offs	Balance at end of period
2023					
Reserves deducted in balance sheet from assets to w hich they apply:					
Allow ance for uncollectible accounts	$ 3,079	$ 2,859	$ 263	$ 2,973	$ 3,228
2022					
Reserves deducted in balance sheet from assets to w hich they apply:					
Allow ance for uncollectible accounts	$ 1,962	$ 920	$ 1,810	$ 1,613	$ 3,079
2021					
Reserves deducted in balance sheet from assets to w hich they apply:					
Allow ance for uncollectible accounts	$ 3,107	$ 780	$ (219)	$ 1,706	$ 1,962

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

NW Holdings and NW Natural management, under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer, completed an evaluation of the effectiveness of the design and operation of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the Exchange Act)). Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer of each registrant have concluded that, as of the end of the period covered by this report, disclosure controls and procedures were effective to ensure that information required to be disclosed by each such registrant and included in reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission (SEC) rules and forms and that such information is accumulated and communicated to management of each registrant, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control Over Financial Reporting

NW Holdings and NW Natural management are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in the Exchange Act Rule 13a-15(f). There have been no changes in NW Holdings' or NW Natural's internal control over financial reporting during the quarter ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting for NW Holdings and NW Natural. The statements contained in Exhibit 31.1, Exhibit 31.2, Exhibit 31.3, and Exhibit 31.4 should be considered in light of, and read together with, the information set forth in this Item 9(a).

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The "Information Concerning Nominees and Continuing Directors" and "Corporate Governance" contained in NW Holdings' definitive Proxy Statement for the 2024 Annual Meeting of Shareholders is hereby incorporated by reference. The following are officers of NW Natural, unless indicated otherwise.

EXECUTIVE OFFICERS		
Name	Age at Dec. 31, 2023	Positions held during last five years[1]
David H. Anderson*	62	Chief Executive Officer (2023-); President and Chief Executive Officer[2] (2016-2023); Chief Operating Officer and President (2015-2016); Executive Vice President and Chief Operating Officer (2014-2015); Executive Vice President Operations and Regulation (2013-2014); Senior Vice President and Chief Financial Officer (2004-2013).
Frank H. Burkhartsmeyer*	59	Senior Vice President and Chief Financial Officer[2][3] (2017- 2023); Executive Vice President, Strategy and Business Development (2023); President and Chief Executive Officer of Renewables, Avangrid Renewables (2015-2017); Senior Vice President of Finance, Iberdrola Renewables Holdings, Inc. (2012-2015).
James R. Downing	54	Vice President and Chief Information Officer (2017-); Chief Information Officer, WorleyParsons (America's Division) (2016-2017); Executive Service Delivery Manager for SAP, British Petroleum (2011-2015).
Shawn M. Filippi*	51	Vice President, Chief Compliance Officer and Corporate Secretary[2] (2016-); Vice President and Corporate Secretary (2015-2016); Senior Legal Counsel (2011-2014); Assistant Corporate Secretary (2010-2014).
Jon G. Huddleston	61	Vice President, Engineering and Utility Operations (2018- 2023); Senior Director, Utility Operations (2014-2018); Director, Utility Operations (2013-2014); Process Director (2007-2013).
Joseph S. Karney	45	Vice President, Engineering and Utility Operations (2023-); Senior Director, Utility Operations (2021-2023); Senior Engineering Director (2019-2021); Engineering Director (2017-2019); Compliance Senior Manager (2015-2017).
Zachary D. Kravitz	40	Vice President, Rates and Regulatory (2022-); Senior Director, Rates and Regulatory (2021-2022); Director, Rates and Regulatory (2018-2021); Regulatory Attorney (2014-2018).
Justin B. Palfreyman*	45	President (2023-); President, NW Natural RNG Holding Company, LLC (2021-); Senior Vice President, Strategy and Business Development, NW Natural Gas Company (2023); Vice President, Strategy and Business Development (2017-2023); President, NW Natural Water, LLC (2018-); Vice President, Business Development (2016-2017); Director, Power, Energy and Infrastructure Group, Lazard, Freres & Co. (2009-2016).
Melinda B. Rogers	58	Vice President, Chief Human Resources and Diversity Officer (2018-); Senior Director of Human Resources (2018); Senior Manager, Organizational Effectiveness and Talent Acquisition (2015-2017); Senior Associate, Point B (2014-2015); Director, Executive Development Center, Willamette University (2011-2014).
Kimberly Heiting Rush	54	Senior Vice President and Chief Operating Officer (2023-); Senior Vice President, Operations and Chief Marketing Officer (2018-2023); Senior Vice President, Communications and Chief Marketing Officer (2018); Vice President, Communications and Chief Marketing Officer (2015-2018); Chief Marketing and Communications Officer (2013-2014); Chief Corporate Communications Officer (2011-2013).
MardiLyn Saathoff*	67	Senior Vice President, Regulation and General Counsel[2][4] (2016-); Senior Vice President and General Counsel (2015-2016); Vice President, Legal, Risk and Compliance (2013-2014); Deputy General Counsel (2010-2013); Chief Governance Officer and Corporate Secretary (2008-2014).
David A. Weber	64	Vice President, Gas Supply and Utility Support Services (2019-); President and Chief Executive Officer, NW Natural Gas Storage, LLC (2011-); President, KB Pipeline Company (2018-); Director, NWN Gas Reserves LLC (2018-); President and Chief Executive Officer, Gill Ranch Storage, LLC (2011-2020).
Kathryn M. Williams	48	Vice President, Chief Public Affairs and Sustainability Officer (2023-); Vice President, Public Affairs and Sustainability (2020-2023); Vice President, Public Affairs (2019-2020); Government and Community Affairs Director (2018-2019); State Affairs Manager, Port of Portland (2015-2018); Business and Rail Relations Manager, Port of Portland (2007-2015).
Brody J. Wilson*	44	Chief Financial Officer (Interim)[5] (2023-), Vice President, Chief Accounting Officer, and Treasurer[2] (2017-); Controller (2013-2023); Chief Financial Officer (Interim), Treasurer (Interim), and Chief Accounting Officer (2016-2017); Chief Accounting Officer, Controller and Assistant Treasurer (2016); Acting Controller (2013); Accounting Director (2012-2013).

DIRECTOR (NORTHWEST NATURAL GAS COMPANY ONLY)**		
Name	Age at Dec. 31, 2023	Positions held during last five years(1)
Steven E. Wynne**	71	Executive Vice President, Moda, Inc., a privately-held healthcare insurance company (2012-2023); Director, JELD-WEN Holding Inc. (2012-); Director, Pendleton Woolen Mills, Inc. (2013-); Director, Lone Rock Resources, Inc. (2016-); Director, FLIR Systems, Inc. (1999-2021); Director, Citifyd Inc. (2013-2019); Trustee, Willamette University (1999-); Trustee, Portland Center Stage (2012-2019); Executive Vice President, JELD-WEN, Inc. (2011-2012); President and Chief Executive Officer, SBI International, Ltd. (2004-2007); Partner, Ater Wynne LLP (2001-2002; 2003-2004); President and Chief Executive Officer, Adidas America, Inc. (1995-2000). Mr. Wynne's senior management experience with a variety of companies, board service on a number of public and private companies and longstanding legal practice in the areas of corporate finance, securities and mergers and acquisitions qualify him to provide insight and guidance in the areas of corporate governance, strategic planning, enterprise risk management, finance and operations.

* Executive Officer of Northwest Natural Holding Company and Northwest Natural Gas Company.
** Director of Northwest Natural Gas Company only (beginning 2018). All other directors of Northwest Natural Gas Company are also directors of Northwest Natural Holding Company, and information regarding all directors concurrently serving on the Board of Directors of Northwest Natural Gas Company and Northwest Natural Holding Company will be incorporated by reference to our definitive Proxy Statement for the 2024 Annual Meeting of Shareholders.
(1) Unless otherwise specified, all positions held at Northwest Natural Gas Company.
(2) Position held at Northwest Natural Holding Company (beginning March 2018) and Northwest Natural Gas Company.
(3) Mr. Burkhartsmeyer voluntarily resigned his Executive Vice President, Strategy and Business Development and Chief Financial Officer positions with NW Holdings and NW Natural effective July 28, 2023.
(4) In 2020, Ms. Saathoff's title at Northwest Natural Holding Company changed from Senior Vice President and General Counsel to Senior Vice President, Regulation and General Counsel.
(5) The Board of Directors appointed Brody J. Wilson as interim Chief Financial Officer of NW Holdings and NW Natural effective July 28, 2023.

Each executive officer serves successive annual terms and thereafter until their successors have been duly elected or until their resignation or removal in accordance with the NW Holdings or NW Natural Bylaws, as applicable. There are no family relationships among our executive officers, directors or any person chosen to become one of our officers or directors. NW Holdings and NW Natural have adopted a Code of Ethics (Code) applicable to all employees, officers, and directors that is available on our website at www.nwnaturalholdings.com. We intend to disclose on our website at www.nwnaturalholdings.com any amendments to the Code or waivers of the Code for executive officers and directors.

ITEM 11. EXECUTIVE COMPENSATION

The information concerning "Executive Compensation", "Report of the Organization and Executive Compensation Committee", and "Compensation Committee Interlocks and Insider Participation" contained in NW Holdings' definitive Proxy Statement for the 2024 Annual Meeting of Shareholders is hereby incorporated by reference. Information related to Executive Officers as of December 31, 2023 is reflected in Part III, Item 10, above.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

As of February 14, 2024, NW Holdings owned 100% of the outstanding common stock of NW Natural.

The following table sets forth information regarding compensation plans under which equity securities of NW Holdings are authorized for issuance as of December 31, 2023 (see Note 8 to the Consolidated Financial Statements):

	(a)	(b)	(c)
Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders:			
Long Term Incentive Plan (LTIP) [1][2]	247,186	n/a	180,755
Employee Stock Purchase Plan	50,120	$ 32.06	256,637
Equity compensation plans not approved by security holders:			
Executive Deferred Compensation Plan (EDCP)[3]	705	n/a	n/a
Directors Deferred Compensation Plan (DDCP)[3]	28,849	n/a	n/a
Deferred Compensation Plan for Directors and Executives (DCP)[4]	210,708	n/a	n/a
Total	537,568		437,392

(1) Awards may be granted under the LTIP as Performance Share Awards, Restricted Stock Units, or stock options. Shares issued pursuant to Performance Share Awards and Restricted Stock Units under the LTIP do not include an exercise price, but are payable when the award criteria are satisfied. The number of shares shown in column (a) include 97,291 Restricted Stock Units and 149,895 Performance Share Awards, reflecting the number of shares to be issued as performance share awards under outstanding Performance Share Awards if target performance levels are achieved. If the maximum awards were paid pursuant to the Performance Share Awards outstanding at December 31, 2023, the number of shares shown in column (a) would increase by 149,895 shares, reflecting the maximum share award of 200% of target, and the number of shares shown in column (c) would decrease by the same amount of shares. No stock options or other types of award have been issued under the LTIP.

(2) The number of shares shown in column (c) includes shares that are available for future issuance under the LTIP as Restricted Stock Units or Performance Share Awards at December 31, 2023.

(3) Prior to January 1, 2005, deferred amounts were credited, at the participant's election, to either a "cash account" or a "stock account." If deferred amounts were credited to stock accounts, such accounts were credited with a number of shares of NW Natural (now NW Holdings) common stock based on the purchase price of the common stock on the next purchase date under our Dividend Reinvestment and Direct Stock Purchase Plan, and such accounts were credited with additional shares based on the deemed reinvestment of dividends. Cash accounts are credited quarterly with interest at a rate equal to Moody's Average Corporate Bond Yield plus two percentage points, subject to a 6% minimum rate. At the election of the participant, deferred balances in the stock accounts are payable after termination of Board service or employment in a lump sum, in installments over a period not to exceed 10 years in the case of the DDCP, or 15 years in the case of the EDCP, or in a combination of lump sum and installments. Amounts credited to stock accounts are payable solely in shares of common stock and cash for fractional shares, and amounts in the above table represent the aggregate number of shares credited to participant's stock accounts. We have contributed common stock to the trustee of the Umbrella Trusts such that the Umbrella Trusts hold approximately the number of shares of common stock equal to the number of shares credited to all participants' stock accounts.

(4) Effective January 1, 2005, the EDCP and DDCP were closed to new participants and replaced with the DCP. The DCP continues the basic provisions of the EDCP and DDCP under which deferred amounts are credited to either a "cash account" or a "stock account." Stock accounts represent a right to receive shares of NW Holdings common stock on a deferred basis, and such accounts are credited with additional shares based on the deemed reinvestment of dividends. Effective January 1, 2007, cash accounts are credited quarterly with interest at a rate equal to Moody's Average Corporate Bond Yield. Our obligation to pay deferred compensation in accordance with the terms of the DCP will generally become due on a predetermined date during a participant's service if elected by such participant or on retirement, death, or other termination of service, and will be paid in a lump sum or in installments of five, 10, or 15 years as elected by the participant in accordance with the terms of the DCP. Amounts credited to stock accounts are payable solely in shares of common stock and cash for fractional shares, and amounts in the above table represent the aggregate number of shares credited to participants' stock accounts. We have contributed common stock to the trustee of the Supplemental Trust such that this trust holds approximately the number of common shares equal to the number of shares credited to all participants' stock accounts. Historically, we have satisfied NW Holdings' stock contributions to the Supplemental Trust through purchases of NW Holdings stock in the open market. In 2023, the board of directors of NW Holdings authorized the original issuance of NW Holdings shares to the Supplemental Trust in satisfaction of such contributions. As of December 31, 2023, 352,307 shares remained available for issuance under current authorizations. The right of each participant in the DCP is that of a general, unsecured creditor of NW Natural.

The information captioned "Beneficial Ownership of Common Stock by Directors and Executive Officers" and "Security Ownership of Common Stock of Certain Beneficial Owners" contained in NW Holdings' definitive Proxy Statement for the 2024 Annual Meeting of Shareholders is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information captioned "Transactions with Related Persons" and "Corporate Governance" in NW Holdings' definitive Proxy Statement for the 2024 Annual Meeting of Shareholders is hereby incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

NW Holdings
The information captioned "2023 and 2022 Audit Firm Fees" in NW Holdings' definitive Proxy Statement for the 2024 Annual Meeting of Shareholders is hereby incorporated by reference.

NW Natural
The following table shows the fees and expenses of NW Natural, paid or accrued for the integrated audits of the consolidated financial statements and other services provided by NW Natural's independent registered public accounting firm, PricewaterhouseCoopers LLP, for fiscal years 2023 and 2022:

In thousands	2023	2022
Audit Fees	$ 1,540	$ 1,518
Audit-Related Fees	37	477
Tax Fees	22	23
All Other Fees	2	4
Total	$ 1,601	$ 2,022

AUDIT FEES. This category includes fees and expenses for services rendered for the integrated audit of the consolidated financial statements included in the Annual Report on Form 10-K and the review of the quarterly financial statements included in the Quarterly Reports on Form 10-Q. The integrated audit includes the review of our internal control over financial reporting in compliance with Section 404 of the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act). In addition, amounts include fees for services routinely provided by the auditor in connection with regulatory filings, including issuance of consents and comfort letters relating to the registration of Company securities and assistance with the review of documents filed with the SEC.

AUDIT-RELATED FEES. This category includes fees for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and internal control over financial reporting, including fees and expenses related to consultations for financial accounting and reporting, fees for EPA assurance letters, and fees for system pre-implementation assessments.

TAX FEES. This category includes fees for tax compliance, and review services rendered for NW Natural's income tax returns.

ALL OTHER FEES. This category relates to services other than those described above. The amount reflects payments for accounting research tools in each of 2023 and 2022.

PRE-APPROVAL POLICY FOR AUDIT AND NON-AUDIT SERVICES. The Audit Committee of NW Natural approved or ratified 100 percent of 2023 and 2022 services for audit, audit-related, tax services and all other fees, including audit services relating to compliance with Section 404 of the Sarbanes-Oxley Act. The chair of the Audit Committee of NW Natural is authorized to pre-approve non-audit services between meetings of the Audit Committee and must report such approvals at the next Audit Committee meeting.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

1. A list of all Financial Statements and Supplemental Schedules is incorporated by reference to Item 8.

2. List of Exhibits filed:

   Reference is made to the Exhibit Index commencing on page 142.

ITEM 16. FORM 10-K SUMMARY

None.

NORTHWEST NATURAL HOLDING COMPANY
NORTHWEST NATURAL GAS COMPANY

Exhibit Index to Annual Report on Form 10-K
For the Fiscal Year Ended December 31, 2023

Exhibit Number	Document
*3a.	Amended and Restated Articles of Incorporation of Northwest Natural Holding Company (incorporated by reference to Exhibit 3.1 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*3b.	Amended and Restated Articles of Incorporation of Northwest Natural Gas Company (incorporated by reference to Exhibit 3b to Form 10-K for the year ended December 31, 2020).
*3c.	Amended and Restated Bylaws of Northwest Natural Holding Company (incorporated by reference to Exhibit 3.1 to the Form 10-Q for the quarter ended June 30, 2022, File No. 1-38681).
*3d.	Amended and Restated Bylaws of Northwest Natural Gas Company (incorporated by reference to Exhibit 3.2 to the Form 10-Q for the quarter ended June 30, 2022, File No. 1-38681).
*4a.	Copy of Mortgage and Deed of Trust of Northwest Natural Gas Company, dated as of July 1, 1946 (Mortgage and Deed of Trust), to Bankers Trust (to whom Deutsche Bank Trust Company Americas is the successor), Trustee (incorporated by reference to Exhibit 7(j) in File No. 2-6494); and copies of Supplemental Indentures Nos. 1 through 14 to the Mortgage and Deed of Trust, dated respectively, as of June 1, 1949, March 1, 1954, April 1, 1956, February 1, 1959, July 1, 1961, January 1, 1964, March 1, 1966, December 1, 1969, April 1, 1971, January 1, 1975, December 1, 1975, July 1, 1981, June 1, 1985 and November 1, 1985 (incorporated by reference to Exhibit 4(d) in File No. 33-1929); Supplemental Indenture No. 15 to the Mortgage and Deed of Trust, dated as of July 1, 1986 (filed as Exhibit 4(c) in File No. 33-24168); Supplemental Indentures Nos. 16, 17 and 18 to the Mortgage and Deed of Trust, dated, respectively, as of November 1, 1988, October 1, 1989 and July 1, 1990 (incorporated by reference to Exhibit 4(c) in File No. 33-40482); Supplemental Indenture No. 19 to the Mortgage and Deed of Trust, dated as of June 1, 1991 (incorporated by reference to Exhibit 4(c) in File No. 33-64014).
*4b.	Supplemental Indenture No. 20 to the Mortgage and Deed of Trust, dated as of June 1, 1993 (incorporated by reference to Exhibit 4a.(1) to Form 10-K for year ended December 31, 1993, File No. 0-00994).
*4c.	Supplemental Indenture No. 21 to the Mortgage and Deed of Trust, dated as of October 15, 2012 (incorporated by reference to Exhibit 4.1 to Form 8-K dated October 26, 2012, File No. 1-15973).
*4d.	Supplemental Indenture No. 22 to the Mortgage and Deed of Trust, dated as of November 1, 2016 (incorporated by reference to Exhibit 4.1 to Form 10-Q for the quarter ended September 30, 2016, File No. 1-15973).
*4e.	Supplemental Indenture No. 23 to the Mortgage and Deed of Trust, dated as of September 1, 2018 (incorporated by reference to Exhibit 4(a) to Form 8-K dated September 10, 2018, File No. 1-15973).
*4f.	Twenty-fourth Supplemental Indenture, providing for, among other things, First Mortgage Bonds, 4.78% Series due 2052, dated as of September 1, 2022, by and between Northwest Natural Gas Company and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to the Form 8-K filed September 30, 2022, file No. 1-15973).
*4g.	Twenty-fifth Supplemental Indenture, providing for, among other things, First Mortgage Bonds, 5.43% Series due 2053, dated as of December 1, 2022, by and between Northwest Natural Gas Company and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Form 8-K dated December 1, 2022, File No. 1-15973).
*4h.	Twenty-sixth Supplemental Indenture, providing for, among other things, First Mortgage Bonds, 5.18% Series due 2034 and 5.23% Series due 2038, dated as of July 1, 2023, by and between Northwest Natural Gas Company and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to the Form 8-K filed August 7, 2023, file No. 1-15973).

*4i.	Copy of Indenture, dated as of June 1, 1991, between Northwest Natural Gas Company and Bankers Trust Company (to whom Deutsche Bank Trust Company Americas is successor), Trustee, relating to Northwest Natural Gas Company's Unsecured Debt Securities (incorporated by reference to Exhibit 4(e) in File No. 33-64014).
*4j.	Amended and Restated Credit Agreement, dated as of November 3, 2021, among Northwest Natural Holding Company and the lenders party thereto, with JPMorgan Chase Bank, N.A. as administrative agent and Bank of America, N.A., U.S. Bank National Association, and Wells Fargo Bank, National Association, as co-syndication agents, as amended by Amendment No.1, dated as of January 20, 2023 (incorporated by reference to Exhibit 4i to Form 10-K for 2022, File No. 1-15973).
*4k.	Amended and Restated Credit Agreement, dated as of November 3, 2021, among Northwest Natural Gas Company and the lenders party thereto, with JPMorgan Chase Bank, N.A. as administrative agent and Bank of America, N.A., U.S. Bank National Association, and Wells Fargo Bank, National Association, as co-syndication agents, as amended by Amendment No. 1, dated as of January 20, 2023 (incorporated by reference to Exhibit 4j to Form 10-K for 2022, File No. 1-38681).
*4l.	Credit Agreement, dated as of June 10, 2021, among NW Natural Water Company, LLC, Northwest Natural Holding Company, the lenders party thereto, and Bank of America, N.A., as administrative agent (incorporated by reference to Exhibit 4.2 to the Form 8-K filed June 14, 2021, File No. 1-38681).
*4m.	Credit Agreement, dated as of June 10, 2021, among Northwest Natural Gas Company, the lenders party thereto, and U.S. Bank National Association, as administrative agent (incorporated by reference to Exhibit 4.1 to the Form 8-K filed June 14, 2021, File No. 1-15973).
*4n.	Credit Agreement, dated as of September 15, 2022, among Northwest Natural Holding Company and the lenders party thereto, with U.S. Bank National Association as administrative agent (incorporated by reference to Exhibit 4.1 to the Form 8-K filed September 21, 2022, file No. 1-38681).
*4o.	Credit Agreement, dated as of September 15, 2022, among NW Natural Water Company, LLC, Northwest Natural Holding Company and the lenders party thereto, with U.S. Bank National Association as administrative agent (incorporated by reference to Exhibit 4.2 to the Form 8-K filed September 21, 2022, file No. 1-38681).
*4p.	Description of securities registered under Section 12 of the Exchange Act of 1934 (incorporated by reference to Exhibit 4j to Form 10-K for the year ended December 31, 2019, File No. 1-38681).
4q.	Note Purchase Agreement dated December 14, 2023, between Northwest Natural Holding Company and the institutional investors named as purchasers therein.
4r.	Uncommitted Letter of Credit and Reimbursement Agreement dated January 5, 2024, among Northwest Natural Gas Company, the lenders party thereto, and Canadian Imperial Bank of Commerce, New York Branch, as administrative agent.
21	Subsidiaries of Northwest Natural Holding Company.
23a.	Consent of PricewaterhouseCoopers LLP - NW Holdings.
23b.	Consent of PricewaterhouseCoopers LLP - NW Natural.
31.1	Certification of Principal Executive Officer of Northwest Natural Gas Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer of Northwest Natural Gas Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.3	Certification of Principal Executive Officer of Northwest Natural Holding Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.

31.4	Certification of Principal Financial Officer of Northwest Natural Holding Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
**32.1	Certification of Principal Executive Officer and Principal Financial Officer of Northwest Natural Gas Company Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
**32.2	Certification of Principal Executive Officer and Principal Financial Officer of Northwest Natural Holding Company Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97	Northwest Natural Holding Company Compensation Recovery Policy, effective as of December 1, 2023.
101	The following materials formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) Consolidated Statements of Income; (ii) Consolidated Balance Sheets; (iii) Consolidated Statements of Cash Flows; and (iv) Related notes.
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2023, formatted in Inline XBRL and contained in Exhibit 101.

Executive Compensation Plans and Arrangements:

*10a.	Executive Supplemental Retirement Income Plan, 2018 Restatement (incorporated herein by reference to Exhibit 10.6 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*10b.	Supplemental Executive Retirement Plan of Northwest Natural Gas Company, 2018 Restatement, as amended July 25, 2019 (incorporated by reference to Exhibit 10.1 to the Form 10-Q for the quarter ended June 30, 2019, File No. 1-15973).
*10c.	Northwest Natural Gas Company Supplemental Trust, effective January 1, 2005, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.9 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*10d.	Northwest Natural Gas Company Umbrella Trust for Directors, effective January 1, 1991, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.11 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*10e.	Northwest Natural Gas Company Umbrella Trust for Executives, effective January 1, 1988, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.10 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*10f.	Executive Deferred Compensation Plan, effective as of January 1, 1987, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.4 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*10g.	Directors Deferred Compensation Plan, effective June 1, 1981, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.5 to the Form 8-K dated October 1, 2018, File No. 1-38681).
*10h.	Deferred Compensation Plan for Directors and Executives, effective January 1, 2005, restated as of September 23, 2021 (incorporated by reference to Exhibit 10.1 to the Form 10-Q for the quarter ended September 30, 2021, File No. 1-38681).
*10i.	Form of Indemnity Agreement as entered into between Northwest Natural Gas Company and each director and certain executive officers (incorporated by reference to Exhibit 10.1 to Form 10-Q the quarter ended September 30, 2023, File No. 1-15973).
*10j.	Form of Indemnity Agreement as entered into between Northwest Natural Holding Company and each director and certain executive officers (incorporated by reference to Exhibit 10.2 to Form 10-Q for the quarter ended September 30, 2023, File No. 1-38681).

*10k.	Non-Employee Directors Stock Compensation Plan, as amended effective December 15, 2005 (incorporated by reference to Exhibit 10.2 to Form 8-K dated December 16, 2005, File No. 1-15973).
*10l.	Executive Annual Incentive Plan, effective February 23, 2023 (incorporated by reference to Exhibit 10m to Form 10-K for 2022, File No. 1-15973).
10m.	Executive Annual Incentive Plan, effective February 22, 2024.
*10n.	Form of Change in Control Severance Agreement between Northwest Natural Gas Company and David Anderson, as amended and restated as of February 23, 2023 (incorporated by reference to Exhibit 10o to Form 10-K for 2022, File No. 1-15973).
*10o.	Form of Change in Control Severance Agreement between Northwest Natural Gas Company and each executive officer (other than David Anderson), as amended and restated as of February 23, 2023 (incorporated by reference to Exhibit 10p to Form 10-K for 2022, File No. 1-15973).
*10q.	Northwest Natural Gas Company Long Term Incentive Plan, as amended and restated as of October 1, 2018 (incorporated by reference to Exhibit 10.1 to Form 8-K dated October 1, 2018, File No. 1-38681).
*10r.	Northwest Natural Holding Company Long Term Incentive Plan, as amended and restated as of February 23, 2023 (incorporated by reference to Exhibit 10s to Form 10-K for 2022, File No. 1-38681).
10s.	Northwest Natural Holding Company Long Term Incentive Plan, as amended and restated as of February 22, 2024.
*10t.	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2021-2023)(incorporated by reference to Exhibit 10w to Form 10-K for 2020, File No. 1-38681).
*10u.	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2022-2024) (incorporated by reference to Exhibit 10w to Form 10-K for 2021, File No. 1-38681).
*10v.	Form of Amendment to Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2021-2023) and Long Term Incentive Plan (2022-2024) (incorporated by reference to Exhibit 10w to Form 10-K for 2022, File No. 1-15973).
*10w.	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2023-2025) (incorporated by reference to Exhibit 10x to Form 10-K for 2022, File No. 1-15973).
10x.	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2024-2026).
*10y.	Form of Consent dated December 14, 2006 entered into by each executive officer with respect to amendments to the Executive Supplemental Retirement Income Plan, the Supplemental Executive Retirement Plan and certain change in control severance agreements (incorporated by reference to Exhibit 10.1 to Form 8-K dated December 19, 2006, File No. 1-15973).
*10z.	Consent to Amendment of Deferred Compensation Plan for Directors and Executives, dated February 28, 2008 entered into by each executive officer (incorporated by reference to Exhibit 10bb to Form 10-K for 2007, File No. 1-15973).
*10aa.	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2023) (incorporated by reference to Exhibit 10bb to Form 10-K for 2022, File No. 1-38681).
10bb.	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2024).
*10cc.	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2022) (incorporated by reference to Exhibit 10z to Form 10-K for 2021, File No. 1-38681).

*10dd.	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2021) (incorporated by reference to Exhibit 10z to Form 10-K for 2020, File No. 1-38681).
*10ee.	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2020) (incorporated by reference to Exhibit 10aa to Form 10-K for 2019, File No. 1-38681).
*10ff.	Cash Retention Agreement between Northwest Natural Gas Company and an executive officer, dated as of March 1, 2018 (incorporated by reference to Exhibit 10ss to Form 10-K for 2017, File No. 1-15973).
10gg.	Form of Amendment of Award Agreements, dated February 22, 2024, entered into by each executive officer.

*Incorporated by reference as indicated
**Pursuant to Item 601(b)(32)(ii) of Regulation S-K, this certificate is not being "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, each registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized. The signature for each undersigned company shall be deemed to relate only to matters having reference to such company and its subsidiaries.

NORTHWEST NATURAL HOLDING COMPANY

By: /s/ David H. Anderson
David H. Anderson
Chief Executive Officer
Date: February 23, 2024

NORTHWEST NATURAL GAS COMPANY

By: /s/ David H. Anderson
David H. Anderson
Chief Executive Officer
Date: February 23, 2024

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated. The signatures of each of the undersigned shall be deemed to relate only to matters having reference to the below named company and its subsidiaries.

NORTHWEST NATURAL HOLDING COMPANY

Signature	Title	Date
/s/ David H. Anderson David H. Anderson Chief Executive Officer	Principal Executive Officer and Director	February 23, 2024
/s/ Brody J. Wilson Brody J. Wilson Chief Financial Officer, Chief Accounting Officer, Vice President, Treasurer	Principal Financial Officer and Principal Accounting Officer	February 23, 2024
/s/ Timothy P. Boyle Timothy P. Boyle	Director	)
/s/ Monica Enand Monica Enand	Director	)
/s/ Karen Lee Karen Lee	Director	)
/s/ Dave McCurdy Dave McCurdy	Director	)
/s/ Sandra McDonough Sandra McDonough	Director	February 23, 2024)
/s/ Nathan I. Partain Nathan I. Partain	Director	)
/s/ Jane L. Peverett Jane L. Peverett	Director	)
/s/ Kenneth Thrasher Kenneth Thrasher	Director	)
/s/ Malia H. Wasson Malia H. Wasson	Director	)
/s/ Charles A. Wilhoite Charles A. Wilhoite	Director	)

NORTHWEST NATURAL GAS COMPANY

Signature	Title	Date
/s/ David H. Anderson David H. Anderson Chief Executive Officer	Principal Executive Officer and Director	February 23, 2024
/s/ Brody J. Wilson Brody J. Wilson Chief Financial Officer, Chief Accounting Officer, Vice President, Treasurer	Principal Financial Officer and Principal Accounting Officer	February 23, 2024
/s/ Timothy P. Boyle Timothy P. Boyle	Director	)
/s/ Monica Enand Monica Enand	Director	)
/s/ Karen Lee Karen Lee	Director	)
/s/ Dave McCurdy Dave McCurdy	Director	)
/s/ Sandra McDonough Sandra McDonough	Director	February 23, 2024)
/s/ Nathan I. Partain Nathan I. Partain	Director	)
/s/ Jane L. Peverett Jane L. Peverett	Director	)
/s/ Kenneth Thrasher Kenneth Thrasher	Director	)
/s/ Malia H. Wasson Malia H. Wasson	Director	)
/s/ Charles A. Wilhoite Charles A. Wilhoite	Director	)
/s/ Steven E. Wynne Steven E. Wynne	Director	)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2023 .
OR
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____.
Commission file number 001-36108

ONE Gas, Inc.

(Exact name of registrant as specified in its charter)

Oklahoma	**46-3561936**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
15 East Fifth Street	
Tulsa, OK	**74103**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **(918) 947-7000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol**	**Name of exchange on which registered**
Common Stock, par value $0.01 per share	OGS	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the equity securities held by nonaffiliates based on the closing trade price of the registrant on June 30, 2023, was $ 4.1 billion.

On February 16, 2024, we had 56,546,006 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:
Portions of the definitive proxy statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held May 23, 2024, are incorporated by reference in Part III.

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ONE Gas, Inc.
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As used in this Annual Report, references to "we," "our," "us" or the "Company" refer to ONE Gas, Inc., an Oklahoma corporation, and its predecessors and subsidiaries, unless the context indicates otherwise.

The statements in this Annual Report that are not historical information, including statements concerning plans and objectives of management for future operations, economic performance or related assumptions, are forward-looking statements. Forward-looking statements may include words such as "will," "anticipate," "estimate," "expect," "project," "intend," "plan," "believe," "should," "goal," "forecast," "guidance," "could," "may," "continue," "might," "potential," "scheduled," "likely" and other words and terms of similar meaning. Although we believe that our expectations regarding future events are based on reasonable assumptions, we can give no assurance that such expectations and assumptions will be achieved. Important factors that could cause actual results to differ materially from those in the forward-looking statements are described under Part I, Item 1A, Risk Factors, and Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operation, Forward-Looking Statements, in this Annual Report.

AVAILABLE INFORMATION

We make available, free of charge, on our website (www.onegas.com) our Annual Reports, Quarterly Reports, Current Reports on Form 8-K, amendments to those reports filed or furnished to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act and reports of holdings of our securities filed by our officers and directors under Section 16 of the Exchange Act. Such materials are available as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the SEC, which also makes these materials available on its website (www.sec.gov). Our Code of Business Conduct and Ethics, Corporate Governance Guidelines, Certificate of Incorporation, bylaws, the written charters of our Audit Committee, Executive Compensation Committee, Corporate Governance Committee and Executive Committee and our ESG Report are also available on our website, and copies of these documents are available upon request.

In addition to filings with the SEC and materials posted on our website, we also use social media platforms as channels of information distribution to reach investors and other stakeholders. Information contained on our website and posted on or disseminated through our social media accounts is not incorporated by reference into this report.

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GLOSSARY

The abbreviations, acronyms and industry terminology used in this Annual Report are defined as follows:

AAO	Accounting Authority Order
ADIT	Accumulated deferred income taxes
AFUDC	Allowance for funds used during construction
Annual Report	Annual Report on Form 10-K for the year ended December 31, 2023
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Bcf	Billion cubic feet
CAA	Federal Clean Air Act, as amended
CERCLA	Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended
CFTC	Commodities Futures Trading Commission
CISA	Cybersecurity and Infrastructure Security Agency
Clean Water Act	Federal Water Pollution Control Amendments of 1972, as amended
CNG	Compressed natural gas
Code	Internal Revenue Code of 1986, as amended
COSA	Cost-of-Service Adjustment
DART	Days Away, Restricted or Transferred Incident Rate; calculated by multiplying the total number of recordable injuries and illnesses, or one or more restricted days that resulted in an employee transferring to a different job within the company by 200,000, and then dividing that number by the total number of hours worked by all employees
DHS	United States Department of Homeland Security
DOT	United States Department of Transportation
Dth	Dekatherm
ECP	The ONE Gas, Inc. Amended and Restated Equity Compensation Plan (2018)
EDIT	Excess deferred income taxes resulting from a change in enacted tax rates
EPA	United States Environmental Protection Agency
EPS	Earnings per share
ER	Emissions Reduction; measured by the reduction of MTCO2e emissions through planned vintage main replacements and service line replacements.
ERT	Emergency Response Time; calculated as the time between the creation of an emergency order and the arrival of a first company responder to the scene expressed as the percentage of emergency orders with a response time of 30 minutes or less
ESG	Environmental, social and governance
ESPP	The ONE Gas, Inc. Amended and Restated Employee Stock Purchase Plan
Exchange Act	Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
GAAP	Accounting principles generally accepted in the United States of America
GRIP	Gas Reliability Infrastructure Program
GSRS	Gas System Reliability Surcharge
HDD	Heating degree day is a measure designed to reflect the demand for energy needed for heating based on the extent to which the daily average temperature falls below a reference temperature for which no heating is required, usually 65 degrees Fahrenheit
IRS	United States Internal Revenue Service
IT	Information Technology
KCC	Kansas Corporation Commission
KDHE	Kansas Department of Health and Environment
KGSS-I	Kansas Gas Service Securitization I, L.L.C.
LDC	Local distribution company
LIBOR	London Interbank Offered Rate
MGP	Manufactured gas plant
MMcf	Million cubic feet
Moody’s	Moody’s Investors Service, Inc.

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MTCO2e	Metric ton of carbon dioxide equivalent
NPRM	Notice of proposed rulemaking
NYSE	New York Stock Exchange
OCC	Oklahoma Corporation Commission
ODFA	Oklahoma Development Finance Authority
ONE Gas	ONE Gas, Inc.
ONE Gas Credit Agreement	ONE Gas' $1.2 billion revolving credit agreement, as amended
OSHA	Occupational Safety and Health Administration
PBRC	Performance-Based Rate Change
PHMSA	United States Department of Transportation Pipeline and Hazardous Materials Safety Administration
PIPES Act	Protecting Our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2020
PVIR	Preventable Vehicle Incident Rate; calculated by multiplying the number of total preventable vehicle incidents by 1,000,000 and then dividing that number by the total number of business use miles driven
Quarterly Report(s)	Quarterly Report(s) on Form 10-Q
RNG	Renewable natural gas
ROE	Return on equity calculated consistent with utility ratemaking principles in each jurisdiction in which we operate
RRC	Railroad Commission of Texas
S&P	Standard & Poor's Ratings Services
SEC	Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
Securitized Utility Tariff Bonds	Series 2022-A Senior Secured Securitized Utility Tariff Bonds, Tranche A
Securitized Utility Tariff Property	Securitized Utility Tariff Property as defined in the financing order issued by the KCC in August 2022
Senior Notes	ONE Gas' registered unsecured notes consisting of $300 million of 3.61 percent senior notes due February 2024, $473 million of 1.10 percent senior notes due March 2024, $300 million of 5.10 percent senior notes due April 2029, $300 million of 2.00 percent senior notes due May 2030, $300 million of 4.25 percent senior notes due September 2032, $600 million of 4.66 percent senior notes due February 2044 and $400 million of 4.50 percent senior notes due November 2048
SOFR	Secured Overnight Financing Rate administered by the Federal Reserve Bank of New York
TCEQ	Texas Commission on Environmental Quality
TNG Corporation	Texas Natural Gas Securitization Finance Corporation
TPFA	Texas Public Finance Authority
TRIR	Total Recordable Incident Rate; calculated by multiplying the number of recordable cases by 200,000, and then dividing that number by the number of hours worked by all employees
TSA	United States Department of Homeland Security's Transportation Security Administration
WNA	Weather normalization adjustment(s)
XBRL	eXtensible Business Reporting Language

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PART I.

ITEM 1. BUSINESS

OUR BUSINESS

ONE Gas, Inc. is incorporated under the laws of the state of Oklahoma. Our common stock is listed on the NYSE under the trading symbol “OGS,” and is included in the S&P MidCap 400 Index. We are a 100-percent regulated natural gas distribution utility, headquartered in Tulsa, Oklahoma, and one of the largest publicly traded natural gas utilities in the United States. We are the successor to the company founded in 1906 as Oklahoma Natural Gas Company, which became ONEOK, Inc. (NYSE: OKE) in 1980. On January 31, 2014, ONE Gas officially separated from ONEOK, Inc.

We provide natural gas distribution services to approximately 2.3 million customers and are the largest natural gas distributor in Oklahoma and Kansas and the third largest in Texas, in terms of customers. We primarily serve residential, commercial and transportation customers in all three states. Our largest natural gas distribution markets in terms of customers are Oklahoma City and Tulsa, Oklahoma; Kansas City, Wichita and Topeka, Kansas; and Austin and El Paso, Texas. Our three divisions, Oklahoma Natural Gas, Kansas Gas Service and Texas Gas Service, distribute natural gas to approximately 89 percent, 71 percent and 13 percent of the natural gas distribution customers in Oklahoma, Kansas and Texas, respectively.

OUR STRATEGY

Our mission is to deliver natural gas for a better tomorrow. Our business strategy is focused on:

- Safe and Reliable Energy - We are committed, first and foremost, to pursuing a zero-incident safety and 100-percent compliance culture. A significant portion of our capital spending is focused on the safety, integrity and reliability of our natural gas distribution system. We also deploy a variety of operational and damage prevention procedures and technologies to monitor and maintain our natural gas distribution system. Our Company’s focus on safety also extends to protecting our assets and information systems from physical damage and cyber intrusions.

- A High-performing Workforce - Our employees are the foundation of our Company. Our success begins with a values-driven culture and a commitment to engaging people to do their best work in an inclusive environment.

- Capital Demand Growth - Through capital investments, we meet growing customer demand, support economic development, and manage our system investments for the long-term.

- Clean Energy Solutions - Our assets are essential to a clean energy future. We are focused on reducing our emissions and supporting our customers’ emission reduction efforts.

- Serving Customers - We provide reliable and affordable energy to our customers by efficiently managing our resources and leveraging technology solutions to enhance operational efficiency. Our energy efficiency and education programs help our customers invest in higher efficiency appliances and reduce energy usage. For customers needing assistance, we offer payment arrangement options and seek to connect customers to social service agencies that provide financial assistance.

REGULATORY OVERVIEW

We are subject to regulation and oversight of the state and local regulatory authorities of the territories in which we operate. Rates and charges for natural gas distribution services are established by the OCC for Oklahoma Natural Gas and by the KCC for Kansas Gas Service. Rates and charges in the incorporated cities of our service areas in Texas are established by those cities, which have primary jurisdiction for their respective service areas. Rates and charges in the unincorporated areas of our service territory in Texas are established by the RRC. All appellate matters in Texas are subject to regulatory oversight by the RRC. These regulatory authorities have the responsibility of ensuring that the utilities under their jurisdiction provide safe and reliable service at a reasonable cost, while providing utilities the opportunity to earn a fair and reasonable return on their investments.

Generally, our rates and charges are established in rate case proceedings. Regulatory authorities may also approve mechanisms that allow for adjustments between rate cases for investments made or specific costs incurred. Due to the nature of the regulatory process, there is an inherent lag between the time that we make investments or incur additional costs and the setting of new rates and/or charges to recover those investments or costs. Additionally, we are not allowed recovery of certain costs we incur.

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The following provides additional detail on the regulatory mechanisms in the jurisdictions we serve.

Oklahoma - Oklahoma Natural Gas currently operates under a PBRC mechanism, which provides for streamlined annual rate reviews between rate cases to adjust rates for incremental capital investment and changes in revenue and allowed expenses. Under this mechanism, we have an authorized ROE of 9.4 percent, with a 100 basis point dead-band of 8.9 to 9.9 percent. If our achieved ROE is below 8.9 percent, our base rates are increased upon OCC approval to an amount necessary to restore the ROE to 9.4 percent. If our achieved ROE exceeds 9.9 percent, the portion of the earnings that exceeds 9.9 percent is shared with our customers, who receive the benefit of 75 percent of those earnings. We retain the benefit of the remaining 25 percent. Oklahoma Natural Gas is required to make filings pursuant to the PBRC mechanism for the 12 months ended December 31 for each of the years 2021 through 2025. Oklahoma Natural Gas is also required to file a rate case on or before June 30, 2027, based on a test year ending December 31, 2026.

Kansas - Kansas Gas Service files periodic rate cases with the KCC as needed. Between rate cases, Kansas Gas Service adjusts rates through provisions of the GSRS statute. The GSRS statute allows Kansas Gas Service to file for a rate adjustment providing a recovery of and return on qualifying infrastructure investments incurred between rate case filings, including safety-related investments to replace, upgrade or modernize obsolete facilities, as well as projects that enhance the integrity of pipeline system components or extend the useful life of such assets. Eligible investments also include expenditures for relocations and physical and cyber security. Filings cannot occur more often than once every 12 months and the rate adjustment cannot increase the monthly charge by more than $0.80 per residential customer per month compared with the most recent GSRS filing. Rate adjustments reflected in the GSRS surcharge may only be collected for 60 months before Kansas Gas Service is required to file a rate case or cease collection of the surcharge. A full rate case may be filed at shorter intervals if desired by either Kansas Gas Service or the KCC.

Texas - Texas Gas Service provides service to customers in various service areas. These service areas are further divided into incorporated cities and unincorporated areas. Periodic rate cases are filed with cities or the RRC, as needed. Between rate cases, Texas Gas Service can adjust rates through annual filings pursuant to the GRIP statute or a COSA tariff. In 2022, Texas Gas Service's customers were aggregated in five service areas. Effective February 2023, three of these service areas were consolidated, reducing the total number of service areas to three.

Annual filings under the GRIP statute allow Texas Gas Service to recover depreciation, taxes, and a return on the annual net increase in investment for a service area. After the fifth anniversary of the effective date of the rate schedules from the first GRIP filing for a service area, Texas Gas Service is required to file a full rate case. A full rate case may be filed at shorter intervals if desired by either Texas Gas Service or the regulator. In 2023, Texas Gas Service made annual GRIP filings for the incorporated cities and unincorporated areas in two of its service areas, which combined comprise 91 percent of Texas Gas Service's customers.

Weather normalization - All of our service areas utilize weather normalization mechanisms. These mechanisms are designed to reduce the delivery charge component of customers' bills for the additional volumes used when actual HDDs exceed normalized HDDs and to increase the delivery charge component of customers' bills for the reduction in volumes used when actual HDDs are less than normal HDDs. Normal HDDs are established through rate proceedings in each of our jurisdictions.

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The following tables provide additional detail on our rate structures and the regulatory mechanisms in each of our jurisdictions:

Division	Jurisdiction	Effective Date of Last Action [1]	Rate Base (millions)	Pre-Tax Rate of Return	Equity Ratio	ROE
Oklahoma Natural Gas [2]	Oklahoma	June 2023	$2,066	8.95%	59%	9.40%
Kansas Gas Service [3]	Kansas	November 2023	$1,330	8.60%	N/A	9.30%
Texas Gas Service [2]	Central-Gulf	June 2023	$617	8.95%	59%	9.50%
	West-North	June 2023	$589	8.91%	60%	9.60%
	Rio Grande Valley	January 2024	$160	8.95%	59%	9.70%

Division	Jurisdiction	Interim Rate Adjustment Mechanism	Interim Capital Recovery	WNA	WNA Effective Dates	Energy Efficiency / Conservation Program
Oklahoma Natural Gas	Oklahoma	PBRC	Yes	Yes	November - April	Yes
Kansas Gas Service [3]	Kansas	GSRS	Yes	Yes	January - December	No
Texas Gas Service	Central-Gulf	GRIP	Yes	Yes	September - May	Yes
	West-North	GRIP	Yes	Yes	September - May	No
	Rio Grande Valley	GRIP	Yes	Yes	September - May	Yes

Division	Jurisdiction	Purchased Gas Adjustment [4]	Bad Debt Recovery [5]	Expense Trackers [6]
Oklahoma Natural Gas	Oklahoma	Yes	Yes	N/A
Kansas Gas Service [3]	Kansas	Yes	Yes	Yes
Texas Gas Service	Central-Gulf	Yes	Yes	Yes
	West-North	Yes	Yes	Yes
	Rio Grande Valley	Yes	Yes	Yes

(1) Effective date of last approved rate case or interim filing.

(2) The rate base, authorized ROE, authorized debt/equity ratio and authorized return on equity presented in this table are those from the most recent approved regulatory filing for Oklahoma Natural Gas and Texas Gas Service.

(3) Kansas Gas Service's most recent rate case, approved in February 2019, settled without a determination of rate base, ROE, authorized debt/equity ratio and authorized return on equity. This reflects Kansas Gas Service's estimate of rate base from that rate case adjusted for approved GSRS filings and ROE embedded in the pre-tax carrying charge utilized in its GSRS filing.

(4) Our purchased gas adjustment mechanisms allow recovery of expenses the Company incurs to purchase, transport, and store natural gas for our customers. These costs are passed on to customers without markup.

(5) We recover the gas cost portion of bad debts through our various purchased gas adjustment mechanisms.

(6) Expense trackers include pension and other postemployment benefits costs for Kansas Gas Service and Texas Gas Service, ad-valorem taxes in Kansas and pipeline integrity testing expenses in Texas.

Our natural gas sales include fixed and variable charges related to the delivery of natural gas and gas costs that are passed through to our customers in accordance with our cost of natural gas regulatory mechanisms. Fixed charges reflect the portion of our natural gas sales attributable to the monthly fixed customer charge component of our rates, which does not fluctuate based on customer usage in each period. Variable charges reflect the portion of our natural gas sales that fluctuate with the volumes delivered and billed and the effects of weather normalization.

For the year ended December 31, 2023, approximately 89 percent, 56 percent, and 70 percent of our revenues from sales customers, excluding the cost of natural gas, were recovered from fixed charges for Oklahoma Natural Gas, Kansas Gas Service, and Texas Gas Service, respectively.

MARKET CONDITIONS AND SEASONALITY

Supply - We purchased 160 Bcf and 165 Bcf of natural gas supply in 2023 and 2022, respectively. Our natural gas supply portfolio consists of contracts with varying terms from a diverse group of suppliers. We award these contracts through competitive-bidding processes to ensure reliable and competitively priced natural gas supply. We acquire our natural gas supply from natural gas processors, marketers and producers.

An objective of our supply-sourcing strategy is to provide value to our customers through reliable, competitively priced and flexible natural gas supply and transportation from multiple production areas and suppliers. This strategy is designed to mitigate the impact on our supply from physical interruptions, financial difficulties of a single supplier, natural disasters and other

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unforeseen force majeure events, as well as to ensure that adequate supply is available to meet the variations of customer demand.

We do not anticipate problems with securing natural gas supply to satisfy customer demand; however, if supply shortages were to occur, we have curtailment provisions in our tariffs that allow us to reduce or discontinue natural gas service to large industrial users and to request that residential and commercial customers reduce their natural gas requirements to an amount essential for public health and safety. In addition, during times of critical supply disruptions, curtailments of deliveries to customers with firm contracts may be made in accordance with guidelines established by appropriate federal, state and local regulatory agencies.

Natural gas supply requirements for our sales customers are impacted by weather and economic conditions. Our customers' usage may also change in response to a variety of factors, including:

- the occurrence of a significant disruption in natural gas supplies, either by itself, or accompanied by higher or lower natural gas prices;
- the availability of more energy-efficient construction methods or home improvements such as installation or replacement of insulated doors and windows, additional or energy efficient insulation and installation or replacement of existing appliances with more efficient appliances; and
- fuel switching from natural gas to other energy alternatives.

In each jurisdiction in which we operate, changes in customer usage are considered in the periodic redesign of our rates.

As of December 31, 2023, we had 58.1 Bcf of natural gas storage capacity under contract with remaining terms ranging from one to ten years and maximum allowable daily withdrawal capacity of approximately 1.7 Bcf. This storage capacity allows us to purchase natural gas during the off-peak season and store it for use in the winter periods. This storage is also needed to support the reliability of gas deliveries during peak demands for natural gas. Approximately 32 percent of our winter natural gas supply needs for our sales customers is expected to be supplied from storage.

In managing our natural gas supply portfolios, we partially mitigate price volatility for our customers using a combination of natural gas in storage, fixed-price natural gas contracts, and financial derivatives. We have natural gas financial hedging programs that have been authorized by the OCC, KCC and certain jurisdictions in Texas. We do not utilize financial derivatives for speculative purposes, nor do we have trading operations associated with our business.

Demand - See discussions below under Seasonality, Competition and CNG for factors affecting demand for our services.

Seasonality - Natural gas sales to residential and commercial customers are seasonal, as a substantial portion of their natural gas requirements are for heating. Accordingly, the volume of natural gas sales is normally higher during the months of November through March than in other months of the year. The impact on our natural gas sales resulting from weather temperatures that are above or below normal is offset partially through our WNA mechanisms. See the tables above under Regulatory Overview for additional information.

Competition - We encounter competition based on customers' preference for natural gas, compared with other energy alternatives and their comparative prices. We compete primarily to supply energy for space and water heating, cooking and clothes drying. Significant energy usage competition occurs between natural gas and electricity in the residential and small commercial markets. Customers and builders typically make the decision on the type of equipment, and therefore the energy source, at initial installation, generally locking in the chosen energy source for the life of the equipment. Changes in the competitive position of natural gas relative to electricity and other energy alternatives have the potential to cause a decline in consumption of natural gas or in the number of natural gas customers.

We are subject to competition from other pipelines for our large industrial and commercial customers. Under our transportation tariffs, qualifying industrial and commercial customers are able to purchase their natural gas supply from the provider of their choice and contract with us to transport it for a fee. A portion of the transportation services that we provide are at negotiated rates that are below the maximum approved transportation tariff rates. Reduced-rate transportation service may be negotiated when a competitive pipeline is in close proximity or another viable energy option is available to the customer. In Texas, we are also subject to competition from other local distribution companies.

CNG - In meeting demand for CNG for motor vehicle transportation, particularly from fleet operators who value its lower greenhouse gas emissions and operating fuel costs relative to gasoline- or diesel-powered vehicles, we supply natural gas to CNG fueling stations. We deploy capital to connect our system to CNG stations built and operated by third parties. As of December 31, 2023, we supply 152 fueling stations, 37 of which we operate in conjunction with our own fleets. Of the 115

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remaining stations, 69 are retail and 46 are private stations. We transported approximately 2.8 million Dth to CNG stations each year in 2023 and 2022.

Alternative Fuels – RNG and hydrogen technologies offer potential opportunities to secure new gas supply sources that could be transported through our pipelines. Our evaluation of these technologies and opportunities includes: (1) establishing interconnection guidelines for delivery of alternative fuels to our system, (2) working directly with developers and end-use customers to identify potential alternative fuel supply projects, (3) analyzing pipeline system integrity and gas supply implications, including sourcing opportunities, related to hydrogen use in our system, (4) partnering with industry groups to identify opportunities for hydrogen blending and utilization, and (5) evaluating the opportunity to reduce greenhouse gas emissions through the use of alternative fuels. See additional information regarding RNG in the “Regulatory Activities” section of Management’s Discussion and Analysis of Financial Condition and Results of Operations.

ENVIRONMENTAL AND SAFETY MATTERS

See Note 15 of the Notes to Consolidated Financial Statements and Management’s Discussion and Analysis of Financial Condition and Results of Operations in this Annual Report for information regarding environmental and safety matters.

HUMAN CAPITAL

We intentionally foster an inclusive work culture, where a broad range of viewpoints are welcome, to develop an engaged and high-performing workforce and an environment where top talent wants to work.

Employment - We employed approximately 3,900 people at February 1, 2024, including approximately 700 people at Kansas Gas Service who are subject to collective bargaining agreements. The following table sets forth our contracts with collective bargaining units at February 1, 2024:

Union	Approximate Employees	Contract Expires
The United Steelworkers	400	May 31, 2025
International Brotherhood of Electrical Workers	300	June 30, 2024

We recognize that employees are a key stakeholder group for the success of our business. Therefore, we perform an annual survey to monitor and assess employee engagement.

Workplace Health and Safety - Safety is our number one core value. We are committed to pursuing a zero-incident safety culture, which can reduce risk, enhance productivity and build a strong reputation in the communities in which we operate. Our success is reliant on training and development, performance management and shared responsibility that focuses on engagement and ensures our employees know what is expected to keep themselves, their co-workers, our customers and communities safe. To reinforce our commitment to the safety and well-being of our co-workers, customers and communities, our short-term incentive compensation program includes four operational measures, ER, DART, PVIR and ERT. These measures focus on the importance of personal injury prevention, reducing the severity of injuries, safe driving, and public safety. The following table sets forth our performance for the periods indicated:

	Years Ended December 31,		
Operational measure	**2023**	**2022**	**2021**
ER	**3,076**	—	—
TRIR	**—**	1.37	0.96
DART	**0.16**	0.22	0.22
PVIR	**1.82**	1.84	2.10
ERT	**64.8%**	62.7%	62.7%

DART and PVIR are personal safety metrics tracked by the American Gas Association. We regularly rank in the top quartile for similar-sized LDCs for these metrics.

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We are committed to a supportive culture of physical, financial, emotional and social wellness for employees. We provide health and wellness programs to support and inspire our employees to make healthy personal and professional lifestyle choices.

Inclusion and Diversity - Our core values include inclusion and diversity, and we believe in creating opportunities to recognize the value and voice of every employee. As part of our commitment, we have and continue to consider inclusion and diversity implications in our recruiting process, Company training, and Company performance monitoring. For example, we monitor our workforce diversity statistics across roles and seniority levels. Additionally, we make available conscious inclusion training to all employees.

We have an Inclusion and Diversity Council, which is chaired by our Chief Executive Officer, and includes six employees serving as permanent members, and 14 employees serving as rotating members with three-year terms. The Inclusion and Diversity Council provides governance and guidance for implementing our strategy and sharing our vision of an inclusive and diverse workforce. In addition, we have employee-led resource groups to provide community and support to our employees based on shared characteristics, interests or experiences.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

All executive officers are elected annually by our Board of Directors and each serves until such person resigns, is removed or is otherwise disqualified to serve or until such officer's successor is duly elected. Our executive officers listed below include the officers who have been designated by our Board of Directors as our Section 16 officers.

Name	Age*		Business Experience in Past Five Years
Robert S. McAnnally	60	2021 to present	President, Chief Executive Officer and Director
		2020 to 2021	Senior Vice President and Chief Operating Officer
		2015 to 2020	Senior Vice President, Operations
Christopher P. Sighinolfi	40	2024 to present	Senior Vice President and Chief Financial Officer
		2022 to 2024	Vice President, Corporate Development and Investor Relations
		2021 to 2022	Vice President, Corporate Development
		2016 to 2021	Managing Director, Jefferies Financial Group, Inc.
Joseph L. McCormick	64	2014 to present	Senior Vice President, General Counsel and Assistant Secretary
Curtis L. Dinan	56	2021 to present	Senior Vice President and Chief Operating Officer
		2020 to 2021	Senior Vice President and Chief Commercial Officer
		2019 to 2020	Senior Vice President, Commercial
		2018 to 2019	Senior Vice President and Chief Financial Officer
Mark A. Bender	59	2015 to present	Senior Vice President, Administration and Chief Information Officer
W. Kent Shortridge	57	2022 to present	Senior Vice President, Operations and Customer Service
		2018 to 2022	Managing Vice President, Operations
Brian F. Brumfield	56	2022 to present	Vice President, Chief Accounting Officer and Controller
		2017 to 2022	Controller, Tucson Electric Power/UNS Energy
Angela E. Kouplen	49	2023 to present	Senior Vice President and Chief Human Resources Officer
		2022 to 2023	Vice President of Administration and Chief Information Officer, the University of Tulsa
		2021 to 2022	Vice President and Chief Information Officer, the University of Tulsa
		2016 to 2021	Senior Vice President of Administration and Chief Information Officer, WPX Energy

* As of January 1, 2024

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No family relationship exists between any of the executive officers, nor is there any arrangement or understanding between any executive officer and any other person pursuant to which the officer was selected.

ITEM 1A. RISK FACTORS

Our investors should consider the following risks that could affect us and our business. Although we believe we have discussed the key factors, our investors need to be aware that other risks may prove to be important in the future. New risks may emerge at any time, and we cannot predict such risks or estimate the extent to which they may affect our financial performance. Investors should carefully consider the following discussion of risks and the other information included or incorporated by reference in this Annual Report, including Forward-Looking Statements, which are included in Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

OPERATIONAL RISKS

Our business is subject to operational hazards and unforeseen interruptions that could materially and adversely affect our business and for which we may not be insured adequately.

We are subject to all the risks and hazards typically associated with the natural gas distribution business that could affect the public safety as well as the reliability of our distribution system. Operating risks include, but are not limited to, leaks, accidents, pipeline ruptures and the breakdown or failure of equipment or processes. Other operational hazards and unforeseen interruptions include adverse weather conditions, accidents, explosions, fires, the collision of equipment or vehicles with our pipeline facilities and catastrophic events, such as severe weather events, hurricanes, thunderstorms, tornadoes, sustained extreme temperatures, earthquakes, floods, acts of terrorism, pandemics and other health crises, or other similar events beyond our control. Climate change could cause these catastrophic events to become more severe or more frequent. It is also possible that our facilities, or those of our counterparties or service providers, could be direct targets or indirect casualties of an act of terrorism, including cyber-attacks. These issues could result in legal liability, repair and remediation costs, increased operating costs, significantly increased capital expenditures, regulatory fines and penalties and other costs and a loss of customer confidence.

Our general liability, cyber, and property insurance policies for many of these hazards and risks are subject to certain limits, deductibles, and policy exclusions. The insurance proceeds received for any loss of, or any damage to, any of our systems or facilities or to third parties may not be sufficient to restore the total loss or damage. Further, the proceeds of any such insurance may not be received in a timely manner. The occurrence of any of the foregoing could have a material adverse effect on our financial condition, results of operations and cash flows.

We may be unable to attract and retain management and professional and technical employees, or we may experience workforce disruptions due to strikes or work stoppages by our unionized employees, which could adversely impact our operations, earnings, and cash flows.

Our ability to implement our business strategy, satisfy our regulatory requirements, and serve our customers is dependent upon our ability to continue to recruit and employ a skilled, agile, diverse, and engaged workforce consisting of talented and experienced managers, professional and technical employees. The competition for talent has become increasingly intense and we may experience increased employee turnover due to a tight labor market. If we are unable to recruit and retain an appropriately qualified workforce, we could encounter operating challenges primarily due to a loss of institutional knowledge and expertise, errors due to inexperience, or the lengthy time period typically required to adequately train replacement personnel. In addition, higher costs could result from loss of productivity, increased safety compliance issues, or cost of contract labor. Additionally, approximately 18 percent of our employees are represented by collective-bargaining units under collective-bargaining agreements. Disputes over the agreements or failure to timely and effectively renegotiate new agreements upon their expiration could have a negative effect on our business, financial condition and results of operations or result in a work stoppage. Any future work stoppage could, depending on the breadth and the length of the work stoppage, have a material adverse effect on our financial condition, results of operations and cash flows.

The availability of adequate natural gas pipeline transportation and storage capacity and natural gas supply may decrease and impair our ability to meet customers' natural gas requirements and our financial condition may be adversely affected.

In order to meet customers' natural gas demands, we rely on and must obtain sufficient natural gas supplies, pipeline transportation and storage capacity from third parties. If we are unable to obtain these, our ability to meet our customers' natural gas requirements could be impaired. If a substantial disruption to or reduction in natural gas supply, pipeline capacity or

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storage capacity occurred due to operational failures or disruptions, legislative or regulatory actions, hurricanes, tornadoes, floods, earthquakes, extreme cold weather, acts of terrorism, or cyber-attacks or acts of war, our operations or financial results could be adversely affected.

Our business increasingly relies on technology, the failure of which may adversely affect our financial results and cash flows.

Due to technological advances, we have become more reliant on technology to effectively operate our business. We use computer programs and applications to help run our business, including an enterprise resource planning system that integrates data and reporting activities across our Company. Additionally, certain portions of our IT systems and infrastructure are provided or maintained by third-party vendors. The failure of these or other similarly important technologies, the lack of alternative technologies, or our inability to have these technologies supported, updated, expanded, or integrated into other technologies, could hinder our operations, and adversely impact our financial condition and results of operations.

The occurrence of cyber breaches or physical security attacks on our business, or those of third parties, may disrupt or adversely affect our operations or result in the loss or misuse of confidential and proprietary information.

Any cyber breaches or physical security attacks, or threats of such attacks, that affect our IT systems, distribution facilities, customers, suppliers and third-party service providers or any financial data could disrupt normal business operations, expose sensitive information, and/or lead to physical damages that may have a material adverse effect on our business. A severe attack or security breach could adversely affect our business reputation, diminish customer confidence, disrupt operations, subject us to financial liability or increased regulation, increase our costs and expose us to material legal claims and liability which may not be fully covered by insurance, and our business, financial condition, results of operations and cash flows could be adversely affected. As cyber or physical security attacks become more frequent and sophisticated, we could be required to incur increased costs to strengthen our systems or to obtain additional insurance coverage against potential losses. Federal and state regulatory agencies, such as DHS and TSA, are increasingly focused on risks related to physical security and cybersecurity in general and have promulgated more stringent security regulations specifically for certain federal contractors and critical infrastructure sectors, including natural gas distribution. Any failure to comply with such government regulations may have a material adverse effect on our results of operations and financial condition.

We are subject to various risks associated with climate change which could increase our operating costs or restrict our opportunities in new or existing markets, adversely affecting our financial results, growth, cash flows and results of operations.

Climate change may increase the likelihood of extreme weather in our service territory, and our customers' energy use could increase or decrease depending on the duration and magnitude of any changes. A decrease in energy use due to weather changes may affect our financial condition through decreased revenues and cash flows which are not adequately offset by our WNA mechanisms. Extreme weather conditions in general require increased system resiliency, adding to costs, and can contribute to increased system stresses, including service interruptions. Weather conditions outside of our operating territory could also have an impact on our revenues and cash flows by affecting natural gas prices and the availability of our leased transportation and storage capacity. Weather impacts our operations primarily through severe weather events, including hurricanes, thunderstorms, tornadoes, sustained extreme temperatures, snow and ice storms, earthquakes, floods, or other similar events beyond our control. To the extent the frequency of extreme weather events increases, our costs of providing service and our working capital requirements could increase.

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REGULATORY AND LEGISLATIVE RISKS

We are subject to federal, state, and local regulation of the safety of our systems and operations, including pipeline safety, system integrity, and the safety of our employees and facilities that may require significant expenditures or, in the case of noncompliance, substantial fines or penalties.

We are subject to regulation under federal pipeline safety statutes promulgated by PHMSA, DOT, OSHA, and any analogous state regulations. These include safety requirements for the design, construction, operation, and maintenance of pipelines, including transmission and distribution pipelines. Additionally, the workplaces associated with our facilities are subject to the requirements of DOT and OSHA, and comparable state statutes that regulate the protection of the health and safety of workers. Compliance with existing or new laws and regulations may result in increased capital, operating and other costs which may not be recoverable in rates from our customers or may impact materially our competitive position relative to other energy providers. The failure to comply with these laws, regulations and other requirements, or an accident or injury to employees could expose us to civil or criminal liability, enforcement actions, fines, penalties, or injunctive measures that may not be recoverable through our rates and could have a material adverse effect on our business, financial condition, results of operations, cash flows, and reputation.

We are subject to federal, state, and local laws, rules and regulations that could impact our ability to earn a reasonable rate of return on our invested capital and to fully recover our invested capital, operating costs, and natural gas costs.

We are subject to regulatory oversight from various federal, state, and local regulatory authorities, including the OCC, KCC, RRC and various municipalities in Texas. Regulatory actions from these authorities relate to allowed rates of return, rate design and construct, and purchased gas and operating cost recovery. Therefore, our returns are continuously monitored and are subject to challenge for their reasonableness by regulatory authorities or third-party intervenors. Our ability to obtain timely future rate increases depends on regulatory discretion and therefore, there can be no assurance that we will be able to obtain rate increases, fully recover our costs or that our authorized rates of return will continue at the current levels, which could adversely impact our results of operations, financial condition, and cash flows.

In the normal course of business, assets are placed in service before regulatory action is taken, such as filing a rate case or seeking interim recovery under a capital tracking mechanism that could result in an adjustment of our returns. Once we make a regulatory filing, regulatory bodies have the authority to suspend implementation of the new rates while evaluating the filing. Because of this process, we may suffer the negative financial effects of having placed assets in service that do not initially earn our authorized rate of return or may not be allowed recovery on such expenditures at all.

We are subject to environmental regulations and legislation, including those intended to address climate change, which could increase our operating costs, adversely affecting our financial results, growth, cash flows and results of operations.

We are subject to laws, regulations and other legal requirements enacted or adopted by federal, state and local governmental authorities, including the EPA and any analogous state agencies, relating to protection of the environment, including those that govern discharges of substances into the air and water, the management and disposal of hazardous substances and waste, the clean-up of contaminated sites, groundwater quality and availability, plant and wildlife protection, as well as work practices related to employee health and safety. Environmental legislation also requires that our facilities, sites, and other properties associated with our operations be operated, maintained, abandoned, and reclaimed to the satisfaction of applicable regulatory authorities. The failure to comply with any laws, regulations, permits and other requirements, or the discovery of presently unknown environmental conditions, could expose us to civil or criminal liability, enforcement actions and regulatory fines and penalties and could have a material adverse effect on our business, financial condition, results of operations and cash flows.

International, federal, regional and/or state legislative and/or regulatory initiatives may attempt to regulate greenhouse gas emissions, including carbon dioxide and methane, as a response to the threat of climate change. Various states and municipalities have adopted or are considering adopting legislation, regulations or other regulatory initiatives that are focused on areas such as greenhouse gas cap and trade programs, carbon taxes, reporting and tracking programs, and restrictions on emissions. Such laws or regulations could impose costs tied to carbon emissions, operational requirements or restrictions, or additional charges to fund energy efficiency activities. They could also incentivize alternative energy sources, impose costs or restrictions on end users of natural gas, or result in other costs or requirements, such as costs associated with the adoption of new infrastructure and technology to respond to new mandates.

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We are subject to federal, state, and local laws, rules and regulations that could affect our operations and financial results.

Our business and operations are subject to regulation by a number of federal agencies, including FERC, CFTC, IRS and various state agencies in Oklahoma, Kansas, and Texas, and we are subject to numerous other federal and state laws and regulations. Future changes to laws, regulations and policies may impair our ability to compete for business or recover costs and could adversely affect our cash flows, restrict our ability to make capital investments and may cause us to increase debt and take other actions to conserve cash. Any compliance failure related to these laws and regulations may result in fines, penalties or injunctive measures affecting our operating assets. The fines or penalties for noncompliance with laws and regulations may not be recoverable through our rates. Our failure to comply with applicable regulations could result in a material adverse effect on our business, financial condition, results of operations and cash flows.

FINANCIAL, ECONOMIC AND MARKET RISKS

Unfavorable economic and market conditions could adversely affect our financial condition, earnings, cash flows and limit our future growth.

Weakening economic activity in our markets and supply chain disruptions could result in a loss of existing customers, fewer new customers, especially in newly constructed homes and other buildings, or a decline in energy consumption, any of which could adversely affect our revenues or restrict our future growth. These conditions may make it more difficult for customers to pay their natural gas bills, leading to slow collections and higher-than-normal levels of accounts receivable, which in turn could increase our financing requirements and bad debt expense. Customers may also experience difficulties paying their natural gas bills in the instance of severe weather events that result in higher usage and higher natural gas prices, reducing our collections and increasing our financing requirements and bad debt expense, which could have a material adverse effect on our business, contracts, financial condition, operating results, cash flow, liquidity, and prospects.

Changes in supply and demand within the natural gas markets, as well as other factors, could cause an increase in the price of natural gas. Market conditions can also lead to short-term price spikes in natural gas prices, such as high demand during periods of extreme cold weather or system constraints at specific delivery locations. An increase in the price of natural gas could cause us to experience a significant increase in short-term or long-term debt because we must pay suppliers for natural gas when purchased.

We cannot predict the timing, severity, or duration of any future economic slowdowns or natural gas market disruptions. Fluctuations and uncertainties in the economy may result in higher interest rates and inflationary pressures on the costs of goods, services, and labor. This could increase our expenses and capital spending and decrease our cash flows if we are not able to recover or recover timely such increased costs from our customers. The foregoing could adversely affect our business, financial condition, results of operations and cash flows.

Our business activities are concentrated in three states.

We provide natural gas distribution services to customers in Oklahoma, Kansas, and Texas. Changes in the regional economies, politics, regulations, regulatory decisions by state and local regulatory authorities, and weather patterns of these states could adversely impact our financial condition, results of operations and cash flows.

The inability to access capital or significant increases in the cost of capital could adversely affect our results of operations, cash flows and financial condition.

Our ability to obtain adequate and cost-effective financing is dependent upon the liquidity of the financial markets, as well as our financial condition and credit ratings. Our long-term debt is currently rated as “investment grade” by both of our rating agencies. We rely upon access to both the short-term and long-term credit and capital markets to satisfy our liquidity requirements. If adverse credit conditions or a downgrade in our ratings outlook were to cause a significant limitation on our access to the private credit and public capital markets, we could see a reduction in our liquidity. A significant reduction in our liquidity could in turn trigger a negative change in our ratings outlook or a reduction in our credit ratings by one or both of our rating agencies. Such a downgrade could further limit our access to private credit and/or public capital markets and increase our costs of borrowing. Additionally, the inability to access adequate capital or an increase in the cost of capital may require us to conserve cash, prevent or delay us from making capital expenditures, and require us to reduce or eliminate our dividend or other discretionary uses of cash.

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Our financing arrangements subject us to various restrictions that could limit our operating flexibility, earnings, and cash flows.

The indentures governing our Senior Notes and our ONE Gas Credit Agreement contain customary covenants that restrict our ability to create or permit certain liens, to consolidate or merge, or to convey, transfer or lease substantially all of our properties and assets. Events beyond our control could impair our ability to satisfy these requirements. As long as our indebtedness remains outstanding, these restrictive covenants could impair our ability to expand or pursue our growth strategy.

In addition, the breach of any covenants or any payment obligations in any of these debt agreements will result in an event of default under the applicable debt instrument. If an event of default were to occur, the holders of the defaulted debt may have the ability to cause all amounts outstanding with respect to that debt to be due and payable, subject to applicable grace periods. This could trigger cross-defaults under our other debt agreements, including our Senior Notes. Forced repayment of some or all of our indebtedness could require us to incur new debt at a higher cost, which would have an adverse impact on our financial condition, results of operations and cash flows.

We may pursue acquisitions, divestitures, and other strategic opportunities which, if not successful, may adversely impact our results of operations, cash flows and financial condition.

As part of our strategic objectives, we may pursue acquisitions to complement or expand our business, as well as divestitures and other strategic opportunities. We may not be able to successfully negotiate, finance or receive regulatory approval for future acquisitions or integrate the acquired businesses with our existing business and services. These efforts may also distract our management and employees from day-to-day operations and require substantial commitments of time and resources. Future acquisitions could result in potentially dilutive issuances of equity securities, a decrease in our liquidity as a result of our using a significant portion of our available cash or borrowing capacity to finance the acquisition, the incurrence of debt, contingent liabilities and amortization expenses and substantial goodwill. The effects of these strategic decisions may have long-term implications that are not likely to be known to us in the short-term. We may be materially and adversely affected if we are unable to successfully integrate businesses that we acquire.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

We commit significant resources to protecting and continuing to improve the security of our computer systems, software, networks, and other information or operations technology assets. Our cybersecurity efforts are designed to preserve the confidentiality, integrity, and continued availability of all information owned by, or in the care of, the Company and protect against, among other things, cybersecurity attacks by unauthorized parties attempting to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems, or otherwise cause damage.

Governance

Our Board of Directors considers cybersecurity risk one of the significant risks to our business. As such, the Board of Directors has retained responsibility for overseeing policies and procedures related to cybersecurity and data privacy matters. The Board of Directors routinely evaluates our cybersecurity strategy to review its effectiveness. Management provides reports to the Board of Directors at least quarterly regarding cybersecurity and other information and operations technology risks.

The Company established a governance committee to provide governance and oversight of security and compliance related activities for security and IT in support of their effective and efficient management of risks, strategies, and operational imperatives for the Company. The committee is chaired by our Chief Information Officer and the membership includes a cross-functional team of executives from IT/cybersecurity, operations, customer service, commercial, risk and insurance, finance, and the legal department. The committee is structured to cultivate collaboration across the enterprise and to align and prioritize resources with our strategic plan.

Risk Management and Strategy

The cybersecurity function is centralized under the Senior Vice President and Chief Information Officer, who has over three decades of experience in information technology. The cybersecurity function is comprised of a dedicated team of professionals who work continuously to monitor risks relating to cybersecurity resilience strategy, policy, standards, architecture, and

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processes. We identify and address cybersecurity risks by employing a defense-in-depth methodology, consisting of both proactive and reactive elements. This requires a comprehensive program involving advanced monitoring and defense technology along with recurring situational drills that exercise incident response and crisis management plans. We leverage dedicated internal resources, along with strategic external partnerships, to mitigate cybersecurity threats to the Company. In the event a cybersecurity incident occurs, we maintain cybersecurity insurance to provide appropriate resources for both financial and cyber expertise. We have partnerships for penetration testing, incident response, and various third-party assessments. We deploy both commercially available solutions and proprietary systems to actively manage threats to our technology environment.

Oversight

Our cybersecurity oversight includes our internal control environment, cybersecurity standards, benchmarks, and internal governance committees. Annually, we assess, either internally or by an independent third-party, against multiple cybersecurity maturity models. We also leverage other industry standards and benchmarks, such as National Institute of Standards and Technology (NIST) standards, and Cybersecurity and Infrastructure Security Agency (CISA) best practices to inform our oversight strategy. The governance committee functions to ensure adherence and accountability to these standards and deploy appropriate resources to keep pace with the shifting cybersecurity threat landscape.

We have policies and procedures to oversee and manage the cybersecurity risks associated with both internal or external threats including the regular review of security reports, relevant cyber attestations, and other independent cyber ratings. These practices include technical controls and processes, as well as contractual mechanisms to mitigate risk. Additionally, we utilize cyber ratings, prepared by reputable external agencies which provide an independent ranking of our cybersecurity maturity and coverage, to assess our cyber proficiency on a standalone basis and comparatively against peers and other companies reviewed annually by the Board of Directors. We have also implemented certain third-party risk management processes to vet, select, and monitor suppliers.

Furthermore, we have established an organizational unit within the legal and compliance department that provides independent compliance testing and review for our regulatory obligations, industry standards, and policies and procedures. It supports the IT and cybersecurity department by conducting formal assessments of compliance measures, consulting on control development and enhancement, and facilitating third-party assessments.

Response

In addition to the safeguards in place to minimize the likelihood and impact of a cyber incident, the Company has established response procedures to address in the event they may occur. These response procedures are designed to identify, analyze, contain, and remediate such cyber incidents in a timely, consistent, and compliant manner. Annually, the Company completes incident response, disaster response, and crisis management plan exercises to validate our current readiness. These exercises are intended to test our cybersecurity response plans and resources through simulated cybersecurity incidents, and may include engagement of outside cybersecurity legal counsel, other third-party partners, executive management, and our Board of Directors.

Education

The Company seeks to ensure every employee understands their role in keeping ONE Gas safe from cyber incidents. As part of this commitment, we require our employees to complete recurring cybersecurity awareness training that provides immediate feedback and, if necessary, additional training or remedial action to employees.

Experience

We have experienced no material cybersecurity breaches. As such, we have not spent any material amount of capital on addressing impacts during this time, nor have we incurred any material breach expenses from penalties and settlements. We maintain cybersecurity insurance coverage that we believe is appropriate for the size and complexity of our business.

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ITEM 2. PROPERTIES

The following table sets forth the approximate miles of distribution mains and transmission pipelines we own as of December 31, 2023:

Properties (miles)	OK	KS	TX	Total
Distribution	**19,600**	**11,800**	**11,100**	**42,500**
Transmission	**500**	**1,500**	**300**	**2,300**
Total properties	**20,100**	**13,300**	**11,400**	**44,800**

We lease approximately 300 thousand square feet of office space and other facilities for our operations. In addition, we have 58.1 Bcf of natural gas storage capacity under contract, with maximum allowable daily withdrawal capacity of approximately 1.7 Bcf.

ITEM 3. LEGAL PROCEEDINGS

See Note 15 of the Notes to Consolidated Financial Statements in this Annual Report for information regarding legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II.

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

MARKET HOLDERS AND DIVIDENDS

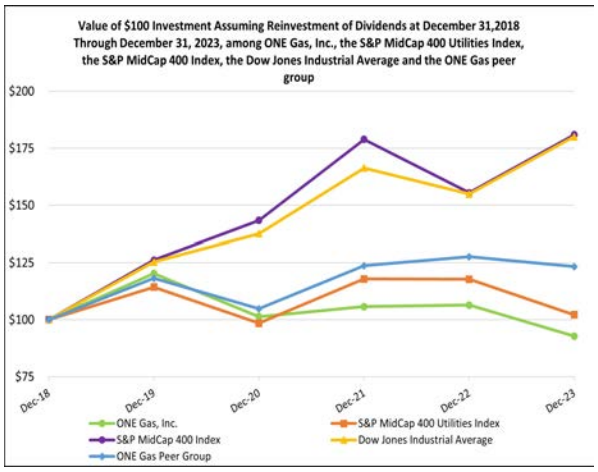
Our common stock is listed on the NYSE under the trading symbol "OGS."

At February 16, 2024, there were 8,969 registered shareholders of our common stock.

In January 2024, we declared a dividend of $0.66 per share ($2.64 per share on an annualized basis) for shareholders of record on February 23, 2024, payable on March 8, 2024.

Performance Graph

The following performance graph compares the performance of our common stock with the S&P MidCap 400 Utilities Index, the S&P MidCap 400 Index, the Dow Jones Industrial Average and a ONE Gas peer group during the period beginning December 31, 2018 and ending on December 31, 2023. This graph assumes a $100 investment in our common stock and in each of the indices at the beginning of the period and a reinvestment of dividends paid on such investments throughout the period.



	Cumulative Total Return As of Each Year Ended December 31,				
	2019	2020	2021	2022	2023
ONE Gas, Inc.	$ 120.28	$ 101.36	$ 105.78	$ 106.40	$ 92.79
S&P MidCap 400 Utilities Index	$ 114.33	$ 98.47	$ 117.92	$ 117.74	$ 102.19
S&P MidCap 400 Index	$ 126.17	$ 143.39	$ 178.85	$ 155.42	$ 180.90
Dow Jones Industrial Average	$ 125.34	$ 137.53	$ 166.34	$ 154.92	$ 180.00
ONE Gas Peer Group *	$ 118.15	$ 104.83	$ 123.73	$ 127.65	$ 123.31

* The ONE Gas peer group used in this graph is the same peer group that will be used in determining our level of performance under our 2023 performance units at the end of the three-year performance period and is comprised of the following companies: Alliant Energy Corporation; Atmos Energy Corporation; Avista Corporation; Black Hills Corporation; CenterPoint Energy, Inc.; Chesapeake Utilities Corporation; CMS Energy Corporation; New Jersey Resources Corporation; NiSource Inc.; Northwest Natural Holding Company; NorthWestern Energy Group, Inc.; Southwest Gas Holdings, Inc.; and Spire Inc.

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ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our audited consolidated financial statements and the Notes to Consolidated Financial Statements in this Annual Report.

EXECUTIVE SUMMARY

We are a 100-percent regulated natural gas distribution company. As such, our regulators determine the rates we are allowed to charge for our service based on the revenue requirements needed to achieve our authorized rates of return. We earn revenues from the delivery of natural gas, but do not earn a profit on the natural gas that we deliver, as those costs are passed through to our customers at cost. The primary components of our revenue requirements are the amount of capital invested in our business, which is also known as rate base, our allowed rate of return on our capital investments and our recoverable operating expenses, including depreciation, interest expense and income taxes. The variable component of our rates is dependent on the consumption of natural gas, which is impacted primarily by the weather and, to a lesser extent, economic activity. While we have WNA mechanisms that adjust customers' bills when actual HDDs differ from normalized HDDs, these mechanisms are in place for only a portion of the year, except in Kansas, and do not offset all fluctuations in usage resulting from weather variability. Accordingly, the weather can have either a positive or negative impact on our financial performance.

Our financial performance is contingent on a number of factors, including: (1) our regulatory construct, including the rates we are allowed to charge for our service, and the authorized rates of return on our investments in rate base; (2) the consumption of natural gas, which impacts the amount of natural gas sales derived from the variable component of our rates; (3) customer growth; (4) our operating performance; and (5) the perceived value of natural gas relative to other energy sources, particularly electricity, which influences our customers' choice of natural gas to provide a portion of their energy needs.

We are subject to regulatory requirements for pipeline integrity, pipeline and cyber security, and environmental compliance. These requirements impact our operating expenses and the level of capital expenditures required for compliance. Historically, our regulators have allowed recovery of these expenditures. However, because integrity and environmental regulations are frequently changing, our capital and operating expenditures to comply are changing as well. Although we believe our regulators will continue to allow recovery of such expenditures in the future, we will continue to make these expenditures with no assurance about if, or over what period, we will be permitted to recover them.

RECENT DEVELOPMENTS

Securitization transactions - In March 2023, the TNG Corporation completed the issuance of the Customer Rate Relief (Winter Storm Uri), Taxable Series 2023 Bonds. On March 23, 2023, we received our portion of the net proceeds, which was approximately $197 million. The proceeds were used to repay debt and for general corporate purposes.

In November 2022, KGSS-I issued $336 million of 5.486 percent Securitized Utility Tariff Bonds. KGSS-I used the proceeds from the issuance to purchase the Securitized Utility Tariff Property from Kansas Gas Service, pay for debt issuance costs, and reimburse Kansas Gas Service for upfront securitization costs paid by Kansas Gas Service on behalf of KGSS-I.

In August 2022, Oklahoma Natural Gas received proceeds of approximately $1.3 billion, which represents the amount of the securitization bonds issued by the ODFA, less issuance costs. The receipt of these proceeds represents Oklahoma Natural Gas' recovery of approximately $1.3 billion of authorized extraordinary natural gas purchase costs and other operational costs incurred during Winter Storm Uri, as well as carrying costs.

Long-Term Debt transactions - In December 2023, we issued $300 million of 5.10 percent senior notes due April 2029. The proceeds from the issuance were used to repay amounts outstanding under our commercial paper program and for general corporate purposes.

In August 2022, we issued $300 million of 4.25 percent senior notes due September 2032. The proceeds from the issuance were used to repay amounts outstanding under our commercial paper program and for general corporate purposes.

In August 2022, we called $750 million of the $1.0 billion of 0.85 percent senior notes due March 2023, $150 million of the $700 million of 1.10 percent senior notes due March 2024 and the remaining $400 million of outstanding floating-rate senior notes due March 2023, using the proceeds received from the securitization transaction for Oklahoma Natural Gas. In November 2022, we called the remaining $250 million of the $1.0 billion of 0.85 percent senior notes due March 2023 and $77 million of the $700 million of 1.10 percent senior notes due March 2024, using the proceeds from the securitization transaction for Kansas Gas Service.

See “Regulatory Activities,” “Liquidity and Capital Resources,” and Notes 1 and 3 of the Notes to Consolidated Financial Statements in this Annual Report for additional discussion of the securitization transactions.

Equity issuances - On December 28, 2023, we settled under forward contracts 1,032,403 shares (289,403 from forwards related to an at-the-market equity distribution agreement and 743,000 from forwards related to underwriting agreements) of our common stock for net proceeds of $79.0 million, or $76.52 per share.

In December 2023, we amended the forward sale agreement we entered into in March 2023 to extend the maturity date of 657,000 shares to December 31, 2024 from December 29, 2023. The amended forward sale agreement provides for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 31, 2024, for 1,257,000 shares of common stock.

In September 2023, we entered into an underwriting agreement and two forward sale agreements for 1.2 million and 180,000 shares of our common stock, respectively. The forward sale agreements provide for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 31, 2024.

In June 2023, we executed forward sale agreements under our current at-the-market equity program for 926,465 shares of our common stock.

In March 2023, we entered into an underwriting agreement and a forward sale agreement for 2.0 million shares of our common stock. The forward sale agreement provided for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 29, 2023, for 1.4 million shares of common stock and by December 31, 2024, for the remaining balance.

In February 2023, we entered into an at-the-market equity distribution agreement under which we may issue and sell shares of our common stock with an aggregate offering price up to $300 million. This at-the-market equity program replaced our previous at-the-market equity program, which began in February 2020, and expired in February 2023. Sales of common stock are made by means of ordinary brokers’ transactions on the NYSE, in block transactions or as otherwise agreed to between us and the sales agent. We are under no obligation to offer and sell common stock under the program. At December 31, 2023, we had $225.5 million of equity available for issuance under the program.

ONE Gas Credit Agreement - In October 2023, we entered into an agreement that increased the capacity of the ONE Gas Credit Agreement to $1.2 billion from $1.0 billion.

In March 2023, we entered into an extension agreement related to the ONE Gas Credit Agreement that extended the maturity date to March 16, 2028, from March 16, 2027.

Other than the increased commitments and term extension, all other terms and conditions of the ONE Gas Credit Agreement remain in full force and effect.

Commercial paper program - In November 2023, we increased the capacity of our commercial paper program to $ 1.2 billion from $ 1.0 billion. Other than the increased capacity, all other terms and conditions of the commercial paper program remain in full force and effect.

Dividend - In January 2024, we declared a dividend of $0.66 per share ($2.64 per share on an annualized basis) for shareholders of record as of February 23, 2024, payable on March 8, 2024.

REGULATORY ACTIVITIES

Oklahoma - As required by our tariff, PBRC filings are made annually on or before March 15 until the next general rate case, which is required to be filed on or before June 30, 2027. In March 2023, Oklahoma Natural Gas filed its required PBRC application for the year ended December 2022. The filed request included a $27.6 million base rate revenue increase, $2.5 million energy efficiency incentive, and $11.9 million of estimated EDIT to be credited to customers in 2024. On June 13, 2023, a settlement in the case was filed with a proposed revenue increase of $26.3 million, a $2.5 million energy efficiency incentive, and a $12.6 million EDIT credit. Pursuant to its tariff, Oklahoma Natural Gas placed new rates into effect on June 29, 2023. In July 2023, the OCC issued an order approving the settlement.

In December 2022, Oklahoma Natural Gas filed a request for an RNG Pilot Program and Voluntary Tariff pursuant to the requirement in the rate case order approved in 2021. The tariff will allow all residential, small commercial and industrial sales customers to voluntarily purchase the environmental attributes of RNG up to the equivalent of 10 Dth per month. In September 2023, responsive testimony was filed by the Public Utility Division of the OCC and the Attorney General's office supporting Oklahoma Natural Gas' request. On October 6, 2023, a unanimous settlement recommending approval of the tariff was filed. On October 19, 2023, a hearing before an administrative law judge was held. At the conclusion of the hearing, the administrative law judge recommended approval of the tariff. On November 21, 2023 the OCC issued an order approving the RNG Pilot Program and Voluntary tariff and customer enrollment began on December 1, 2023. Approximately $2.4 million of RNG credits were purchased in December to support the program. Assessment of the tariff and pilot program will be made in the rate case required to be filed on or before June 30, 2027.

Kansas - In August 2023, Kansas Gas Service submitted an application to the KCC requesting an increase of approximately $8.0 million related to its GSRS. The KCC issued an order in November 2023 authorizing the increase, and the new surcharge became effective on December 1, 2023.

Texas - Pursuant to securitization legislation enacted in Texas as a result of Winter Storm Uri and a June 2021 RRC Notice to Gas Utilities, Texas Gas Service submitted an application to the RRC in July 2021 for an order authorizing the amount of extraordinary costs for recovery and other such specifications necessary for the issuance of securitized bonds.

In February 2022, the RRC issued a single financing order for Texas Gas Service and other natural gas utilities in Texas participating in the securitization process, which included a determination that the approved costs will be collected from customers over a period of not more than 30 years. The TPFA formed the TNG Corporation, a new independent public authority, to issue the securitized bonds.

In March 2023, the TNG Corporation completed the issuance of the Customer Rate Relief (Winter Storm Uri), Taxable Series 2023 Bonds and we received our portion of the net proceeds, which was approximately $197 million. The proceeds were used to repay certain indebtedness and for general corporate purposes. Interest costs that exceeded the amount securitized have been deferred and will be addressed in the next general rate proceeding in each applicable jurisdiction in Texas. In October 2023, Texas Gas Service began acting as a collection agent, with responsibility for collecting the securitization charges from customers that are then submitted to the TNG Corporation to repay the securitization bonds.

Central-Gulf Service Area - In February 2024, Texas Gas Service made GRIP filings for all customers in the Central-Gulf service area, requesting a $12.3 million increase to be effective in June 2024.

In February 2023, Texas Gas Service made GRIP filings for all customers in the Central-Gulf service area, requesting an $11.5 million increase to be effective in June 2023. All municipalities, and the RRC, approved the increase or allowed it to take effect with no action, in June 2023.

West-North Service Area - In March 2023, Texas Gas Service made GRIP filings for all customers in the West-North service area, requesting a $7.4 million increase to be effective in July 2023. In June 2023, El Paso, Socorro and Anthony denied the requested increase. Texas Gas Service appealed the municipalities' actions to the RRC. All other municipalities, and the RRC, approved an increase of $7.3 million or allowed it to take effect with no action. Texas Gas Service implemented the new rates in June 2023, subject to adjustment depending upon the outcome of the appeal. In August 2023, the RRC granted the appeal and approved the increase.

In June 2022, Texas Gas Service filed a rate case seeking to consolidate its West Texas, North Texas and Borger/Skellytown service areas into a single West-North service area and requesting a rate increase of $13.0 million. In January 2023, the RRC

approved the consolidation and a rate increase of $8.8 million premised on a return on equity of 9.6 percent and a common equity ratio of 59.74 percent equity. The new rates were implemented in February 2023.

Rio Grande Valley Service Area - In June 2023, Texas Gas Service filed a rate case for all customers in the Rio Grande Valley service area, requesting a $9.8 million increase. In November 2023, the parties filed a signed settlement agreement that included a 9.7 percent ROE and an overall revenue increase of $5.9 million. In January 2024, the administrative law judge issued a proposal for decision recommending approval of the settlement. On January 30, 2024, the RRC approved the administrative law judge's decision and the new rates went into effect.

FINANCIAL RESULTS AND OPERATING INFORMATION

We operate in one reportable business segment: regulated public utilities that deliver natural gas to residential, commercial and transportation customers. We evaluate our financial performance principally on net income.

Selected Financial Results - Net income was $231.2 million, or $4.14 per diluted share, $221.7 million, or $4.08 per diluted share, and $206.4 million, or $3.85 per diluted share, for the years ended December 31, 2023, 2022 and 2021, respectively.

The following table sets forth certain selected financial results for our operations for the periods indicated:

	Years Ended December 31,			Variances 2023 vs. 2022		Variances 2022 vs. 2021	
Financial Results	**2023**	**2022**	**2021**	**Increase (Decrease)**		**Increase (Decrease)**	
			(Millions of dollars, except percentages)				
Natural gas sales	**$ 2,154.0**	$ 2,412.9	$ 1,661.7	**$ (258.9)**	**(11)%**	$ 751.2	45 %
Transportation revenues	**133.6**	126.5	119.0	**7.1**	**6 %**	7.5	6 %
Securitization customer charges	**48.7**	5.8	—	**42.9**	**740 %**	5.8	100 %
Other revenues	**35.7**	32.8	27.9	**2.9**	**9 %**	4.9	18 %
Total revenues	**2,372.0**	2,578.0	1,808.6	**(206.0)**	**(8)%**	769.4	43 %
Cost of natural gas	**1,134.5**	1,459.1	775.0	**(324.6)**	**(22)%**	684.1	88 %
Operating costs	**580.1**	540.4	516.1	**39.7**	**7 %**	24.3	5 %
Depreciation and amortization	**279.8**	228.5	207.2	**51.3**	**22 %**	21.3	10 %
Operating income	**$ 377.6**	$ 350.0	$ 310.3	**$ 27.6**	**8 %**	$ 39.7	13 %
Net Income	**$ 231.2**	**221.7**	206.4	**$ 9.5**	**4 %**	$ 15.3	7 %
Capital expenditures and asset removal costs	**$ 728.7**	$ 656.5	$ 544.3	**$ 72.2**	**11 %**	$ 112.2	21 %

Natural gas sales to customers represent revenue from contracts with customers through implied contracts established by our tariffs and rates approved by regulatory authorities, as well as revenues from regulatory mechanisms related to natural gas sales. Additionally, natural gas sales include recovery of the cost of natural gas.

Our natural gas sales include fixed and variable charges related to the delivery of natural gas and gas costs that are passed through to our customers in accordance with our cost of natural gas regulatory mechanisms. Fixed charges reflect the portion of our natural gas sales attributable to the monthly fixed customer charge component of our rates, which does not fluctuate based on customer usage in each period. Variable charges reflect the portion of our natural gas sales that fluctuate with the volumes delivered and billed and the effects of weather normalization.

Transportation revenues represent revenue from contracts with customers through implied contracts established by our tariffs and rates approved by regulatory authorities, as well as tariff-based negotiated contracts.

Securitization customer charges represent revenue from contracts with customers through implied contracts established by the financing order approved by the KCC, related to the securitization of extraordinary costs incurred during Winter Storm Uri in the state of Kansas. See Note 17 of the Notes to Consolidated Financial Statements in this Quarterly Report for additional discussion of the securitization transaction in Kansas.

Other revenues include primarily miscellaneous service charges, which represent implied contracts with customers established by our tariffs and rates approved by regulatory authorities and other revenues from regulatory mechanisms.

Our average cost of gas rate decreased to $7.08 per Mcf for the year ended December 31, 2023, compared to $8.22 per Mcf in the prior year. Cost of natural gas includes commodity purchases, fuel, storage, transportation, hedging costs and settlement proceeds for natural gas price volatility mitigation programs approved by our regulators and other gas purchase costs recovered through our cost of natural gas regulatory mechanisms and does not include an allocation of general operating costs or depreciation and amortization. These regulatory mechanisms provide a method of recovering natural gas costs on an ongoing basis without a profit. Therefore, although our revenues will fluctuate with the cost of natural gas that we pass-through to our customers, operating income is not affected by fluctuations in the cost of natural gas.

2023 vs. 2022 - Operating income increased $27.6 million due primarily to the following:

- an increase of $61.6 million from new rates;
- an increase of $6.3 million in residential sales due primarily to net customer growth; and
- an increase of $4.9 million in ad valorem recoveries.

These increases were offset partially by:

- an increase of $26.5 million in employee-related costs; and
- an increase of $19.3 million in depreciation expense due to additional capital expenditures being placed in service.

Revenues for the year ended December 31, 2023, include an increase of $42.9 million associated with KGSS-I, which is offset by an increase of $27.1 million in amortization and operating expense and $15.7 million in net interest expense.

Other Factors Affecting Net Income - Other factors that affect net income for the year ended December 31, 2023, compared with 2022, include an increase of $13.7 million in other income, net, and an increase of $37.8 million in interest expense. The increase in other income, net, is due primarily to a $12.0 million increase in the market value of investments associated with our nonqualified employee benefit plans. The increase in interest expense is due primarily to interest on our commercial paper, the issuance of $300 million of 4.250 percent senior notes in August 2022 and $336 million of 5.486 percent Securitized Utility Tariff Bonds in November 2022, compared with the same period last year.

EDIT - The return of EDIT to our customers is not expected to have a material impact on earnings, as any reduction or credit in rates is offset by a reduction in income tax expense. During the years ended December 31, 2023 and 2022, we credited income tax expense $22.4 million and $18.0 million, respectively, for the amortization of the regulatory liability associated with EDIT that was returned to customers.

Capital Expenditures and Asset Removal Costs - Our capital expenditures program includes expenditures for pipeline integrity, extending service to new areas, increasing system capabilities, pipeline replacements, automated meter reading, government-mandated pipeline relocations, fleet, facilities, IT assets, and cybersecurity. It is our practice to maintain and upgrade our infrastructure, facilities and systems to ensure safe, reliable, and efficient operations. Asset removal costs include expenditures associated with the replacement or retirement of long-lived assets that result from the construction, development and/or normal use of our assets, primarily our pipeline assets.

Capital expenditures and asset removal costs increased $72.2 million for 2023, compared with 2022, due primarily to expenditures for system integrity and extension of service to new areas . Our capital expenditures and asset removal costs are expected to be approximately $750 million for 2024. While we did not experience a significant impact to our capital expenditure program during the year ended December 31, 2023, our future capital expenditure activity is dependent on a number of factors, including economic conditions and our supply chains for contract labor, materials and supplies.

Selected Operating Information - The following tables set forth certain selected operating information for the periods indicated:

	Years Ended December 31,								Variances 2023 vs. 2022			
(in thousands)	2023				2022				Increase (Decrease)			
Average Number of Customers	**OK**	**KS**	**TX**	**Total**	**OK**	**KS**	**TX**	**Total**	**OK**	**KS**	**TX**	**Total**
Residential	**836**	**592**	**660**	**2,088**	831	592	656	2,079	**5**	**—**	**4**	**9**
Commercial and industrial	**77**	**50**	**35**	**162**	76	50	35	161	**1**	—	—	**1**
Other	**—**	**—**	**3**	**3**	1	—	3	4	**(1)**	**—**	**—**	**(1)**
Transportation	**5**	**6**	**1**	**12**	5	6	1	12	**—**	**—**	**—**	**—**
Total customers	**918**	**648**	**699**	**2,265**	913	648	695	2,256	**5**	**—**	**4**	**9**

The increase in the average number of customers for 2023, compared with 2022, is due primarily to the connection of new customers resulting from the extension and expansion of our system in our service areas. For 2023, our average customer count includes 23,400 new customer connections compared to 27,100 in 2022.

The following table reflects total volumes delivered, excluding the effects of WNA mechanisms on sales volumes:

	Years Ended December 31,		
Volumes *(MMcf)*	**2023**	**2022**	**2021**
Natural gas sales			
Residential	**114,239**	125,286	117,758
Commercial and industrial	**40,630**	43,184	37,615
Other	**1,737**	2,725	2,521
Total sales volumes delivered	**156,606**	171,195	157,894
Transportation	**227,875**	230,080	229,935
Total volumes delivered	**384,481**	401,275	387,829

The impact of weather on residential and commercial natural gas sales is mitigated by WNA mechanisms in all jurisdictions.

The following table sets forth the HDDs by state for the periods indicated:

	Years Ended December 31,						
	2023		2022		2023 vs. 2022	2023	2022
HDDs	**Actual**	**Normal**	**Actual**	**Normal**	**Actual Variance**	**Actual as a percent of Normal**	
Oklahoma	**3,125**	**3,346**	3,621	3,346	**(14)%**	**93 %**	108 %
Kansas	**4,117**	**4,721**	4,779	4,722	**(14)%**	**87 %**	101 %
Texas	**1,558**	**1,705**	1,950	1,764	**(20)%**	**91 %**	111 %

Normal HDDs are established through rate proceedings in each of our jurisdictions for use primarily in weather normalization billing calculations. Normal HDDs disclosed above are based on:

- *Oklahoma* - A 10-year weighted average as of June 30, 2021, as calculated using 11 weather stations across Oklahoma and weighted on average customer count.
- *Kansas* - A 30-year rolling average for years 1988-2017 calculated using three weather stations across Kansas and weighted on HDDs by weather station and customers.
- *Texas* - An average of HDDs authorized in our most recent rate proceeding in each jurisdiction and weighted using a rolling 10-year average of actual natural gas distribution sales volumes by service area.

Actual HDDs are based on the quarter-to-date weighted average of:

- 11 weather stations and customers by month for Oklahoma;
- 3 weather stations and customers by month for Kansas; and
- 9 weather stations and natural gas distribution sales volumes by service area for Texas.

CONTINGENCIES

We are a party to various litigation matters and claims that have arisen in the normal course of our operations. While the results of litigation and claims cannot be predicted with certainty, we believe the reasonably possible losses from such matters, individually and in the aggregate, are not material. Additionally, we believe the probable outcome of such matters will not have a material adverse effect on our results of operations, financial position or cash flows. See Note 15 of the Notes to Consolidated Financial Statements in this Annual Report for information with respect to legal proceedings.

LIQUIDITY AND CAPITAL RESOURCES

General - We have relied primarily on operating cash flow and commercial paper for our liquidity and capital resource requirements. We fund operating expenses, working capital requirements, including purchases of natural gas, and capital expenditures primarily with cash from operations and commercial paper.

We believe that the combination of the significant residential component of our customer base, the fixed-charge component of our natural gas sales revenues and our rate mechanisms that we have in place result in a stable cash flow profile and historically has generated stable earnings. Additionally, we have rate mechanisms in place in our jurisdictions that reduce the lag in earning a return on our capital expenditures and provide for recovery of certain changes in our cost of service by allowing for adjustments to rates between rate cases. We anticipate that our cash flow generated from operations and our expected short- and long-term financing arrangements will enable us to maintain our current and planned level of operations and provide us flexibility to finance our infrastructure investments. Our ability to access capital markets for debt and equity financing under reasonable terms depends on market conditions, our financial condition and credit ratings.

Short-term Debt - In October 2023, we entered into an agreement that increased the capacity of the ONE Gas Credit Agreement to $1.2 billion from $1.0 billion.

In March 2023, we entered into an extension agreement related to the ONE Gas Credit Agreement that extended the maturity date to March 16, 2028, from March 16, 2027.

Other than the increased commitments and term extension, all other terms and conditions of the ONE Gas Credit Agreement remain in full force and effect.

The ONE Gas Credit Agreement provides for a $1.2 billion revolving unsecured credit facility and includes a $20 million letter of credit subfacility and a $60 million swingline subfacility. We can request an increase in commitments of up to an additional $300 million upon satisfaction of customary conditions, including receipt of commitments from either new lenders or increased commitments from existing lenders. The ONE Gas Credit Agreement is available to provide liquidity for working capital, capital expenditures, acquisitions and mergers, the issuance of letters of credit, and for other general corporate purposes.

The ONE Gas Credit Agreement contains certain financial, operational and legal covenants. Among other things, these covenants include maintaining ONE Gas' total debt-to-capital ratio of no more than 70 percent at the end of any calendar quarter. At December 31, 2023, our total debt-to-capital ratio was 52 percent and we were in compliance with all covenants under the ONE Gas Credit Agreement. Excluding the debt of KGSS-I, which is non-recourse to us, our total debt-to-capital ratio was 50 percent. We may reduce the unutilized portion of the ONE Gas Credit Agreement in whole or in part without premium or penalty. The ONE Gas Credit Agreement contains customary events of default. Upon the occurrence of certain events of default, the obligations under the ONE Gas Credit Agreement may be accelerated and the commitments may be terminated.

In November 2023, we increased the capacity of our commercial paper program to $1.2 billion from $1.0 billion.

Under our commercial paper program, we may issue unsecured commercial paper up to a maximum amount of $1.2 billion to fund short-term borrowing needs. The maturities of the commercial paper vary but may not exceed 270 days from the date of issue. Commercial paper is generally sold at par less a discount representing an interest factor. At December 31, 2023 and 2022, we had $88.5 million and $552.0 million of commercial paper outstanding with a weighted-average interest rate of 5.60 percent and 4.75 percent, respectively.

At December 31, 2023, we had $1.4 million in letters of credit issued and no borrowings under the ONE Gas Credit Agreement, with approximately $1.2 billion of remaining credit, which is available to repay our commercial paper borrowings.

Senior Notes - In December 2023, we issued $300 million of 5.10 percent senior notes due April 2029. The proceeds from the issuance were used to repay amounts outstanding under our commercial paper program and for general corporate purposes.

At December 31, 2023, we had outstanding $2.7 billion of Senior Notes with $773.0 million due within the next year. The indenture governing our Senior Notes includes an event of default upon the acceleration of other indebtedness of $100 million or more. Such events of default would entitle the trustee or the holders of 25 percent in aggregate principal amount of the outstanding Senior Notes to declare those Senior Notes immediately due and payable in full.

Depending on the series, we may redeem our Senior Notes at par, plus accrued and unpaid interest to the redemption date, starting three months or six months before their maturity dates. Prior to these dates, we may redeem these Senior Notes, in whole or in part, at a redemption price equal to the principal amount, plus accrued and unpaid interest and a make-whole premium. The redemption price will never be less than 100 percent of the principal amount of the respective Senior Note plus accrued and unpaid interest to the redemption date. The remaining $473 million of outstanding principal of our 1.10 percent senior notes due March 2024 can be called at par with a 30-day notice. Our Senior Notes are senior unsecured obligations, ranking equally in right of payment with all of our existing and future unsecured senior indebtedness.

Securitized Utility Tariff Bonds - At December 31, 2023, we had outstanding $315.3 million of 5.486 percent KGSS-I Securitized Utility Tariff Bonds with $27.4 million due within the next year. The bonds are governed by an indenture between KGSS-I and the indenture trustee. The indenture contains certain covenants that restrict KGSS-I's ability to sell, transfer, convey, exchange, or otherwise dispose of its assets.

At December 31, 2023, our long-term debt-to-capital ratio was 52 percent. Excluding the debt of KGSS-I, which is non-recourse to us, our long-term debt-to-capital ratio was 49 percent. See Note 17 of the Notes to Consolidated Financial Statements in this Annual Report for information with respect to KGSS-I.

Credit Ratings - Our credit ratings at December 31, 2023, were:

Rating Agency	Rating	Outlook
Moody's	A3	Stable
S&P	A-	Stable

At December 31, 2023, our commercial paper was rated Prime-2 by Moody's and A-2 by S&P. We intend to maintain credit metrics at a level that supports our balanced approach to capital investment and a return of capital to shareholders via a dividend that we believe will be competitive with our peer group.

Equity Issuances - On December 28, 2023, we settled under forward contracts 1,032,403 shares (289,403 from forwards related to an at-the-market equity distribution agreement and 743,000 from forwards related to underwriting agreements) of our common stock for net proceeds of $79.0 million.

In December 2023, we amended the forward sale agreement we entered into in March 2023 to extend the maturity date of 657,000 shares to December 31, 2024 from December 29, 2023. The amended forward sale agreement provides for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 31, 2024, for 1,257,000 shares of common stock.

In September 2023, we entered into an underwriting agreement and two forward sale agreements for 1.2 million and 180,000 shares of our common stock, respectively. The forward sale agreements provide for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 31, 2024.

In June 2023, we executed forward sale agreements under our current at-the-market equity program for 926,465 shares of our common stock.

In March 2023, we entered into an underwriting agreement and a forward sale agreement for 2.0 million shares of our common stock. The forward sale agreement provided for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 29, 2023, for 1.4 million shares of common stock and by December 31, 2024, for the remaining balance.

In February 2023, we entered into an at-the-market equity distribution agreement under which we may issue and sell shares of our common stock with an aggregate offering price up to $300 million. This at-the-market equity program replaced our previous at-the-market equity program, which began in February 2020, and expired in February 2023. Sales of common stock are made by means of ordinary brokers' transactions on the NYSE, in block transactions or as otherwise agreed to between us and the sales agent. We are under no obligation to offer and sell common stock under the program. At December 31, 2023, we had $225.5 million of equity available for issuance under the program.

The following table summarizes all of our outstanding forward sale agreements at December 31, 2023:

Maturity	Original Shares	Remaining Shares	Net Proceeds Available (in thousands)	Forward Price
December 31, 2024	**926,465**	**926,465**	**$ 74,396**	**$ 80.30**
December 31, 2024	**2,000,000**	**1,257,000**	**96,709**	**76.94**
December 31, 2024	**1,200,000**	**1,200,000**	**88,823**	**74.02**
December 31, 2024	**180,000**	**180,000**	**13,315**	**73.97**
Total forward sale agreements	**4,306,465**	**3,563,465**	**$ 273,243**	**$ 76.68**

For the year ended December 31, 2022, under our at-the-market equity distribution agreement we sold and issued 403,792 shares of our common stock for $35.0 million, generating proceeds, net of issuance costs, of $34.7 million.

For the year ended December 31, 2022, we executed forward sale agreements under our previous at-the-market equity distribution agreement for 1,451,474 shares of our common stock. On December 30, 2022, we settled forward sales agreements with respect to 1,162,071 shares of our common stock for net proceeds of $93.8 million.

Pension and Other Postemployment Benefit Plans - For the year ended December 31,2023, we contributed $1.3 million to our defined benefit pension plans and $2.5 million to our other postemployment benefit plans. For the year ended December 31, 2022, we contributed $1.5 million to our defined benefit pension plans and $1.9 million to our other postemployment benefit plans. Additional information about our pension and other postemployment benefit plans, including anticipated contributions, is included under “Estimates and Critical Accounting Policies - Pension and Other Postemployment Benefits” and under Note 11 of the Notes to Consolidated Financial Statements in this Annual Report.

CASH FLOW ANALYSIS

We use the indirect method to prepare our consolidated statements of cash flows. Under this method, we reconcile net income to cash flows provided by operating activities by adjusting net income for those items that impact net income but may not result in actual cash receipts or payments and changes in our assets and liabilities not classified as investing or financing activities during the period. Items that impact net income but may not result in actual cash receipts or payments include, but are not limited to, depreciation and amortization, deferred income taxes, share-based compensation expense and provision for doubtful accounts.

The following table sets forth the changes in cash flows by operating, investing and financing activities for the periods indicated:

	Year Ended December 31,			Variance	Variance
	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
			(*Millions of dollars*)		
Total cash provided by (used in):					
Operating activities	**$ 939.5**	$ 1,570.8	$ (1,535.7)	**$ (631.3)**	$ 3,106.5
Investing activities	**(669.6)**	(614.1)	(501.1)	**(55.5)**	(113.0)
Financing activities	**(248.6)**	(947.4)	2,037.6	**698.8**	(2,985.0)
Change in cash, cash equivalents, restricted cash and restricted cash equivalents	**21.3**	9.3	0.8	**12.0**	8.5
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of period	**18.1**	8.8	8.0	**9.3**	0.8
Cash, cash equivalents, restricted cash and restricted cash equivalents at end of period	**$ 39.4**	$ 18.1	$ 8.8	**$ 21.3**	$ 9.3

Operating Cash Flows - Changes in cash flows from operating activities are due primarily to changes in sales revenues, natural gas costs and operating expenses discussed in “Financial Results and Operating Information,” the effects of Winter Storm Uri discussed in “Regulatory Activities” and changes in working capital. Changes in natural gas prices and demand for our services or natural gas, whether because of general economic conditions, variations in weather not mitigated by WNAs, changes in supply or increased competition from other service providers, could affect our earnings and operating cash flows. Typically, our cash flows from operations are greater in the first half of the year compared with the second half of the year.

Operating cash flows were lower in 2023, compared to 2022, due primarily to recovery of the winter weather event regulatory asset for Oklahoma Natural Gas through securitization beginning in August 2022, offset by the recovery of the winter weather event regulatory asset for Texas Gas Service through securitization in March 2023, and working capital changes related to accounts receivable which were impacted by new rates in 2023 compared with 2022.

Investing Cash Flows - Cash used in investing activities increased in 2023, compared to 2022, due primarily to an increase in capital expenditures for system integrity and extension of service to new areas.

Financing Cash Flows - Cash used in financing activities decreased in 2023, compared to 2022, due primarily to the repayment in August 2022 of long-term debt related to Winter Storm Uri.

ENVIRONMENTAL, SAFETY AND REGULATORY MATTERS

Environmental Matters - We are subject to multiple laws and regulations regarding protection of the environment and natural and cultural resources, which affect many aspects of our present and future operations. Regulated activities include, but are not limited to, those involving air emissions, storm water and wastewater discharges, handling and disposal of solid and hazardous wastes, wetland preservation, plant and wildlife protection, hazardous materials use, storage and transportation, and pipeline and facility construction. These laws and regulations require us to obtain and/or comply with a wide variety of environmental clearances, registrations, licenses, permits and other approvals. Failure to comply with these laws, regulations, licenses and permits or the discovery of presently unknown environmental conditions may expose us to fines, penalties and/or interruptions in our operations that could be material to our results of operations. In addition, emission controls and/or other regulatory or permitting mandates under the CAA and other similar federal and state laws could require unexpected capital expenditures. We cannot assure that existing environmental statutes and regulations will not be revised or that new regulations will not be adopted or become applicable to us. Revised or additional statutes or regulations that result in increased compliance costs or additional operating restrictions could have a material adverse effect on our business, financial condition and results of operations. Our expenditures for environmental investigation and remediation compliance to-date have not been significant in relation to our financial position, results of operations or cash flows, and our expenditures related to environmental matters had no material effects on earnings or cash flows during 2023, 2022 and 2021.

We own or retain legal responsibility for certain environmental conditions at 12 former MGP sites in Kansas. These sites contain contaminants generally associated with MGP sites and are subject to control or remediation under various environmental laws and regulations. A consent agreement with the KDHE governs all environmental investigation and remediation work at these sites. The terms of the consent agreement require us to investigate these sites and set remediation activities based upon the results of the investigations and risk analysis. Remediation typically involves the management of contaminated soils and may involve removal of structures and monitoring and/or remediation of groundwater. Regulatory closure has been achieved at five of the 12 sites, but these sites remain subject to potential future requirements that may result in additional costs.

We have completed or are addressing removal of the source of soil contamination at all 12 sites and continue to monitor groundwater at seven of the 12 sites according to plans approved by the KDHE. In 2019, we completed a project to remove a source of contamination and associated contaminated materials at the twelfth site where no active soil remediation had previously occurred. In 2022, we completed a remediation project to remove a source of contamination and contaminated materials at one of the MGP sites. In June 2023, we submitted a revised draft remediation plan to the KDHE for review following receipt of agency comments and public feedback. In August 2023, the KDHE approved the remediation plan without comment. We submitted a site investigation work plan for another site and on August 27, 2023 the KDHE approved the document without comment.

We have an AAO that allows Kansas Gas Service to defer and seek recovery of costs necessary for investigation and remediation at, and nearby, these 12 former MGP sites that are incurred after January 1, 2017, up to a cap of $ 15.0 million, net of any related insurance recoveries. Costs approved for recovery in a future rate proceeding would then be amortized over a 15-year period. The unamortized amounts will not be included in rate base or accumulate carrying charges. Following a determination that future investigation and remediation work approved by the KDHE is expected to exceed $ 15.0 million, net of any related insurance recoveries, Kansas Gas Service will be required to file an application with the KCC for approval to increase the $ 15.0 million cap. At December 31, 2023 and 2022, we have deferred $ 32.0 million and $ 29.8 million, respectively, for accrued investigation and remediation costs pursuant to our AAO. Kansas Gas Service expects to file an application for amounts deferred in excess of the cap as soon as practicable after the KDHE approves the remediation plans we have submitted.

We also own or retain legal responsibility for certain environmental conditions at a former MGP site in Texas. At the request of the TCEQ, we began investigating the level and extent of contamination associated with the site under their Texas Risk Reduction Program. A preliminary site investigation revealed that this site contains contaminants generally associated with MGP sites and is subject to control or remediation under various environmental laws and regulations. Impacts have been identified in the soil and groundwater at the site with limited impacts observed in surrounding areas. In April 2022, we submitted a remediation work plan to address the areas impacted to the TCEQ. In August 2023, remediation activities were conducted to address the impacted area in accordance with the remediation work plan. During the third quarter 2023, the TCEQ requested acceptable financial assurance for the projected costs on post-response action care activities at the site. At December 31, 2023, estimated costs associated with expected remediation activities for this site are not material.

Our expenditures for environmental evaluation, mitigation, remediation and compliance to date have not been significant in relation to our financial position, results of operations or cash flows, and our expenditures related to environmental matters had no material effects on earnings or cash flows during the years ended December 31, 2023 and 2022. The reserve for remediation of our MGP sites was $ 14.3 million and $ 12.7 million at December 31, 2023 and 2022, respectively.

Environmental Footprint - We cannot assure that existing environmental statutes and regulations will not be revised or that new regulations will not be adopted or become applicable to us. Revised or additional regulations that result in increased compliance costs or additional operating restrictions could have a material adverse effect on our business, financial condition and results of operations. Our expenditures for environmental investigation, and remediation compliance to-date have not been significant in relation to our financial position, results of operations or cash flows, and our expenditures related to environmental matters had no material effects on earnings or cash flows during 2023, 2022 or 2021.

Pipeline Safety - We are subject to regulation under federal pipeline safety statutes and any analogous state regulations. These include safety requirements for the design, construction, operation, and maintenance of pipelines, including transmission and distribution pipelines. At the federal level, we are regulated by PHMSA. PHMSA regulations require the following for certain pipelines: inspection and maintenance plans; integrity management programs, including the determination of pipeline integrity risks and periodic assessments on certain pipeline segments; an operator qualification program, which includes certain trainings; a public awareness program that provides certain information; and a control room management plan.

As part of the Consolidated Appropriations Act, 2021, the PIPES Act reauthorized PHMSA through 2023 and directed the agency to move forward with several regulatory actions, including the “Pipeline Safety: Class Location Change Requirements” and the “Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines” proposed rulemakings. Congress has also instructed PHMSA to issue final regulations that will require operators of non-rural gas gathering lines and new and existing transmission and distribution pipeline facilities to conduct certain leak detection and repair programs and to require facility inspection and maintenance plans to align with those regulations. To the extent such rulemakings impose more stringent requirements on our facilities, we may be required to incur expenditures that may be material.

Regulatory - Several regulatory initiatives impacted the earnings and future earnings potential of our business. See additional information regarding our regulatory initiatives in the “Regulatory Activities” section of Management’s Discussion and Analysis of Financial Condition and Results of Operations.

IMPACT OF NEW ACCOUNTING STANDARDS

Information about the impact of new accounting standards, if any, is included in Note 1 of the Notes to Consolidated Financial Statements in this Annual Report.

CRITICAL ESTIMATES AND ACCOUNTING POLICIES

The preparation of our consolidated financial statements and related disclosures in accordance with GAAP requires us to make estimates and assumptions with respect to values or conditions that cannot be known with certainty that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements. These estimates and assumptions also affect the reported amounts of revenues and expenses during the reporting period. Although we believe these estimates and assumptions are reasonable, actual results could differ from our estimates.

The following summary sets forth what we consider to be our most critical estimates and accounting policies. Our critical accounting policies are defined as those estimates and policies most important to the portrayal of our financial condition and results of operations and that require management's most difficult, subjective or complex judgment, particularly because of the need to make estimates concerning the impact of inherently uncertain matters.

Regulation - Our operations are subject to regulation with respect to rates, service, maintenance of pipeline and accounting records and various other matters by the respective regulatory authorities in the states in which we operate. We account for the financial effects of the ratemaking and accounting practices and policies of the various regulatory authorities in our consolidated financial statements. We record regulatory assets for costs that have been deferred for which future recovery through customer rates is considered probable and regulatory liabilities when it is probable that revenues will be reduced for amounts that will be returned to customers through the ratemaking process. As a result, certain costs that would normally be expensed under GAAP are capitalized or deferred on the balance sheet because it is probable they can be recovered through rates. Discontinuing the application of this method of accounting for regulatory assets and liabilities could significantly increase our operating expenses, as fewer costs would likely be capitalized or deferred on the balance sheet, which could reduce our net income. Further, regulation may impact the period in which revenues or expenses are recognized. The amounts to be recovered or recognized are based upon historical experience and our understanding of the regulations. The impact of regulation on our operations may be affected by decisions of the regulatory authorities or the issuance of new regulations.

For further discussion of regulatory assets and liabilities, see Note 3 of the Notes to Consolidated Financial Statements in this Annual Report.

Revenue Recognition - For regulated deliveries of natural gas, we read meters and bill customers on a monthly cycle. We recognize revenues upon the delivery of natural gas or services rendered to customers. The billing cycles for customers do not necessarily coincide with the accounting periods used for financial reporting purposes. We accrue unbilled revenues for natural gas that has been delivered but not yet billed at the end of an accounting period. Accrued unbilled revenue is based on a percentage estimate of amounts unbilled each month, which is dependent upon a number of factors, some of which require management's judgment. These factors include customer consumption patterns and the impact of weather on usage. The accrued unbilled natural gas sales revenue at December 31, 2023 and 2022 was $191.4 million and $269.5 million, respectively, and is included in accounts receivable on our consolidated balance sheets.

We have determined the majority of our natural gas sales and transportation tariffs to be implied contracts with customers, which are settled over time, where our performance obligation is settled with our customer when natural gas is delivered and simultaneously consumed by the customer. In addition, we use the invoice method practical expedient, where we recognize revenue for volumes delivered for which we have a right to invoice. For our other utility revenue, which are primarily one-time service fees that meet the requirements under ASC 606, the performance obligation is satisfied at a point in time when services are rendered to the customer. Certain revenues that do not meet the requirements under ASC 606 as revenues from contracts with customers are reflected as other revenues in determining total revenue. See Note 2 of the Notes to Consolidated Financial Statements in this Annual Report for additional information regarding our revenues.

Pension and Other Postemployment Benefits - We have defined benefit pension plans covering eligible retirees and eligible employees. We also sponsor welfare plans that provide other postemployment medical and life insurance benefits to eligible retirees and employees who retire with at least five years of service.

To calculate the expense and liabilities related to our plans, we utilize an outside actuarial consultant, which uses statistical and other factors to anticipate future events. These factors include assumptions about the discount rate, expected return on plan assets, rate of future compensation increases, age and mortality and employment periods. We use tables issued by the Society of Actuaries to estimate mortality rates. In determining the projected benefit costs, assumptions can change from period to period and may result in material changes in the costs and liabilities we recognize.

For the year ended December 31, 2023, we contributed $1.3 million to our defined benefit pension plans and $2.5 million to our other postemployment benefit plans. For the year ended December 31, 2022, we contributed $1.5 million to our defined benefit pension plans and $1.9 million to our other postemployment benefit plans. In 2024, our contributions are expected to be $1.4 million to our defined benefit pension plans, and no contributions are expected to be made to our other postemployment benefit plans.

We recorded net periodic benefit credits for our defined benefit pension plans, prior to regulatory deferrals, of $7.5 million in 2023, and estimate that in 2024, we will record a credit of approximately $5.5 million. Net periodic benefits costs for our postemployment benefit plans, prior to regulatory deferrals, were $0.3 million in 2023, and we estimate that in 2024, we will record a credit of approximately $0.4 million, prior to regulatory deferrals.

The following table sets forth the significant assumptions used to determine our estimated 2024 net periodic benefit cost related to our defined benefit pension and other postemployment benefit plans and sensitivity to changes with respect to these assumptions:

	Rate Used	Cost Sensitivity (a)	Obligation Sensitivity (b)
		(*Millions of dollars*)	
Discount rate for pension	**5.30 %**	**$ 2.3**	**$ 21.3**
Discount rate for other postemployment benefits	**5.40 %**	**(0.2)**	**3.4**
Expected long-term return on plan assets for pension	**6.70 %**	**2.2**	**—**
Expected long-term return on plan assets for other postemployment benefits	**5.20 %**	**0.4**	**—**

(a) Approximate impact a quarter percentage point decrease in the assumed rate would have on net periodic pension costs.
(b) Approximate impact a quarter percentage point decrease in the assumed rate would have on defined benefit pension obligation.

See Note 11 of the Notes to Consolidated Financial Statements in this Annual Report for additional information regarding our pension and other postretirement benefit plans.

Contingencies - Our accounting for contingencies covers a variety of business activities, including contingencies for legal and environmental exposures. We accrue these contingencies when our assessments indicate that it is probable that a liability has been incurred or an asset will not be recovered and an amount can be reasonably estimated. We expense legal fees as incurred and base our legal liability estimates on currently available facts and our assessments of the ultimate outcome or resolution. Accruals for estimated losses from environmental remediation obligations generally are recognized no later than the completion of a remediation feasibility study. Recoveries of environmental remediation costs from other parties are recorded as assets when their receipt is deemed probable.

Our expenditures for environmental evaluation, mitigation, remediation and compliance to date have not been significant in relation to our financial position, results of operations or cash flows, and our expenditures related to environmental matters had no material effect on earnings or cash flows for the years ended December 31, 2023, 2022 and 2021. Environmental issues may exist with respect to these MGP sites that are unknown to us. Accordingly, future costs are dependent on the final determination and regulatory approval of any remedial actions, the complexity of the site, level of remediation required, changing technology and governmental regulations, and to the extent not recovered by insurance or recoverable in rates from our customers, could be material to our financial condition, results of operations or cash flows.

See “Environmental Matters” and Note 15 of the Notes to Consolidated Financial Statements in this Annual Report for additional discussion of contingencies.

FORWARD-LOOKING STATEMENTS

Some of the statements contained and incorporated in this Annual Report are forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. The forward-looking statements relate to our anticipated financial performance, liquidity, management’s plans and objectives for our future operations, our business prospects, the outcome of regulatory and legal proceedings, market conditions and other matters. We make these forward-looking statements in reliance on the safe harbor protections provided under the Private Securities Litigation Reform Act of 1995. The following discussion is intended to identify important factors that could cause future outcomes to differ materially from those set forth in the forward-looking statements.

Forward-looking and other statements in this Annual Report regarding our environmental, social and other sustainability plans and goals are not an indication that these statements are necessarily material to investors or required to be disclosed in our filings with the SEC. In addition, historical, current, and forward-looking environmental, social and sustainability-related statements may be based on standards for measuring progress that are still developing, internal controls and processes that continue to evolve, and assumptions that are subject to change in the future.

Forward-looking statements include the items identified in the preceding paragraph, the information concerning possible or assumed future results of our operations and other statements contained or incorporated in this Annual Report identified by words such as “anticipate,” “estimate,” “expect,” “project,” “intend,” “plan,” “believe,” “should,” “goal,” “forecast,” “guidance,” “could,” “may,” “continue,” “might,” “potential,” “scheduled,” “likely,” and other words and terms of similar meaning.

One should not place undue reliance on forward-looking statements, which are applicable only as of the date of this Annual Report. Known and unknown risks, uncertainties and other factors may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by forward-looking statements. Those factors may affect our operations, costs, liquidity, markets, products, services and prices. In addition to any assumptions and other factors referred to specifically in connection with the forward-looking statements, factors that could cause our actual results to differ materially from those contemplated in any forward-looking statement include, among others, the following:

- our ability to recover costs, income taxes and amounts equivalent to the cost of property, plant and equipment, regulatory assets and our allowed rate of return in our regulated rates or other recovery mechanisms;
- cyber-attacks, which, according to experts, continue to increase in volume and sophistication, or breaches of technology systems that could disrupt our operations or result in the loss or exposure of confidential or sensitive customer, employee, vendor, counterparty or Company information; further, increased remote working arrangements have required enhancements and modifications to our IT infrastructure (e.g. Internet, Virtual Private Network, remote collaboration systems, etc.), and any failures of the technologies, including third-party service providers, that facilitate working remotely could limit our ability to conduct ordinary operations or expose us to increased risk or effect of an attack;
- our ability to manage our operations and maintenance costs;
- changes in regulation of natural gas distribution services, particularly those in Oklahoma, Kansas and Texas;
- the economic climate and, particularly, its effect on the natural gas requirements of our residential and commercial customers;
- the length and severity of a pandemic or other health crisis which could significantly disrupt or prevent us from operating our business in the ordinary course for an extended period;
- competition from alternative forms of energy, including, but not limited to, electricity, solar power, wind power, geothermal energy and biofuels;
- adverse weather conditions and variations in weather, including seasonal effects on demand and/or supply, the occurrence of severe storms in the territories in which we operate, and climate change, and the related effects on supply, demand, and costs;
- indebtedness could make us more vulnerable to general adverse economic and industry conditions, limit our ability to borrow additional funds and/or place us at competitive disadvantage compared with competitors;
- our ability to secure reliable, competitively priced and flexible natural gas transportation and supply, including decisions by natural gas producers to reduce production or shut-in producing natural gas wells and expiration of existing supply and transportation and storage arrangements that are not replaced with contracts with similar terms and pricing;
- our ability to complete necessary or desirable expansion or infrastructure development projects, which may delay or prevent us from serving our customers or expanding our business;
- operational and mechanical hazards or interruptions;
- adverse labor relations;
- the effectiveness of our strategies to reduce earnings lag, revenue protection strategies and risk mitigation strategies, which may be affected by risks beyond our control such as commodity price volatility, counterparty performance or creditworthiness and interest rate risk;
- the capital-intensive nature of our business, and the availability of and access to, in general, funds to meet our debt obligations prior to or when they become due and to fund our operations and capital expenditures, either through (i) cash on hand, (ii) operating cash flow, or (iii) access to the capital markets and other sources of liquidity;
- our ability to obtain capital on commercially reasonable terms, or on terms acceptable to us, or at all;
- limitations on our operating flexibility, earnings and cash flows due to restrictions in our financing arrangements;
- cross-default provisions in our borrowing arrangements, which may lead to our inability to satisfy all of our outstanding obligations in the event of a default on our part;
- changes in the financial markets during the periods covered by the forward-looking statements, particularly those affecting the availability of capital and our ability to refinance existing debt and fund investments and acquisitions to execute our business strategy;
- actions of rating agencies, including the ratings of debt, general corporate ratings and changes in the rating agencies' ratings criteria;
- changes in inflation and interest rates;
- our ability to recover the costs of natural gas purchased for our customers and any related financing required to support our purchase of natural gas supply;
- impact of potential impairment charges;
- volatility and changes in markets for natural gas and our ability to secure additional and sufficient liquidity on reasonable commercial terms to cover costs associated with such volatility;

- possible loss of LDC franchises or other adverse effects caused by the actions of municipalities;
- payment and performance by counterparties and customers as contracted and when due, including our counterparties maintaining ordinary course terms of supply and payments;
- changes in existing or the addition of new environmental, safety, tax, cybersecurity and other laws or regulations to which we and our subsidiaries are subject, including those that may require significant expenditures, significant increases in operating costs or, in the case of noncompliance, substantial fines or penalties;
- the effectiveness of our risk-management policies and procedures, and employees violating our risk-management policies;
- the uncertainty of estimates, including accruals and costs of environmental remediation;
- advances in technology, including technologies that increase efficiency or that improve electricity's competitive position relative to natural gas;
- population growth rates and changes in the demographic patterns of the markets we serve in Oklahoma, Kansas and Texas, and economic conditions in these areas;
- acts of nature and the potential effects of threatened or actual terrorism and war, including recent events in Europe and the Middle East;
- the sufficiency of insurance coverage to cover losses;
- the effects of our strategies to reduce tax payments;
- changes in accounting standards;
- changes in corporate governance standards;
- existence of material weaknesses in our internal controls;
- our ability to comply with all covenants in our indentures and the ONE Gas Credit Agreement, a violation of which, if not cured in a timely manner, could trigger a default of our obligations;
- our ability to attract and retain talented employees, management and directors, and shortage of skilled-labor;
- unexpected increases in the costs of providing health care benefits, along with pension and postemployment health care benefits, as well as declines in the discount rates on, declines in the market value of the debt and equity securities of, and increases in funding requirements for, our defined benefit plans; and
- our ability to successfully complete merger, acquisition or divestiture plans, regulatory or other limitations imposed as a result of a merger, acquisition or divestiture, and the success of the business following a merger, acquisition or divestiture.

These factors are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in any of our forward-looking statements. Other factors could also have material adverse effects on our future results. These and other risks are described in greater detail in Part 1, Item 1A, Risk Factors, in this Annual Report. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these factors. Other than as required under securities laws, we undertake no obligation to update publicly any forward-looking statement whether as a result of new information, subsequent events or change in circumstances, expectations or otherwise.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to market risk discussed below includes forward-looking statements. Our views on market risk are not necessarily indicative of actual results that may occur and do not represent the maximum possible gains and losses that may occur since actual gains and losses will differ from those estimated based on actual fluctuations in commodity prices or interest rates and the timing of transactions.

Commodity Price Risk

Our commodity price risk, driven primarily by fluctuations in the price of natural gas, is mitigated by our purchased-gas cost adjustment mechanisms through which we pass-through natural gas costs to our customers without profit. We may use fixed-price natural gas contracts or derivative instruments to hedge the cost of a portion of our anticipated natural gas purchases during the winter heating months to reduce the impact on our customers of upward market price volatility of natural gas. Additionally, we inject natural gas into storage during the warmer months, when natural gas prices are typically lower, and withdraw the natural gas during the colder months of the year. Gains or losses associated with these derivative instruments and the costs of our fixed-price natural gas contracts and storage activities are included in, and recoverable through our purchased-gas cost adjustment mechanisms, which are subject to review by regulatory authorities.

Interest-Rate Risk

We are exposed to interest-rate risk primarily associated with commercial paper borrowings, borrowings under our credit agreement, and new debt financing needed to fund capital requirements, including future contractual obligations and maturities

of long-term and short-term debt. We may manage interest-rate risk on future borrowings through the use of fixed-rate debt, floating-rate debt and, at times, interest-rate swaps. Fixed-rate swaps may be used to reduce our risk of increased interest costs during periods of rising interest rates. Floating-rate swaps may be used to convert the fixed rates of long-term borrowings into short-term variable rates.

Counterparty Credit Risk

We assess the creditworthiness of our customers. Those customers who do not meet minimum standards are required to provide security, including deposits or other forms of collateral, when appropriate and allowed by tariff. With approximately 2.3 million customers across three states, we are not exposed materially to a concentration of credit risk. We maintain a provision for doubtful accounts based upon factors surrounding the credit risk of customers, historical trends, consideration of the current credit environment and other information. We are able to recover the fuel-related portion of bad debts through our purchased-gas cost adjustment mechanisms.

ITEM 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of ONE Gas, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of ONE Gas, Inc. and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Regulatory Matters

As described in Note 1 and 3 to the consolidated financial statements, the Company is subject to rate regulation and accounting requirements of regulatory authorities in the states in which it operates, and it follows the accounting and reporting guidance for regulated operations, including evaluating regulatory decisions to determine appropriate revenue recognition, cost deferrals, recoverability for regulatory assets and refund requirements for regulatory liabilities. As disclosed by management, regulatory assets are recorded for costs that have been deferred for which future recovery through customer rates is considered probable and regulatory liabilities are recorded when it is probable that revenues will be reduced for amounts that will be credited to customers through the ratemaking process. As a result, certain costs that would normally be expensed under accounting principles generally accepted in the United States of America for non-regulated entities are capitalized or deferred on the balance sheet because it is probable they can be recovered through rates. The amounts to be recovered or recognized are based upon historical experience and management's understanding of regulations and may be affected by decisions of the regulatory authorities or the issuance of new regulations. Should recovery cease due to regulatory actions, certain regulatory assets may no longer meet the criteria for recognition, and accordingly, the Company may be required to write off the regulatory assets at that time. As described in Note 3, as of December 31, 2023, there were $363 million of deferred costs included in regulatory assets and $567 million of regulatory liabilities awaiting cash outflow or potential refund.

The principal considerations for our determination that performing procedures relating to the Company's accounting for the effects of regulatory matters is a critical audit matter are (i) the significant judgment by management in evaluating the impact of regulatory orders and accounting guidance on relevant transactions and (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence related to management's evaluation of revenue recognition, cost deferrals, and recoverability of regulatory assets, including the securitization of the costs related to the winter weather event and the recovery of the related regulatory assets, and refund requirements for regulatory liabilities.
Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the impact of regulatory orders and accounting guidance on relevant transactions, including controls over management's process for evaluating and recording (i) deferred costs, including the amounts to be deferred and the future recovery, resulting in regulatory assets or (ii) a reduction to revenues for amounts that will be credited to customers, resulting in regulatory liabilities. These procedures also included, among others, (i) evaluating management's process for identifying relevant transactions which require application of regulatory accounting guidance; (ii) evaluating the reasonableness of management's assessment regarding revenue recognition, probability of recovery and establishment of regulatory assets, including the securitization of the costs related to the winter weather event and the recovery of the related regulatory assets, and the establishment of regulatory liabilities; and (iii) testing the regulatory assets and regulatory liabilities considering the provisions and formulas outlined in rate orders and other regulatory correspondence.

/s/ PricewaterhouseCoopers LLP

Tulsa, Oklahoma
February 22, 2024

We have served as the Company's auditor since 2013.

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ONE Gas, Inc.
CONSOLIDATED STATEMENTS OF INCOME

	Years Ended December 31,		
	2023	**2022**	**2021**
	(*Thousands of dollars, except per share amounts*)		
Total revenues	**$ 2,371,990**	$ 2,578,005	$ 1,808,597
Cost of natural gas	**1,134,510**	1,459,087	775,006
Operating expenses			
Operations and maintenance	**508,399**	472,265	449,676
Depreciation and amortization	**279,830**	228,479	207,233
General taxes	**71,661**	68,217	66,424
Total operating expenses	**859,890**	768,961	723,333
Operating income	**377,590**	349,957	310,258
Other income (expense), net	**9,476**	(4,183)	(3,207)
Interest expense, net	**(115,339)**	(77,506)	(60,301)
Income before income taxes	**271,727**	268,268	246,750
Income taxes	**(40,495)**	(46,526)	(40,316)
Net income	**$ 231,232**	$ 221,742	$ 206,434
Earnings per share			
Basic	**$ 4.16**	$ 4.09	$ 3.85
Diluted	**$ 4.14**	$ 4.08	$ 3.85
Average shares (*thousands*)			
Basic	**55,600**	54,207	53,575
Diluted	**55,860**	54,338	53,674
Dividends declared per share of stock	**$ 2.60**	$ 2.48	$ 2.32

See accompanying Notes to Consolidated Financial Statements.

ONE Gas, Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Years Ended December 31,		
	2023	**2022**	**2021**
	(*Thousands of dollars*)		
Net income	**$ 231,232**	$ 221,742	$ 206,434
Other comprehensive income, net of tax			
Change in pension and other postemployment benefit plan liability, net of tax of $ 140 , $(1,705), and $(379), respectively	**(478)**	5,823	1,250
Total other comprehensive income (loss), net of tax	**(478)**	5,823	1,250
Comprehensive income	**$ 230,754**	$ 227,565	$ 207,684

See accompanying Notes to Consolidated Financial Statements.

ONE Gas, Inc.
CONSOLIDATED BALANCE SHEETS

	December 31, 2023	December 31, 2022
Assets	(*Thousands of dollars*)	
Property, plant and equipment		
Property, plant and equipment	**$ 8,468,967**	$ 7,834,557
Accumulated depreciation and amortization	**2,333,755**	2,205,717
Net property, plant and equipment	**6,135,212**	5,628,840
Current assets		
Cash and cash equivalents	**18,835**	9,681
Restricted cash and cash equivalents	**20,552**	8,446
Total cash, cash equivalents and restricted cash and cash equivalents	**39,387**	18,127
Accounts receivable, net	**347,864**	553,834
Materials and supplies	**77,649**	70,873
Natural gas in storage	**187,097**	269,205
Regulatory assets	**75,308**	275,572
Other current assets	**37,899**	29,997
Total current assets	**765,204**	1,217,608
Goodwill and other assets		
Regulatory assets	**287,906**	330,831
Securitized intangible asset, net	**293,619**	323,838
Goodwill	**157,953**	157,953
Other assets	**131,100**	117,326
Total goodwill and other assets	**870,578**	929,948
Total assets	**$ 7,770,994**	$ 7,776,396

See accompanying Notes to Consolidated Financial Statements.

ONE Gas, Inc.
CONSOLIDATED BALANCE SHEETS
(Continued)

	December 31, 2023	December 31, 2022
Equity and Liabilities	(*Thousands of dollars*)	
Equity and long-term debt		
Common stock, $ 0.01 par value: authorized 250,000,000 shares; issued and outstanding 56,545,924 shares at December 31, 2023; issued and outstanding 55,349,954 shares at December 31, 2022	**$ 565**	$ 553
Paid-in capital	**2,028,755**	1,932,714
Retained earnings	**737,739**	651,863
Accumulated other comprehensive loss	**(1,182)**	(704)
Total equity	**2,765,877**	2,584,426
Other long-term debt, excluding current maturities, net of issuance costs	**1,877,895**	2,352,400
Securitized utility tariff bonds, excluding current maturities, net of issuance costs	**282,506**	309,343
Total long-term debt, excluding current maturities, net of issuance costs	**2,160,401**	2,661,743
Total equity and long-term debt	**4,926,278**	5,246,169
Current liabilities		
Current maturities of other long-term debt	**772,984**	12
Current maturities of securitized utility tariff bonds	**27,430**	20,716
Notes payable	**88,500**	552,000
Accounts payable	**278,056**	360,493
Accrued taxes other than income	**68,793**	78,352
Regulatory liabilities	**66,901**	47,867
Customer deposits	**62,187**	57,854
Other current liabilities	**112,370**	72,125
Total current liabilities	**1,477,221**	1,189,419
Deferred credits and other liabilities		
Deferred income taxes	**752,068**	698,456
Regulatory liabilities	**500,478**	529,441
Employee benefit obligations	**20,265**	19,587
Other deferred credits	**94,684**	93,324
Total deferred credits and other liabilities	**1,367,495**	1,340,808
Commitments and contingencies		
Total liabilities and equity	**$ 7,770,994**	$ 7,776,396

See accompanying Notes to Consolidated Financial Statements.

ONE Gas, Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2023	**2022**	**2021**
	(*Thousands of dollars*)		
Operating activities			
Net income	**$ 231,232**	$ 221,742	$ 206,434
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	**279,830**	228,479	207,233
Deferred income taxes	**24,773**	(22,034)	43,449
Share-based compensation expense	**12,184**	10,741	10,498
Provision for doubtful accounts	**9,698**	6,003	9,131
Proceeds from government securitization of winter weather event costs	**197,366**	1,330,582	—
Changes in assets and liabilities:			
Accounts receivable	**196,272**	(213,656)	(57,902)
Materials and supplies	**(6,776)**	(15,981)	(2,126)
Natural gas in storage	**82,108**	(89,559)	(85,700)
Asset removal costs	**(62,023)**	(47,032)	(49,029)
Accounts payable	**(90,046)**	85,915	107,207
Accrued taxes other than income	**(9,559)**	11,317	3,235
Customer deposits	**4,333**	(4,600)	(5,574)
Regulatory assets and liabilities - current	**7,249**	52,417	(1,562,574)
Regulatory assets and liabilities - noncurrent	**38,869**	53,992	(367,210)
Other assets and liabilities - current	**26,070**	(23,377)	18,461
Other assets and liabilities - noncurrent	**(2,048)**	(14,107)	(11,190)
Cash provided by (used in) operating activities	**939,532**	1,570,842	(1,535,657)
Investing activities			
Capital expenditures	**(666,634)**	(609,486)	(495,246)
Other investing expenditures	**(8,508)**	(8,632)	(7,554)
Other investing receipts	**5,499**	4,008	1,717
Cash used in investing activities	**(669,643)**	(614,110)	(501,083)
Financing activities			
Borrowings (repayments) of notes payable, net	**(463,500)**	58,000	75,775
Issuance of other long-term debt, net of discounts	**299,583**	297,591	2,498,895
Issuance of securitized utility tariff bonds, net of discounts	**—**	335,931	—
Long-term debt financing costs	**(2,508)**	(8,567)	(35,110)
Issuance of common stock	**85,259**	133,711	26,662
Repayment of other long-term debt	**—**	(1,627,000)	(400,000)
Repayment of securitized utility tariff bonds	**(20,716)**	—	
Dividends paid	**(144,094)**	(133,954)	(123,912)
Tax withholdings related to net share settlements of stock compensation	**(2,653)**	(3,169)	(4,711)
Cash provided by (used in) financing activities	**(248,629)**	(947,457)	2,037,599
Change in cash, cash equivalents, restricted cash and restricted cash equivalents	**21,260**	9,275	859
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of period	**18,127**	8,852	7,993
Cash, cash equivalents, restricted cash and restricted cash equivalents at end of period	**$ 39,387**	$ 18,127	$ 8,852
Supplemental cash flow information:			
Cash paid for interest, net of amounts capitalized	**$ 80,726**	$ 84,871	$ 70,066
Cash paid (received) for income taxes, net	**$ 20,844**	$ 67,421	$ (10,809)

See accompanying Notes to Consolidated Financial Statements.

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ONE Gas, Inc.
CONSOLIDATED STATEMENTS OF EQUITY

	Common Stock Issued	Common Stock	Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Equity
	(Shares)			*(Thousands of dollars)*		
January 1, 2021	53,166,733	$ 532	$ 1,756,921	$ 483,635	$ (7,777)	$ 2,233,311
Net income	—	—	—	206,434	—	206,434
Other comprehensive income	—	—	—	—	1,250	1,250
Common stock issued and other	466,477	4	32,445	—	—	32,449
Common stock dividends - $ 2.32 per share	—	—	996	(124,908)	—	(123,912)
December 31, 2021	53,633,210	536	1,790,362	565,161	(6,527)	2,349,532
Net income	—	—	—	221,742	—	221,742
Other comprehensive income	—	—	—	—	5,823	5,823
Common stock issued and other	1,716,744	17	141,266	—	—	141,283
Common stock dividends - $ 2.48 per share	—	—	1,086	(135,040)	—	(133,954)
December 31, 2022	55,349,954	553	1,932,714	651,863	(704)	2,584,426
Net income	—	—	—	**231,232**	—	**231,232**
Other comprehensive income	—	—	—	—	**(478)**	**(478)**
Common stock issued and other	**1,195,970**	**12**	**94,779**	—	—	**94,791**
Common stock dividends - $ 2.60 per share	—	—	**1,262**	**(145,356)**	—	**(144,094)**
December 31, 2023	**56,545,924**	**$ 565**	**$ 2,028,755**	**$ 737,739**	**$ (1,182)**	**$ 2,765,877**

See accompanying Notes to Consolidated Financial Statements.

ONE Gas, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation - The consolidated financial statements include the accounts of our natural gas distribution business as set forth in "Organization and Nature of Operations" below. All significant balances and transactions between our subsidiaries have been eliminated .

Organization and Nature of Operations - We provide natural gas distribution services to approximately 2.3 million customers in Oklahoma, Kansas and Texas through our three divisions, Oklahoma Natural Gas, Kansas Gas Service and Texas Gas Service, respectively. We primarily serve residential, commercial and transportation customers in all three states. We are a corporation incorporated under the laws of the state of Oklahoma, and our common stock is listed on the NYSE under the trading symbol "OGS."

Segments - We operate in one reportable business segment: regulated public utilities that deliver natural gas primarily to residential, commercial and transportation customers. We define reportable business segments as components of an organization for which discrete financial information is available and operating results are evaluated on a regular basis by the chief operating decision maker ("CODM") in order to assess performance and allocate resources. Our CODM is our Chief Executive Officer. Characteristics of our organization that were relied upon in making this determination include the similar nature of services we provide, the functional alignment of our organizational structure, and the reports that are regularly reviewed by the CODM for the purpose of assessing performance and allocating resources. Our management is functionally aligned and centralized, with performance evaluated based upon results of the entire distribution business. Capital allocation decisions are driven by asset integrity management, operating efficiency, growth opportunities and government-requested pipeline relocations, not geographic location or regulatory jurisdiction.

In 2023, 2022 and 2021, we had no single external customer from which we received 10 percent or more of our gross revenues.

Revenues - We recognize revenue from contracts with customers to depict the transfers of goods and services to customers at an amount that we expect to be entitled to receive in exchange for these goods and services. Our sources of revenue are disaggregated by natural gas sales, transportation revenues, and miscellaneous revenues, which are primarily one-time service fees, that meet the requirements of ASC 606. Certain revenues that do not meet the requirements of ASC 606 are classified as other revenues in our Notes to Consolidated Financial Statements in this Annual Report.

Our natural gas sales to customers and transportation revenues represent revenues from contracts with customers through implied contracts established by our tariffs approved by regulatory authorities. Our customers receive the benefits of our performance when the commodity is delivered to the customer. The performance obligation is satisfied over time as the customer receives the natural gas.

For deliveries of natural gas, customers are billed on a monthly cycle. We recognize revenues upon the delivery of natural gas or services rendered to customers. The billing cycles for customers do not necessarily coincide with the accounting periods used for financial reporting purposes. We accrue unbilled revenues for natural gas that has been delivered but not yet billed at the end of an accounting period. We use the invoice method practical expedient, where we recognize revenue for volumes delivered for which we have a right to invoice. Our estimate of accrued unbilled revenue is based on a percentage estimate of amounts unbilled each month, which is dependent upon a number of factors, some of which require management's judgment. These factors include customer consumption patterns and the impact of weather on usage. The accrued unbilled natural gas sales revenue is included in accounts receivable on our consolidated balance sheets.

Our miscellaneous revenues from contracts with customers represent implied contracts established by our tariff rates approved by the regulatory authorities and include miscellaneous utility services with the performance obligation satisfied at a point in time when services are rendered to the customer.

Total other revenues consist of revenues associated with regulatory mechanisms that do not meet the requirements of ASC 606 as revenue from contracts with customers, but authorize us to accrue revenues earned based on tariffs approved by regulatory authorities. Other revenues - natural gas sales primarily relate to the WNA mechanism in Kansas. This mechanism adjusts our revenues earned for the variance between actual and normal HDDs. This mechanism can have either positive
(warmer than normal) or negative (colder than normal) effects on revenues.

We collect and remit other taxes on behalf of governmental authorities, and we record these amounts in accrued taxes other than income in our consolidated balance sheets. See Note 2 for additional discussion of revenues.

Use of Estimates - The preparation of our consolidated financial statements and related disclosures in accordance with GAAP requires us to make estimates and assumptions with respect to values or conditions that cannot be known with certainty that affect the reported amount of assets and liabilities, and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements. These estimates and assumptions also affect the reported amounts of revenue and expenses during the reporting period. Items that may be estimated include, but are not limited to, the economic useful life of assets, fair value of assets and liabilities, provisions for doubtful accounts receivable, unbilled revenues for natural gas delivered but for which meters have not been read, natural gas purchased but for which no invoice has been received, provision for income taxes, including any deferred income tax valuation allowances, the results of litigation and various other recorded or disclosed amounts.

We evaluate these estimates on an ongoing basis using historical experience and other methods we consider reasonable based on the particular circumstances. Nevertheless, actual results may differ significantly from the estimates. Any effects on our financial position or results of operations from revisions to these estimates are recorded in the period when the facts that give rise to the revision become known.

Cost of Natural Gas - Cost of natural gas includes commodity purchases, fuel, storage, transportation, financial derivatives, and other gas purchase costs recovered through our cost of natural gas regulatory mechanisms and does not include an allocation of general operating costs or depreciation and amortization. These cost of natural gas regulatory mechanisms provide a method of recovering natural gas costs on an ongoing basis without a profit. See Note 3 for additional discussion of purchased gas cost recoveries.

Cash, Cash Equivalents and Restricted Cash and Restricted Cash Equivalents - Cash equivalents and restricted cash equivalents consist of highly liquid investments, which are readily convertible into cash and have original maturities of three months or less. Restricted cash consists of funds that are contractually or legally restricted as to usage or withdrawal and have been presented separately from cash and cash equivalents on our consolidated balance sheets. Restricted cash and restricted cash equivalents accounts were established for payment of Securitized Utility Tariff Bond issuance costs and payment of debt service on those bonds.

Property, Plant and Equipment - Our properties are stated at cost, which includes direct construction costs such as direct labor, materials, burden and AFUDC. Generally, the cost of our property retired or sold, plus removal costs, less salvage, is charged to accumulated depreciation. Gains and losses from sales or retirement of an entire operating unit or system of our properties are recognized in income. Maintenance and repairs are charged directly to expense.

AFUDC represents the cost of borrowed funds used to finance construction activities. We capitalize interest costs during the construction or upgrade of qualifying assets. Capitalized interest is recorded as a reduction to interest expense.

Our properties are depreciated using the straight-line method over their estimated useful lives. Generally, we apply composite depreciation rates to functional groups of property having similar economic circumstances. We periodically conduct depreciation studies to assess the economic lives of our assets. These depreciation studies are completed as a part of our regulatory proceedings, and the changes in economic lives, if applicable, are implemented prospectively when the new rates are approved by our regulators and become effective. Changes in the estimated economic lives of our property, plant and equipment could have a material effect on our financial position, results of operations or cash flows.

Property, plant and equipment on our consolidated balance sheets includes construction work in process for capital projects that have not yet been placed in service and therefore are not being depreciated. Assets are transferred out of construction work in process when they are substantially complete and ready for their intended use.

See Note 14 for additional information regarding our property, plant and equipment.

Accounts Receivable, Net - Accounts receivable represent valid claims against nonaffiliated customers for natural gas sold or services rendered. We assess the creditworthiness of our customers. Those customers who do not meet minimum standards may be required to provide security, including deposits and other forms of collateral, when appropriate and allowed by our tariffs. With approximately 2.3 million customers across three states, we are not exposed materially to a concentration of credit risk. We maintain an allowance for doubtful accounts based upon factors surrounding the credit risk of customers, historical trends, consideration of the current environment and other information. We recover natural gas costs related to accounts written off

when they are deemed uncollectible through the purchased-gas cost adjustment mechanisms in each of our jurisdictions. At December 31, 2023 and 2022, our allowance for doubtful accounts was $ 16.1 million and $ 16.7 million, respectively.

Inventories - Natural gas in storage is accounted for on the basis of weighted-average cost. Materials and supplies inventories are stated at the lower of weighted-average cost or net realizable value.

Leases - We determine if an arrangement is a lease at inception if the contract conveys the right to control the use and obtain substantially all the economic benefits from the use of an identified asset for a period of time in exchange for consideration. We identify a lease as a finance lease if the agreement includes any of the following criteria: transfer of ownership by the end of the lease term; an option to purchase the underlying asset that the lessee is reasonably certain to exercise; a lease term that represents 75 percent or more of the remaining economic life of the underlying asset; a present value of lease payments and any residual value guaranteed by the lessee that equals or exceeds 90 percent of the fair value of the underlying asset; or an underlying asset that is so specialized in nature that there is no expected alternative use to the lessor at the end of the lease term. A lease that does not meet any of these criteria is considered an operating lease.

Lease right-of-use assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Right-of-use assets and liabilities are recognized at the commencement date of a lease based on the present value of lease payments over the lease term. Our lease terms may include options to extend or terminate the lease. We include these extension or termination options in the determination of the lease term when it is reasonably certain that we will exercise that option. We have lease agreements with lease and non-lease components, which are accounted for separately. Additionally, for certain office equipment leases, we apply a portfolio approach to effectively account for the operating lease right-of-use assets and liabilities. We do not recognize leases having a term of less than one year in our consolidated balance sheets.

For purposes of determining the present value of the lease payments, we use a lease's implicit interest rate when readily determinable. As most of our leases do not provide an implicit interest rate, we use an incremental borrowing rate based on available information at the commencement of the lease. Lease cost for operating leases is recognized on a straight-line basis over the lease term. See Note 6 for additional information regarding our leases.

Derivatives and Risk Management Activities - We record all derivative instruments at fair value, with the exception of certain commodity purchase contracts for which we have chosen the normal purchase normal sale election as they are expected to result in physical delivery. The accounting for changes in the fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, if so, the reason for holding it, or if regulatory requirements impose a different accounting treatment.

If certain conditions are met, we may elect to designate a derivative instrument as a hedge of exposure to changes in fair values or cash flows. We have not elected to designate any of our derivative instruments as hedges.

The table below summarizes the various ways in which we account for our derivative instruments and the impact on our consolidated financial statements:

	Recognition and Measurement	
Accounting Treatment	**Balance Sheet**	**Income Statement**
Normal purchases and normal sales	- Fair value not recorded	- Change in fair value not recognized in earnings
Mark-to-market	- Recorded at fair value	- Change in fair value recognized in, and recoverable through, the purchased-gas cost adjustment mechanisms

See Note 16 for additional information regarding our economic hedging activities using derivatives.

Fair Value Measurements - We define fair value as the price that would be received from the sale of an asset or the transfer of a liability in an orderly transaction between market participants at the measurement date. We use the market and income approaches to determine the fair value of our assets and liabilities and consider the markets in which the transactions are executed. We measure the fair value of a group of financial assets and liabilities consistent with how a market participant would price the net risk exposure at the measurement date.

Fair Value Hierarchy - At each balance sheet date, we utilize a fair value hierarchy to classify fair value amounts recognized or disclosed in our consolidated financial statements based on the observability of inputs used to estimate such fair value. The levels of the hierarchy are described below:

- Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities;
- Level 2 - Significant observable pricing inputs other than quoted prices included within Level 1 that are, either directly or indirectly, observable as of the reporting date. Essentially, this represents inputs that are derived principally from or corroborated by observable market data; and
- Level 3 - May include one or more unobservable inputs that are significant in establishing a fair value estimate. These unobservable inputs are developed based on the best information available and may include our own internal data.

We recognize transfers into and out of the levels as of the end of each reporting period.

Determining the appropriate classification of our fair value measurements within the fair value hierarchy requires management's judgment regarding the degree to which market data is observable or corroborated by observable market data. We categorize derivatives for which fair value is determined using multiple inputs within a single level, based on the lowest level input that is significant to the fair value measurement in its entirety. See Note 16 for additional information regarding our fair value measurements.

Impairment of Goodwill and Long-Lived Assets - We assess our goodwill for impairment at least annually as of July 1, unless events or a change in circumstances indicate an impairment may have occurred before that time. As part of our goodwill impairment test, we first assess qualitative factors (including macroeconomic conditions, industry and market considerations, cost factors and overall financial performance) to determine whether it is more likely than not that our fair value is less than the carrying amount of our net assets. If further testing is necessary or a quantitative test is elected to refresh our recurring qualitative assessment, we perform a quantitative impairment test for goodwill.

Our impairment assessment is performed by comparing our fair value with our book value, including goodwill. If the fair value is less than the book value, an impairment is measured by the amount of our carrying value that exceeds fair value, not to exceed the carrying amount of our goodwill.

To estimate fair value, we use two generally accepted valuation approaches, an income approach and a market approach, using assumptions consistent with a market participant's perspective. Under the income approach, we use anticipated cash flows over a period of years plus a terminal value and discount these amounts to their present value using appropriate discount rates. Under the market approach, we apply acquisition multiples to forecasted cash flows. The acquisition multiples used are consistent with historical market transactions. The forecasted cash flows are based on average forecasted cash flows over a period of years.

Our goodwill impairment analysis performed in 2023 and 2022 utilized a qualitative assessment and did not result in any impairment indicators, nor did our analysis reflect our reporting unit at risk. Subsequent to July 1, 2023, no event has occurred indicating that it is more likely than not that our fair value is less than the carrying value of our net assets.

We assess our long-lived assets for impairment whenever events or changes in circumstances indicate that an asset's carrying amount may not be recoverable. An impairment is indicated if the carrying amount of a long-lived asset exceeds the sum of the undiscounted future cash flows expected to result from the use and eventual disposition of the asset. If an impairment is indicated, we record an impairment loss equal to the difference between the carrying value and the fair value of the long-lived asset. We determined that there were no material asset impairments in 2023, 2022 or 2021.

Securitized Intangible Asset - On November 18, 2022, KGSS-I acquired the Securitized Utility Tariff Property from Kansas Gas Service for $ 327.4 million. The Securitized Utility Tariff Property is classified as a securitized intangible asset on our consolidated balance sheets. This securitized intangible asset will be amortized over 10 years, the estimated period needed to collect the required amounts from Kansas Gas Service's customers to service the Securitized Utility Tariff Bonds. The amortization expense related to the securitized intangible asset will be included in depreciation and amortization expense in our consolidated statements of income. For the years ended December 31, 2023 and 2022, we recorded $ 30.2 million and $ 3.5 million, respectively, of amortization expense related to the securitized intangible asset. At the end of its life, this securitized intangible asset will have no residual value. See Note 5 for additional information about the Securitized Utility Tariff Bonds and Notes 3 and 7 for additional information about the securitization transactions.

Finite-lived intangible assets are stated at cost, net of accumulated amortization, which is recorded on a straight-line or accelerated basis over the life of the asset. We review amortizable intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. If such a review should indicate that

the carrying amount of amortizable intangible assets is not recoverable, we reduce the carrying amount of such assets to fair value.

Regulation - We are subject to the rate regulation and accounting requirements of the OCC, KCC, RRC and various municipalities in Texas. We follow the accounting and reporting guidance for regulated operations, including evaluating regulatory decisions to determine appropriate revenue recognition, cost deferrals and recoverability for regulatory assets and refund requirements for regulatory liabilities. During the ratemaking process, regulatory authorities set the framework for what we can charge customers for our services and establish the manner that our costs are accounted for, including allowing us to defer recognition of certain costs and permitting recovery of the amounts through rates over time, as opposed to expensing such costs as incurred. Examples include weather normalization, unrecovered purchased-gas costs, extraordinary costs associated with Winter Storm Uri, pension and postemployment benefit costs and ad-valorem taxes. This allows us to stabilize rates over time rather than passing such costs on to the customer for immediate recovery. Actions by regulatory authorities could have an effect on the amount recovered from customers. Any difference in the amount recoverable and the amount deferred is recorded as income or expense at the time of the regulatory action. A write-off of regulatory assets and costs not recovered may be required if all or a portion of the regulated operations have rates that are no longer:

- established by independent regulators;
- designed to recover our costs of providing regulated services; and
- set at levels that will recover our costs when considering the demand and competition for our services.

Should recovery cease due to regulatory actions, certain of these assets may no longer meet the criteria for recognition and accordingly, a write-off of regulatory assets and stranded costs may be required. There were no write-offs of regulatory assets resulting from the failure to meet the criteria for capitalization during 2023, 2022 and 2021.

See Note 3 for additional information regarding our regulatory assets and liabilities.

Pension and Other Postemployment Employee Benefits - We have defined benefit pension plans covering eligible employees, all of which are closed to new participants. We also sponsor welfare plans that provide other postemployment medical and life insurance benefits to eligible employees who retire with at least five years of service. To calculate the costs and liabilities related to our plans, we utilize an outside actuarial consultant, which uses statistical and other factors to anticipate future events. These factors include assumptions about the discount rate, expected return on plan assets, rate of future compensation increases, age and mortality and employment periods. We use tables issued by the Society of Actuaries to estimate mortality rates. In determining the projected benefit obligations and costs, assumptions can change from period to period and may result in material changes in the cost and liabilities we recognize.

Income Taxes - Deferred income taxes are recorded for the difference between the financial statement and income tax basis of assets and liabilities and carryforward items, based on income tax laws and rates existing at the time the temporary differences are expected to reverse. The effect on deferred income taxes of a change in tax rates is deferred and amortized for operations regulated by the OCC, KCC, RRC and various municipalities in Texas, if, as a result of an action by a regulator, it is probable that the effect of the change in tax rates will be recovered from or returned to customers through future rates. We continue to amortize previously deferred investment tax credits for ratemaking purposes over the periods prescribed by our regulators.

A valuation allowance for deferred income tax assets is recognized when it is more likely than not that some or all of the benefit from the deferred income tax asset will not be realized. To assess that likelihood, we use estimates and judgment regarding our future taxable income, as well as the jurisdiction in which such taxable income is generated, to determine whether a valuation allowance is required. Such evidence can include our current financial position, our results of operations, both actual and forecasted, the reversal of deferred income tax liabilities, as well as the current and forecasted business economics of our industry. We had no valuation allowance at December 31, 2023 and 2022.

We utilize a more-likely-than-not recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position that is taken or expected to be taken in a tax return. We reflect penalties and interest as part of income tax expense as they become applicable for tax provisions that do not meet the more-likely-than-not recognition threshold and measurement attribute. There were no material uncertain tax positions at December 31, 2023 and 2022.

Changes in tax laws or tax rates are recognized in the financial reporting period that includes the enactment date.

See Note 12 for additional information regarding income taxes.

Asset Retirement Obligations - Asset retirement obligations represent legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and/or normal use of the asset. Certain long-lived assets that comprise our natural gas distribution systems, primarily our pipeline assets, are subject to agreements or regulations that give rise to an asset retirement obligation for removal or other disposition costs associated with retiring the assets in place upon the discontinued use of the natural gas distribution system. We recognize the fair value of a liability for an asset retirement obligation in the period when it is incurred if a reasonable estimate of the fair value can be made. We are not able to estimate reasonably the fair value of the asset retirement obligations for portions of our assets because the settlement dates are indeterminable given our expected continued use of the assets with proper maintenance. We expect our natural gas distribution systems will continue in operation for the foreseeable future. Based on our proximity to significant natural gas reserves and infrastructure and the widespread use of natural gas for heating and cooking activities by residential and commercial customers in our service areas, we expect supply and demand to exist for the foreseeable future.

In accordance with long-standing regulatory treatment, we collect through rates the estimated costs of removal on certain regulated properties through depreciation expense as a portion of the net salvage value component of our composite deprecation rates, with a corresponding credit to accumulated depreciation and amortization. These removal costs collected through our rates include costs attributable to legal and nonlegal removal obligations. These costs are addressed prospectively in depreciation rates, rather than as a regulatory liability, in each general rate order.

For financial reporting purposes, if the removal costs collected have exceeded our removal costs incurred, we estimate a regulatory liability using current rates since the last general rate order in each of our jurisdictions. At December 31, 2023 and 2022, we have not recorded a regulatory liability, as our removal costs incurred have exceeded amounts collected through our depreciation rates. Significant uncertainty exists regarding the recording of these regulatory liabilities, pending, among other issues, clarification of regulatory intent. We continue to monitor the regulatory requirements, and any future regulatory liabilities incurred may be adjusted as more information is obtained. To the extent these estimated liabilities are adjusted, such amounts will be reclassified between accumulated depreciation and amortization and regulatory liabilities on our balance sheet and therefore will not have an impact on earnings.

Contingencies - Our accounting for contingencies covers a variety of business activities, including contingencies for legal and environmental exposures. We accrue these contingencies when our assessments indicate that it is probable that a liability has been incurred or an asset will not be recovered and an amount can be estimated reasonably. We expense legal fees as incurred and base our legal liability estimates on currently available facts and our estimates of the ultimate outcome or resolution. Accruals for the estimated cost of environmental remediation obligations generally are recognized no later than the completion of a remediation feasibility study. Recoveries of environmental remediation costs from other parties are recorded as assets when their receipt is deemed probable. Actual results may differ from our estimates resulting in an impact, positive or negative, on earnings.

See Note 15 for additional information regarding contingencies.

Share-Based Payments - We expense the fair value of share-based payments net of estimated forfeitures. We estimate forfeiture rates based on historical forfeitures under our share-based payment plans.

Earnings per share - Basic EPS is calculated by dividing net income by the daily weighted-average number of common shares outstanding during the periods presented, which includes fully vested stock awards that have not yet been issued as common stock. Diluted EPS is based on shares outstanding for the calculation of basic EPS, plus unvested stock awards granted under our compensation plans and equity forward sale agreements, but only to the extent these instruments dilute earnings per share.

Reclassifications - A reclassification has been made in the prior-year financial statements to conform to the current-year presentation. We have updated our consolidated balance sheet at December 31, 2022, to disaggregate “current maturities of other long-term debt,” which had previously been included in “other current liabilities,” to conform to our current-year presentation.

Recently Issued Accounting Standards Update - In December 2023, the FASB issued ASU 2023-09, “Income Taxes (Topic 740): Improvements to Income Tax Disclosures,” which will enhance annual income tax disclosures to address investor requests for more information about the tax risks and opportunities present in an entity’s operations. The amendments require disclosure of additional information in specified categories with respect to the reconciliation of the effective tax rate to the statutory rate (the rate reconciliation) for federal, state, and foreign income taxes. They also require greater detail about individual reconciling items in the rate reconciliation to the extent the impact of those items exceeds a specified threshold. In addition to new disclosures associated with the rate reconciliation, the amendments in this update require information pertaining to taxes paid (net of refunds received) to be disaggregated for federal, state, and foreign taxes and further disaggregated for

specific jurisdictions to the extent the related amounts exceed a quantitative threshold. The amendments in this update are effective for annual periods beginning after December 15, 2023, and early adoption is permitted. We are currently assessing the timing and impacts of adopting this standard.

In November 2023, the FASB issued ASU 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures," which will improve annual and interim reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. The amendment enhances interim disclosure requirements, clarifies circumstances in which an entity can disclose multiple segment measures of profit or loss, provides new segment disclosure requirements for entities with a single reportable segment, and contains other disclosure requirements. The amendments in this update are effective for annual periods beginning after December 15, 2023, and interim periods within annual periods beginning after December 15, 2024. Early adoption is permitted. We are currently assessing the timing and impacts of adopting this standard.

In November 2021, the FASB issued ASU 2021-10, "Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance," which will require disclosure about government assistance in the notes to the financial statements. The amendment requires annual disclosures about transactions with a government that are accounted for by applying a grant or contribution accounting model by analogy, including information about the nature of the transactions and the related accounting policy used to account for the transactions, the line items on the balance sheet and income statement that are affected by the transactions and the significant terms and conditions of the transactions, including commitments and contingencies. The amendment became effective for us beginning January 1, 2022. As the guidance is related only to disclosures in the notes to the financial statements, it did not impact our financial position, results of operations or cash flows. See Note 3 for additional discussion regarding our securitization transactions with the Oklahoma and Texas governments that are accounted for by applying a grant accounting model by analogy.

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting," which provides relief from the accounting analysis and impacts that may otherwise be required for modifications to agreements (e.g., loans, debt securities, derivatives, borrowings) necessitated by reference rate reform. It also provides optional expedients to enable companies to continue to apply hedge accounting to certain hedging relationships impacted by reference rate reform. In the first quarter 2020, we adopted this new guidance effective for contracts modified between March 12, 2020 and December 31, 2022. In March 2022, we amended the ONE Gas Credit Agreement to change the defined benchmark rate to SOFR from LIBOR. Our adoption and subsequent amendment of the ONE Gas Credit Agreement did not result in a material impact to our consolidated financial statements.

2. REVENUE

The following table sets forth our revenues disaggregated by source for the periods indicated:

	Years Ended December 31,		
	2023	**2022**	**2021**
	(Thousands of dollars)		
Natural gas sales to customers	**$ 2,141,908**	$ 2,410,048	$ 1,652,566
Transportation revenues	**132,945**	125,951	118,492
Securitization customer charges (Note 17)	**48,677**	5,769	—
Miscellaneous revenues	**22,791**	19,850	16,757
Total revenues from contracts with customers	**2,346,321**	2,561,618	1,787,815
Other revenues - natural gas sales related	**12,764**	3,403	9,650
Other revenues	**12,905**	12,984	11,132
Total other revenues	**25,669**	16,387	20,782
Total revenues	**$ 2,371,990**	$ 2,578,005	$ 1,808,597

Accrued unbilled natural gas sales revenues at December 31, 2023 and December 31, 2022, were $ 191.4 million and $ 269.5 million, respectively, and are included in accounts receivable on our consolidated balance sheets.

3. REGULATORY ASSETS AND LIABILITIES

The tables below present a summary of regulatory assets and liabilities, net of amortization, for the periods indicated:

		December 31, 2023		
	Remaining Recovery Period	Current	Noncurrent	Total
		(*Thousands of dollars*)		
Winter weather event costs	(a)	**$ 22,633**	**$ 21,495**	**$ 44,128**
Under-recovered purchased-gas costs	1 year	**10,391**	**—**	**10,391**
Pension and postemployment benefit costs	See Note 11	**6,379**	**228,092**	**234,471**
Reacquired debt costs	6 years	**723**	**2,712**	**3,435**
MGP remediation costs	15 years	**98**	**31,893**	**31,991**
Ad-valorem tax	1 year	**14,533**	**—**	**14,533**
WNA	1 year	**11,404**	**—**	**11,404**
Customer credit deferrals	1 year	**6,184**	**—**	**6,184**
Other	1 to 18 years	**2,963**	**3,714**	**6,677**
Total regulatory assets, net of amortization		**75,308**	**287,906**	**363,214**
Income tax rate changes	(a)	**—**	**(500,478)**	**(500,478)**
Over-recovered purchased-gas costs	1 year	**(66,901)**	**—**	**(66,901)**
Total regulatory liabilities		**(66,901)**	**(500,478)**	**(567,379)**
Net regulatory assets and liabilities		**$ 8,407**	**$ (212,572)**	**$ (204,165)**

(a) Recovery period varies by jurisdiction. See discussion below for additional information regarding our regulatory assets related to winter weather event costs and regulatory liabilities related to federal income tax rate changes.

		December 31, 2022		
	Remaining Recovery Period	Current	Noncurrent	Total
		(*Thousands of dollars*)		
Winter weather event costs	(a)	$ 221,926	$ 36,291	$ 258,217
Under-recovered purchased-gas costs	1 year	19,755	—	19,755
Pension and postemployment benefit costs	See Note 11	—	258,257	258,257
Reacquired debt costs	6 years	812	3,347	4,159
MGP remediation costs	15 years	98	29,743	29,841
Ad-valorem tax	1 year	13,359	—	13,359
WNA	1 year	8,474	—	8,474
Customer credit deferrals	1 year	9,504	—	9,504
Other	1 to 18 years	1,644	3,193	4,837
Total regulatory assets, net of amortization		275,572	330,831	606,403
Pension and other postemployment benefit costs	See Note 11	(8,228)	—	(8,228)
Income tax rate changes	(a)	—	(529,441)	(529,441)
Over-recovered purchased-gas costs	1 year	(39,639)	—	(39,639)
Total regulatory liabilities		(47,867)	(529,441)	(577,308)
Net regulatory assets and liabilities		$ 227,705	$ (198,610)	$ 29,095

(a) Recovery period varies by jurisdiction. See discussion below for additional information regarding our regulatory assets related to winter weather event costs and regulatory liabilities related to federal income tax rate changes.

Regulatory assets in our consolidated balance sheets, as authorized by various regulatory authorities, are probable of recovery. Base rates and certain riders are designed to provide a recovery of costs during the period such rates are in effect, but do not generally provide for a return on investment for amounts we have deferred as regulatory assets. All of our regulatory assets are subject to review by the respective regulatory authorities during future regulatory proceedings.

Winter weather event costs - In February 2021, the U.S. experienced Winter Storm Uri, a historic winter weather event impacting supply, market pricing and demand for natural gas in a number of states, including our service territories of Oklahoma, Kansas, and Texas. During this time, the governors of Oklahoma, Kansas, and Texas each declared a state of

emergency, and certain regulatory agencies issued emergency orders that impacted the utility and natural gas industries, including statewide utility curtailment programs and orders requiring jurisdictional natural gas and electric utilities to do all things possible and necessary to ensure that natural gas and electricity utility services continued to be provided to their customers. Due to the historic nature of this winter weather event, we experienced unforeseeable and unprecedented market pricing for natural gas in our Oklahoma, Kansas, and Texas jurisdictions, which resulted in aggregated natural gas purchases for the month of February 2021 of approximately $ 2.1 billion.

Oklahoma - In August 2022, the ODFA completed the issuance of $ 1.4 billion in ratepayer-backed bonds with varying scheduled final maturities over 30 years, consistent with the OCC financing order. The bonds are limited and special revenue obligations of the ODFA, payable solely from the securitization bond collateral and are not an obligation of Oklahoma Natural Gas or any of its affiliates.

The proceeds received by Oklahoma Natural Gas were approximately $ 1.3 billion, which represents the amount of the securitization bonds issued by the ODFA less issuance costs. The receipt of these proceeds represents Oklahoma Natural Gas' recovery of the approximately $ 1.3 billion of authorized extraordinary natural gas purchase costs and other operational costs incurred during Winter Storm Uri, as well as carrying costs. Beginning September 1, 2022, Oklahoma Natural Gas acts as a servicer, with responsibility for collecting the securitization charges from Oklahoma customers that are then submitted to the ODFA to repay the securitization bonds. The collection and remittance of these funds on behalf of the ODFA are recorded in other current liabilities in our consolidated balance sheets.

Kansas - In November 2022, KGSS-I issued $ 336 million of 5.486 percent Securitized Utility Tariff Bonds. KGSS-I used the proceeds from the issuance to purchase the Securitized Utility Tariff Property from Kansas Gas Service, pay for debt issuance costs, and reimburse Kansas Gas Service for upfront securitization costs paid by Kansas Gas Service on behalf of KGSS-I. See Notes 1 and 5 for additional information about the Securitized Utility Tariff Bonds and Note 17 for additional information about the securitization transaction in Kansas.

Texas - Pursuant to securitization legislation enacted in Texas as a result of Winter Storm Uri and a June 2021 RRC Notice to Gas Utilities, Texas Gas Service submitted an application to the RRC in July 2021, for an order authorizing the amount of extraordinary costs for recovery and other such specifications necessary for the issuance of securitized bonds.

In February 2022, the RRC issued a single financing order for Texas Gas Service and other natural gas utilities in Texas participating in the securitization process, which included a determination that the approved costs will be collected from customers over a period of not more than 30 years. The TPFA formed the TNG Corporation, a new independent public authority, to issue the securitized bonds.

In March 2023, the TNG Corporation completed the issuance of the Customer Rate Relief (Winter Storm Uri), Taxable Series 2023 Bonds and we received our portion of the net proceeds, which was approximately $ 197 million. The proceeds were used to repay certain indebtedness and for general corporate purposes. Interest costs that exceeded the amount securitized have been deferred and will be addressed in the next general rate proceeding in each applicable jurisdiction in Texas.

At December 31, 2023, Texas Gas Service had deferred approximately $ 26.6 million in extraordinary costs associated with Winter Storm Uri attributable to its former West Texas service area. Pursuant to the approved settlement order, Texas Gas Service began collecting the extraordinary costs, including carrying costs, from those customers in January 2022.

GAAP does not provide comprehensive recognition and measurement guidance for many forms of government assistance received by business entities. Accordingly, we have accounted for the proceeds received from the ODFA and TNG Corporation by analogy to International Accounting Standards No. 20, "Accounting for Government Grants and Disclosure of Government Assistance" consistent with a grant related to income. The proceeds received and the corresponding recognition of the deferred regulatory asset have been reflected in cost of natural gas in our consolidated statements of income. As the proceeds reflect the recovery of our winter weather event regulatory asset, there was no material impact to earnings.

The deferred winter weather event costs also include invoiced costs for natural gas purchases during Winter Storm Uri that have not been paid as we work with our suppliers for Kansas and Texas to resolve discrepancies in invoiced amounts. These amounts may be adjusted as the differences with suppliers are resolved. Settlements of these amounts are recoverable through the purchased gas cost mechanisms in the respective state. Future adjustments to the amounts are not expected to have a material impact on earnings.

Other regulatory assets and liabilities - Purchased-gas costs represent the natural gas costs that have been over- or under-recovered from customers through the purchased-gas cost adjustment mechanisms, and includes natural gas utilized in our operations and premiums paid and any cash settlements received from our purchased natural gas call options.

The OCC, KCC and regulatory authorities in Texas have approved the recovery of pension costs and other postemployment benefits costs through rates for Oklahoma Natural Gas, Kansas Gas Service and Texas Gas Service, respectively. The costs recovered through rates are based on the net periodic benefit cost for defined benefit pension and other postemployment costs. Differences, if any, between the net periodic benefit cost, net of deferrals, and the amount recovered through rates are reflected in earnings. We historically have recovered defined benefit pension and other postemployment benefit costs through rates. We believe it is probable that regulators will continue to include the net periodic pension and other postemployment benefit costs in our cost of service.

We amortize reacquired debt costs in accordance with the accounting guidelines prescribed by the OCC and the KCC.

See Note 15 for additional information regarding our regulatory assets for MGP remediation costs.

Ad-valorem tax represents the difference in Kansas Gas Service's taxes incurred each year above or below the amount approved in base rates. This difference is deferred as a regulatory asset or liability for a 12-month period. Kansas Gas Service then applies an adjustment to customers' bills to refund the over-collected revenue or bill the under-collected revenue over the subsequent 12 months.

Weather normalization represents revenue over- or under-recovered through the WNA rider in Kansas. This amount is deferred as a regulatory asset or liability for a 12-month period. Kansas Gas Service then applies an adjustment to customers' bills for 12 months to refund the over-collected revenue or bill the under-collected revenue.

The customer credit deferrals and the noncurrent regulatory liability for income tax rate changes represents deferral of the effects of enacted federal and state income tax rate changes on our ADIT and the effects of these changes on our rates. See Note 12 for additional information regarding the impact of income tax rate changes.

Recovery through rates resulted in amortization of regulatory assets of approximately $ 14.7 million, $ 9.4 million and $ 5.5 million for the years ended December 31, 2023, 2022 and 2021, respectively.

4. CREDIT FACILITY AND SHORT-TERM DEBT

In October 2023, we entered into an agreement that increased the capacity of the ONE Gas Credit Agreement to $ 1.2 billion from $ 1.0 billion.

In March 2023, we entered into an extension agreement related to the ONE Gas Credit Agreement that extended the maturity date to March 16, 2028, from March 16, 2027.

Other than the increased commitments and term extension, all other terms and conditions of the ONE Gas Credit Agreement remain in full force and effect.

The ONE Gas Credit Agreement provides for a $ 1.2 billion revolving unsecured credit facility and includes a $ 20 million letter of credit subfacility and a $ 60 million swingline subfacility. We can request an increase in commitments of up to an additional $ 300 million upon satisfaction of customary conditions, including receipt of commitments from either new lenders or increased commitments from existing lenders. The ONE Gas Credit Agreement is available to provide liquidity for working capital, capital expenditures, acquisitions and mergers, the issuance of letters of credit and for other general corporate purposes.

The ONE Gas Credit Agreement contains certain financial, operational and legal covenants. Among other things, these covenants include maintaining ONE Gas' total debt-to-capital ratio of no more than 70 percent at the end of any calendar quarter. At December 31, 2023, our total debt-to-capital ratio was 52 percent and we were in compliance with all covenants under the ONE Gas Credit Agreement. We may reduce the unutilized portion of the ONE Gas Credit Agreement in whole or in part without premium or penalty. The ONE Gas Credit Agreement contains customary events of default. Upon the occurrence of certain events of default, the obligations under the ONE Gas Credit Agreement may be accelerated and the commitments may be terminated.

At December 31, 2023, we had $ 1.4 million in letters of credit issued and no borrowings under the ONE Gas Credit Agreement, with approximately $ 1.2 billion of remaining credit, which is available to repay our commercial paper borrowings.

In November 2023, we increased the capacity of our commercial paper program to $ 1.2 billion from $ 1.0 billion.

Under our commercial paper program, we may issue unsecured commercial paper up to a maximum amount of $ 1.2 billion to fund short-term borrowing needs. The maturities of the commercial paper vary but may not exceed 270 days from the date of issue. Commercial paper is generally sold at par less a discount representing an interest factor. At December 31, 2023 and December 31, 2022, we had $ 88.5 million and $ 552.0 million of commercial paper outstanding with a weighted-average interest rate of 5.60 percent and 4.75 percent, respectively.

5. LONG-TERM DEBT

The table below presents a summary of our long-term debt outstanding for the periods indicated:

	Interest rate at December 31, 2023	December 31, 2023	December 31, 2022
		(*Thousands of dollars*)	
Senior Notes due:			
February 2024	**3.610 %**	**$ 300,000**	$ 300,000
March 2024	**1.100 %**	**473,000**	473,000
April 2029	**5.100 %**	**300,000**	—
May 2030	**2.000 %**	**300,000**	300,000
September 2032	**4.250 %**	**300,000**	300,000
February 2044	**4.658 %**	**600,000**	600,000
November 2048	**4.500 %**	**400,000**	400,000
Total Senior Notes		**2,673,000**	2,373,000
KGSS-I Securitized Utility Tariff Bonds	**5.486 %**	**315,284**	336,000
Other	**8.000 %**	**1,238**	1,250
Unamortized discounts on long-term debt		**(7,615)**	(7,636)
Debt issuance costs (a)		**(21,092)**	(20,143)
Total long-term debt, net		**2,960,815**	2,682,471
Less: current maturities of securitized utility tariff bonds, net		**27,430**	20,716
Less: current maturities of other long-term debt, net		**772,984**	12
Noncurrent portion of long-term debt, net		**$ 2,160,401**	$ 2,661,743

(a) Includes issuance costs for the KGSS-I Securitized Utility Tariff Bonds of $ 5.3 million and $ 5.9 million, respectively.

Senior Notes - In December 2023, we issued $ 300 million of 5.10 percent senior notes due April 2029. The proceeds from the issuance were used to repay amounts outstanding under our commercial paper program and for general corporate purposes.

In August 2022, we issued $ 300 million of 4.25 percent senior notes due September 2032. The proceeds from the issuance were used to repay amounts outstanding under our commercial paper program and for general corporate purposes.

In August 2022, we called $ 750 million of the $ 1.0 billion of 0.85 percent senior notes due March 2023, $ 150 million of the $ 700 million of 1.10 percent senior notes due March 2024 and the remaining $ 400 million of outstanding floating-rate senior notes due March 2023, using the proceeds received from the Oklahoma government in our securitization transaction for Oklahoma Natural Gas.

In November 2022, we called the remaining $ 250 million of the $ 1.0 billion of 0.85 percent senior notes due March 2023 and $ 77 million of the $ 700 million of 1.10 percent senior notes due March 2024, using the proceeds from the securitization transaction for Kansas Gas Service.

The indenture governing our Senior Notes includes an event of default upon the acceleration of other indebtedness of $ 100 million or more. Such events of default would entitle the trustee or the holders of 25 percent in aggregate principal amount of the outstanding Senior Notes to declare those Senior Notes immediately due and payable in full.

Depending on the series, we may redeem our Senior Notes at par, plus accrued and unpaid interest to the redemption date, starting three months or six months before their maturity dates. Prior to these dates, we may redeem these Senior Notes, in whole or in part, at a redemption price equal to the principal amount, plus accrued and unpaid interest and a make-whole

premium. The redemption price will never be less than 100 percent of the principal amount of the respective Senior Note plus accrued and unpaid interest to the redemption date. The remaining $ 473 million of outstanding principal of our 1.10 percent senior notes due March 2024 can be called at par with a 30-day notice. Senior Notes are senior unsecured obligations, ranking equally in right of payment with all of our existing and future unsecured senior indebtedness.

Securitized Utility Tariff Bonds - On November 18, 2022, KGSS-I issued $ 336 million of 5.486 percent Securitized Utility Tariff Bonds. The Securitized Utility Tariff Bonds have a term of 10 years with semi-annual principal repayments that began on August 1, 2023, and an expected weighted average life of 5.5 years. The bonds are governed by an indenture between KGSS-I and the indenture trustee. The indenture contains certain covenants that restrict KGSS-I's ability to sell, transfer, convey, exchange, or otherwise dispose of its assets. See Notes 3 and 17 for additional discussion of the securitization transactions.

The KGSS-I Securitized Utility Tariff Bonds are governed by an indenture between KGSS-I and the indenture trustee. The indenture contains certain covenants that restrict KGSS-I's ability to sell, transfer, convey, exchange, or otherwise dispose of its assets. See Note 17 for additional discussion of the Kansas securitization transaction.

6. LEASES

We have operating leases for office facilities, gas storage facilities, IT equipment and right-of-way contracts. Our leases have remaining lease terms of 1 to 6 years, some of which include options to extend the leases for up to 10 years , and some of which include options to terminate the leases within specified time frames. We have not entered into any finance leases.

Our right-of-use asset is $ 21.0 million and $ 23.3 million as of December 31, 2023 and 2022, respectively, and is reported within other assets in our consolidated balance sheets. Operating lease liabilities are reported within our other current liabilities and other liabilities in our consolidated balance sheets. Total operating lease cost including immaterial amounts attributable to short-term operating leases was $ 7.7 million, $ 7.8 million, and $ 8.2 million in 2023, 2022 and 2021, respectively.

In 2023, we reassessed certain operating leases for office facilities and IT equipment which were extended or modified, resulting in an increase of $ 3.9 million in our right-of-use asset and operating lease liability.

Other information related to operating leases	Year Ended December 31, 2023	2022	2021
		(Millions of dollars)	
Weighted-average remaining lease term	**4 years**	5 years	6 years
Weighted-average discount rate	**4.28 %**	4.04 %	2.78 %
Supplemental cash flows information			
Lease payments	**$ (8.3)**	$ (8.2)	$ (8.0)
Right-of-use assets obtained in exchange for lease obligations	**$ 3.9**	$ 0.3	$ 0.4

Future minimum lease payments under non-cancellable operating leases	December 31, 2023
	(Millions of dollars)
2024	**$ 6.7**
2025	**4.9**
2026	**3.3**
2027	**3.1**
2028	**2.8**
Thereafter	**1.4**
Total future minimum lease payments	**$ 22.2**
Imputed interest	**(1.9)**
Total operating lease liability	**$ 20.3**
Consolidated balance sheets as of December 31, 2023	
Current operating lease liability	**$ 6.0**
Long-term operating lease liability	**14.3**
Total operating lease liability	**$ 20.3**

7. EQUITY

Preferred Stock - At December 31, 2023, we had 50 million, $ 0.01 par value, authorized shares of preferred stock available. We have not issued or established any classes or series of shares of preferred stock.

Common Stock - At December 31, 2023, we had approximately 193.5 million shares of authorized common stock available for issuance.

Equity Issuances - On December 28, 2023, we settled under forward contracts 1,032,403 shares (289,403 from forwards related to an at-the-market equity distribution agreement and 743,000 from forwards related to underwriting agreements) of our common stock for net proceeds of $ 79.0 million.

In December 2023, we amended the forward sale agreement we entered into in March 2023 to extend the maturity date of 657,000 shares to December 31, 2024 from December 29, 2023. The amended forward sale agreement provides for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 31, 2024, for 1,257,000 shares of common stock.

In September 2023, we entered into an underwriting agreement and two forward sale agreements for 1.2 million and 180,000 shares of our common stock, respectively. The forward sale agreements provide for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 31, 2024.

In June 2023, we executed forward sale agreements under our current at-the-market equity program for 926,465 shares of our common stock.

In March 2023, we entered into an underwriting agreement and a forward sale agreement for 2.0 million shares of our common stock. The forward sale agreement provided for settlement on a date, or dates, to be specified at our discretion, but which will occur no later than December 29, 2023, for 1.4 million shares of common stock and by December 31, 2024, for the remaining balance.

In February 2023, we entered into an at-the-market equity distribution agreement under which we may issue and sell shares of our common stock with an aggregate offering price up to $ 300 million. This at-the-market equity program replaced our previous at-the-market equity program, which began in February 2020, and expired in February 2023. Sales of common stock are made by means of ordinary brokers' transactions on the NYSE, in block transactions or as otherwise agreed to between us and the sales agent. We are under no obligation to offer and sell common stock under the program. At December 31, 2023, we had $ 225.5 million of equity available for issuance under the program.

The following table summarizes all of our outstanding forward sale agreements at December 31, 2023:

Maturity	Original Shares	Remaining Shares	Net Proceeds Available (in thousands)	Forward Price
December 31, 2024	**926,465**	**926,465**	**$ 74,396**	**$ 80.30**
December 31, 2024	**2,000,000**	**1,257,000**	**96,709**	**76.94**
December 31, 2024	**1,200,000**	**1,200,000**	**88,823**	**74.02**
December 31, 2024	**180,000**	**180,000**	**13,315**	**73.97**
Total forward sale agreements	**4,306,465**	**3,563,465**	**$ 273,243**	**$ 76.68**

For the year ended December 31, 2022, under our at-the-market equity distribution agreement we sold and issued 403,792 shares of our common stock for $ 35.0 million, generating proceeds, net of issuance costs, of $ 34.7 million.
For the year ended December 31, 2022, we executed forward sale agreements related to our at-the-market equity distribution agreement for 1,451,474 shares of our common stock. On December 30, 2022, we settled forward sales agreements with respect to 1,162,071 shares of our common stock for net proceeds of $ 93.8 million.

Dividends Declared - For the years ended December 31, 2023 and 2022, we declared and paid dividends of $ 2.60 per share ($ 0.65 per share quarterly) and $ 2.48 per share ($ 0.62 per share quarterly), respectively. In January 2024, we declared a dividend of $ 0.66 per share ($ 2.64 per share on an annualized basis) for shareholders of record as of February 23, 2024, payable on March 8, 2024.

8. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table sets forth the balance in accumulated other comprehensive loss for the periods indicated:

	Accumulated Other Comprehensive Income (Loss)
	(Thousands of dollars)
January 1, 2022	$ (6,527)
Pension and other postemployment benefit plans obligations	
Other comprehensive income before reclassification, net of tax of $(1,669)	5,701
Amounts reclassified from accumulated other comprehensive income (loss), net of tax of $(36)	122
Other comprehensive income	5,823
December 31, 2022	(704)
Pension and other postemployment benefit plans obligations	
Other comprehensive loss before reclassification, net of tax of $ 140	**(479)**
Amounts reclassified from accumulated other comprehensive income, net of tax of $ —	**1**
Other comprehensive loss	**(478)**
December 31, 2023	**$ (1,182)**

The following table sets forth the effect of reclassifications from accumulated other comprehensive loss in our consolidated statements of income for the periods indicated:

Details About Accumulated Other Comprehensive Loss Components	Years Ended December 31, 2023	2022	2021	Affected Line Item in the Consolidated Statements of Income
		(Thousands of dollars)		
Pension and other postemployment benefit plan obligations (a)				
Amortization of net loss	**$ 1,960**	$ 17,010	$ 45,896	
Amortization of unrecognized prior service cost	**525**	289	(279)	
	2,485	17,299	45,617	
Regulatory adjustments (b)	**(2,484)**	(17,141)	(44,055)	
	1	158	1,562	Income before income taxes
	—	(36)	(390)	Income tax expense
Total reclassifications for the period	**$ 1**	$ 122	$ 1,172	Net income

(a) These components of accumulated other comprehensive loss are included in the computation of net periodic benefit cost. See Note 11 for additional detail of our net periodic benefit cost.
(b) Regulatory adjustments represent pension and other postemployment benefit costs expected to be recovered through rates and are deferred as part of our regulatory assets. See Note 3 for additional disclosures of regulatory assets and liabilities.

9. EARNINGS PER SHARE

Basic EPS is calculated by dividing net income by the daily weighted-average number of common shares outstanding during the periods presented, which includes fully vested stock awards that have not yet been issued as common stock. Diluted EPS is based on shares outstanding for the calculation of basic EPS, plus unvested stock awards granted under our compensation plans and equity forward sale agreements, but only to the extent these instruments dilute earnings per share.

The following tables set forth the computation of basic and diluted EPS from continuing operations for the periods indicated:

	Year Ended December, 31, 2023		
	Income	Shares	Per Share Amount
	(*Thousands, except per share amounts*)		
Basic EPS Calculation			
Net income available for common stock	**$ 231,232**	**55,600**	**$ 4.16**
Diluted EPS Calculation			
Effect of dilutive securities	**—**	**260**	
Net income available for common stock and common stock equivalents	**$ 231,232**	**55,860**	**$ 4.14**

	Year Ended December, 31, 2022		
	Income	Shares	Per Share Amount
	(*Thousands, except per share amounts*)		
Basic EPS Calculation			
Net income available for common stock	$ 221,742	54,207	$ 4.09
Diluted EPS Calculation			
Effect of dilutive securities	—	131	
Net income available for common stock and common stock equivalents	$ 221,742	54,338	$ 4.08

	Year Ended December, 31, 2021		
	Income	Shares	Per Share Amount
	(*Thousands, except per share amounts*)		
Basic EPS Calculation			
Net income available for common stock	$ 206,434	53,575	$ 3.85
Diluted EPS Calculation			
Effect of dilutive securities	—	99	
Net income available for common stock and common stock equivalents	$ 206,434	53,674	$ 3.85

10. SHARE-BASED PAYMENTS

The ECP provides for the granting of stock-based compensation, including incentive stock options, nonstatutory stock options, stock bonus awards, restricted stock awards, restricted stock unit awards, performance stock awards and performance unit awards to eligible employees and the granting of stock awards to non-employee directors. At December 31, 2023, we have 4.3 million shares of common stock reserved for issuance under the ECP. At December 31, 2023, we had approximately 1.8 million shares available for issuance under the ECP, which reflect shares issued and estimated shares expected to be issued upon vesting of outstanding awards granted under the plan, less forfeitures. The plan allows for the deferral of awards granted in stock or cash, in accordance with the Code section 409A requirements.

Compensation expense for our ECP share-based payment plans was $ 7.8 million, net of tax benefits of $ 2.6 million, for 2023, $ 6.8 million, net of tax benefits of $ 2.3 million, for 2022, and $ 7.5 million, net of tax benefits of $ 2.5 million, for 2021.

Restricted Stock Unit Awards - We have granted restricted stock unit awards to key employees that vest over a service period of generally three years and entitle the grantee to receive shares of our common stock. Restricted stock unit awards granted accrue dividend equivalents in the form of additional restricted stock units prior to vesting. Restricted stock unit awards are

measured at fair value as if they were vested and issued on the grant date and adjusted for estimated forfeitures. Compensation expense is recognized on a straight-line basis over the vesting period of the award. A forfeiture rate of 3 percent per year based on historical forfeitures under our share-based payment plans is used.

Performance Stock Unit Awards - We have granted performance stock unit awards to key employees. The shares of common stock underlying the performance stock units vest at the expiration of a service period of generally three years if certain performance criteria are met by us as determined by the Executive Compensation Committee of the Board of Directors. Upon vesting, a holder of performance stock units is entitled to receive a number of shares of common stock equal to a percentage (0 percent to 200 percent) of the performance stock units granted, based on our total shareholder return over the vesting period, compared with the total shareholder return of a peer group of other utilities over the same period.

If paid, the outstanding performance stock unit awards entitle the grantee to receive shares of our common stock. The outstanding performance stock unit awards are equity awards with a market-based condition, which results in the compensation expense for these awards being recognized on a straight-line basis over the requisite service period, provided that the requisite service period is fulfilled, regardless of when, if ever, the market condition is satisfied. The performance stock unit awards granted accrue dividend equivalents in the form of additional performance stock units prior to vesting. The fair value of these performance stock units was estimated on the grant date based on a Monte Carlo model. The compensation expense on these awards will only be adjusted for forfeitures. A forfeiture rate of 3 percent per year based on historical forfeitures under our share-based payment plans is used.

Restricted Stock Unit Award Activity

Total unrecognized compensation expense related to the nonvested restricted stock unit awards was $ 4.0 million and $ 3.7 million as of December 31, 2023 and 2022, respectively, which is expected to be recognized over a weighted-average period of 1.8 years. The following tables set forth activity and various statistics for restricted stock unit awards outstanding under the respective plans for the period indicated:

	Number of Units	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2022	116,633	$ 79.32
Granted	**48,841**	**$ 81.79**
Vested	**(31,328)**	**$ 90.94**
Forfeited	**(7,198)**	**$ 77.65**
Nonvested at December 31, 2023	**126,948**	**$ 77.50**

	2023	2022	2021
Weighted-average grant date fair value (per share)	**$ 81.79**	$ 76.96	$ 72.69
Fair value of shares granted (thousands of dollars)	**$ 3,995**	$ 4,342	$ 3,660

For the years ended December 31, 2023, 2022 and 2021, the fair value of restricted stock vested was $ 2.8 million, $ 2.9 million, and $ 3.4 million, respectively.

Performance Stock Unit Award Activity

Total unrecognized compensation expenses related to the nonvested performance stock unit awards was $ 9.7 million and $ 8.0 million as of December 31, 2023 and 2022, respectively, which is expected to be recognized over a weighted-average period of 1.8 years. The following tables set forth activity and various statistics related to our performance stock unit awards and the assumptions used by us in the valuations of the 2023, 2022 and 2021 grants at the grant date:

	Number of Units	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2022	214,537	$ 92.47
Granted	**95,474**	**$ 105.74**
Vested	**(50,188)**	**$ 102.77**
Forfeited	**(12,497)**	**$ 97.91**
Nonvested at December 31, 2023	**247,326**	**$ 95.23**

	2023	2022	2021
Volatility (a)	**29.20 %**	34.00 %	32.70 %
Dividend yield	**3.18 %**	3.22 %	3.19 %
Risk-free interest rate (b)	**4.37 %**	1.65 %	0.20 %

(a) - Volatility based on historical volatility over three years using daily stock price observations of our peer utilities.
(b) - Using 3-year treasury rate.

	2023	2022	2021
Weighted-average grant date fair value (per share)	**$ 105.74**	$ 95.80	$ 82.51
Fair value of shares granted (thousands of dollars)	**$ 10,095**	$ 8,360	$ 8,860

For the years ended December 31, 2023, 2022 and 2021, the fair value of performance stock vested was $ 3.7 million, $ 5.2 million, and $ 7.2 million, respectively.

Employee Stock Purchase Plan

We have reserved a total of 1.25 million shares of common stock for issuance under our ESPP. Employees can choose to have up to 10 percent of their annual base pay withheld to purchase our common stock, subject to terms and limitations of the plan. The purchase price of the stock is 85 percent of the lower of the average market price of our common stock on the grant date or exercise date. Approximately 45 percent, 42 percent and 44 percent of employees participated in the plan in 2023, 2022 and 2021, respectively. For the years ended December 31, 2023, 2022 and 2021, employees purchased 108,875 , 86,657 , and 89,240 shares, respectively, at an average price of $ 58.98 , $ 65.21 and $ 63.41 , respectively.

Compensation expense related to our ESPP, before taxes, was $ 1.2 million, $ 1.1 million and $ 1.1 million for the years ended December 31, 2023, 2022 and 2021, respectively.

11. EMPLOYEE BENEFIT PLANS

Defined Benefit Pension and Other Postemployment Benefit Plans

Defined Benefit Pension Plans - We have a defined benefit pension plan and a supplemental executive retirement plan, both of which are closed to new participants. Certain employees of the Texas Gas Service division are entitled to benefits under a frozen cash-balance pension plan. We fund our defined benefit pension costs at a level needed to maintain or exceed the minimum funding levels required by the Employee Retirement Income Security Act of 1974, as amended, and the Pension Protection Act of 2006.

Other Postemployment Benefit Plans - We sponsor health and welfare plans that provide postemployment medical and life insurance benefits to certain employees who retire with at least five years of service. The postemployment medical plan is contributory based on hire date, age and years of service, with retiree contributions adjusted periodically, and contains other cost-sharing features such as deductibles and coinsurance.

Actuarial Assumptions - The following table sets forth the weighted-average assumptions used to determine benefit obligations for pension and postemployment benefits for the periods indicated:

	December 31,	
	2023	**2022**
Discount rate - pension plans	**5.30 %**	5.60 %
Discount rate - other postemployment plans	**5.40 %**	5.70 %
Compensation increase rate	**3.50 % - 4.30 %**	3.60 % - 5.00 %

The following table sets forth the weighted-average assumptions used by us to determine the periodic benefit costs for pension and postemployment benefits for the periods indicated:

	Years Ended December 31,		
	2023	**2022**	**2021**
Discount rate - pension plans	**5.60 %**	3.05 %/ 4.55 % (a)	2.80 %
Discount rate - other postemployment plans	**5.70 %**	3.00 %	2.70 %
Expected long-term return on plan assets - pension plans	**6.75 %**	6.40 %	7.15 %
Expected long-term return on plan assets - other postemployment plans	**5.55 %**	5.85 %	7.50 %
Compensation increase rate	**3.60 % - 5.00 %**	3.10 % - 5.00 %	3.10 % - 3.90 %

(a) Pension plans were remeasured as of April 30, 2022.

We determine our discount rates annually. We estimate our discount rate based upon a comparison of the expected cash flows associated with our future payments under our defined benefit pension and other postemployment obligations to a hypothetical bond portfolio created using high-quality bonds that closely match expected cash flows. Bond portfolios are developed by selecting a bond for each of the next 60 years based on the maturity dates of the bonds. Bonds selected to be included in the portfolios are only those rated by Moody's as AA- or better and exclude callable bonds, bonds with less than a minimum issue size, yield outliers and other filtering criteria to remove unsuitable bonds.

We determine our overall expected long-term rate of return on plan assets based on our review of historical returns and economic growth models. We update our assumed mortality rates to incorporate new tables issued by the Society of Actuaries as needed.

Regulatory Treatment - The OCC, KCC and regulatory authorities in Texas have approved the recovery of pension and other postemployment benefits costs through rates for Oklahoma Natural Gas, Kansas Gas Service and Texas Gas Service, respectively. The costs recovered through rates are based on current funding requirements and the net periodic benefit cost for defined benefit pension and other postemployment costs. Differences, if any, between the net periodic benefit cost, net of deferrals, and the amount recovered through rates are reflected in earnings.

We historically have recovered defined benefit pension and other postemployment benefit costs through rates. We believe it is probable that regulators will continue to include the net periodic pension and other postemployment benefit costs in our cost of service.

We capitalize all eligible service cost and non-service cost components pursuant to the accounting requirements of ASC Topic 980 (Regulated Operations) for rate-regulated entities, as these costs are authorized by our regulators to be included in capitalized costs. Noncurrent regulatory assets in our consolidated balance sheets reflect the capitalized non-service cost components of $ 2.2 million and $ 2.8 million as of December 31, 2023 and 2022, respectively. See Note 3 for additional information.

Obligations and Funded Status - The following table sets forth our defined benefit pension and other postemployment benefit plans, benefit obligations and fair value of plan assets for the periods indicated:

	Pension Benefits		Other Postemployment Benefits	
	December 31,		December 31,	
	2023	2022	2023	2022
Changes in Benefit Obligation		*(Thousands of dollars)*		
Benefit obligation, beginning of period	**$ 784,633**	$ 1,049,990	**$ 168,342**	$ 222,806
Service cost	**7,242**	10,369	**730**	1,274
Interest cost	**42,428**	36,150	**9,154**	6,448
Plan participants' contributions	**—**	—	**2,823**	3,035
Actuarial loss (gain)	**23,015**	(259,261)	**(5,551)**	(48,609)
Benefits paid	**(53,713)**	(55,326)	**(16,963)**	(16,612)
Plan amendments	**—**	2,711	**—**	—
Benefit obligation, end of period	**$ 803,605**	$ 784,633	**158,535**	$ 168,342
Change in Plan Assets				
Fair value of plan assets, beginning of period	**$ 768,961**	$ 1,013,244	**$ 181,877**	$ 231,994
Actual return (loss) on plan assets	**78,827**	(190,484)	**11,325**	(38,432)
Employer contributions	**1,306**	1,527	**2,546**	1,892
Plan participants' contributions	**—**	—	**2,823**	3,035
Benefits paid	**(53,713)**	(55,326)	**(16,963)**	(16,612)
Fair value of assets, end of period	**795,381**	768,961	**181,608**	181,877
Benefit Asset (Obligation), net at December 31	**$ (8,224)**	$ (15,672)	**$ 23,073**	$ 13,535
Other noncurrent assets	**$ 13,409**	$ 5,267	**$ 23,073**	$ 13,535
Current liabilities	**(1,368)**	(1,352)	**—**	—
Noncurrent liabilities	**(20,265)**	(19,587)	**—**	—
Benefit Asset (Obligation), net at December 31	**$ (8,224)**	$ (15,672)	**$ 23,073**	$ 13,535

The accumulated benefit obligation for our defined benefit pension plans was $ 772.1 million and $ 746.8 million at December 31, 2023 and 2022, respectively.

For the years ended December 31, 2023 and 2022, the pension benefit obligations experienced actuarial losses and gains of $ 23.0 million and $ 259.3 million, respectively, primarily due to the impact of increases in the discount rates used to calculate the benefit obligations.

In 2024, our contributions are expected to be $ 1.4 million to our defined benefit pension plans, and no contributions are expected to be made to our other postemployment benefit plans.

The following tables set forth the components of net periodic benefit cost for our pension and other postemployment benefit plans for the periods indicated:

	Pension Benefits		
	Year Ended December 31,		
	2023	2022	2021
	(Thousands of dollars)		
Components of net periodic benefit cost (credit)			
Service cost	**$ 7,242**	$ 10,369	$ 13,811
Interest cost (a)	**42,428**	36,150	29,458
Expected return on assets (a)	**(59,518)**	(58,528)	(62,382)
Amortization of unrecognized prior service cost (a)	**372**	248	—
Amortization of net loss (a)	**2,008**	16,793	45,523
Net periodic benefit cost (credit)	**$ (7,468)**	$ 5,032	$ 26,410

(a) These amounts, net of any amounts capitalized as a regulatory asset, have been recognized as other income (expense), net in the consolidated statement of income. See Note 13 for additional detail for our other income (expense), net.

	Other Postemployment Benefits		
	Year Ended December 31,		
	2023	2022	2021
	(*Thousands of dollars*)		
Components of net periodic benefit cost (credit)			
Service cost	**$ 730**	$ 1,274	$ 1,587
Interest cost (a)	**9,154**	6,448	6,251
Expected return on assets (a)	**(9,728)**	(13,181)	(16,807)
Amortization of unrecognized prior service cost (credit) (a)	**153**	41	(279)
Amortization of net (gain) loss (a)	**(48)**	217	373
Net periodic benefit cost (credit)	**$ 261**	$ (5,201)	$ (8,875)

(a) These amounts, net of any amounts capitalized as a regulatory asset, have been recognized as other income (expense), net in the consolidated statement of income. See Note 13 for additional detail for our other income (expense), net.

We use a December 31 measurement date for our plans. On April 30, 2022, we amended our defined benefit pension plans to change the variable cost of living adjustment for eligible participants to a fixed rate. Accordingly, we remeasured our net benefit obligations as of April 30, 2022, resulting in an adjustment of approximately $ 7.2 million to our pension expense, net of capitalization and regulatory deferrals, for the year ended December 31, 2022.

Other Comprehensive Income (Loss) - The following table sets forth the amounts recognized in other comprehensive income (loss), net of regulatory deferrals, related to our defined benefit pension benefits for the period indicated:

	Pension Benefits		
	Year Ended December 31,		
	2023	2022	2021
	(Thousands of dollars)		
Net gain (loss) arising during the period	**$ (619)**	$ 7,369	$ 67
Amortization of loss	**1**	159	1,562
Deferred income taxes	**140**	(1,705)	(379)
Total recognized in other comprehensive income (loss)	**$ (478)**	$ 5,823	$ 1,250

Due to our regulatory deferrals, there were no amounts recognized in other comprehensive income (loss) related to our other postemployment benefits for the periods presented.

The tables below set forth the amounts in accumulated other comprehensive loss that had not yet been recognized as components of net periodic benefit expense for the periods indicated:

	Pension Benefits	
	December 31,	
	2023	2022
	(Thousands of dollars)	
Prior service cost	**$ (2,091)**	$ (2,463)
Accumulated loss	**(246,988)**	(245,290)
Accumulated other comprehensive loss before regulatory assets	**(249,079)**	(247,753)
Regulatory asset for regulated entities	**247,684**	246,975
Accumulated other comprehensive loss after regulatory assets	**(1,395)**	(778)
Deferred income taxes	**213**	74
Accumulated other comprehensive loss, net of tax	**$ (1,182)**	$ (704)

	Other Postemployment Benefits	
	December 31,	
	2023	2022
	(Thousands of dollars)	
Prior service cost	**$ —**	$ (153)
Accumulated loss	**(1.457)**	(8,557)
Accumulated other comprehensive loss before regulatory assets	**(1.457)**	(8,710)
Regulatory asset for regulated entities	**1.457**	8,710
Accumulated other comprehensive loss after regulatory assets	**$ —**	$ —

Health Care Cost Trend Rates - The following table sets forth the assumed health care cost-trend rates for the periods indicated:

	2023	2022
Health care cost-trend rate assumed for next year	**6.00 %**	6.50 %
Rate to which the cost-trend rate is assumed to decline (the ultimate trend rate)	**4.50 %**	4.50 %
Year that the rate reaches the ultimate trend rate	**2030**	2030

Plan Assets - Our investment strategy is to invest plan assets in accordance with sound investment practices that emphasize long-term fundamentals. The goal of this strategy is to maximize investment returns while managing risk in order to meet the plan's current and projected financial obligations. To achieve this strategy, we have established a liability-driven investment strategy to change the allocations as the funded status of the defined benefit pension plan increases. The plan's investments include a diverse blend of various domestic and international equities, investment-grade debt securities which mirror the cash flows of our liability, insurance contracts and alternative investments. The current target allocation for the assets of our defined benefit pension plan is as follows:

Investment-grade bonds	70.0 %
U.S. large-cap equities	13.0 %
Alternative investments	7.0 %
Developed foreign large-cap equities	5.0 %
Mid-cap equities	3.0 %
Emerging markets equities	1.0 %
Small-cap equities	1.0 %
Total	100.0 %

As part of our risk management for the plans, minimums and maximums have been set for each of the asset classes listed above. All investment managers for the plan are subject to certain restrictions on the securities they purchase and, with the exception of indexing purposes, are prohibited from owning our stock.

The current target allocation for the assets of our other postemployment benefits plan is 90 percent fixed income securities and 10 percent equity securities.

The following tables set forth our pension and other postemployment benefits plan assets by fair value category as of the measurement date:

	Pension Benefits December 31, 2023			
Asset Category	**Level 1**	**Level 2**	**Level 3**	**Total**
		(Thousands of dollars)		
Investments:				
Equity securities (a)	**$ 88,477**	**$ —**	**$ —**	**$ 88,477**
Government obligations	**—**	**204,669**	**—**	**204,669**
Corporate obligations (b)	**—**	**366,482**	**—**	**366,482**
Cash and money market funds (c)	**5,300**	**28,977**	**—**	**34,277**
Insurance contracts and group annuity contracts	**—**	**—**	**12,350**	**12,350**
Other investments (d)	**—**	**—**	**89,126**	**89,126**
Total assets	**$ 93,777**	**$ 600,128**	**$ 101,476**	**$ 795,381**

(a) - This category represents securities of the various market sectors from diverse industries.
(b) - This category represents bonds from diverse industries.
(c) - This category primarily represents money market funds.
(d) - This category represents alternative investments such as hedge funds and other financial instruments.

	Pension Benefits December 31, 2022			
Asset Category	**Level 1**	**Level 2**	**Level 3**	**Total**
		(Thousands of dollars)		
Investments:				
Equity securities (a)	$ 150,027	$ —	$ —	$ 150,027
Government obligations	—	160,799	—	160,799
Corporate obligations (b)	—	329,973	—	329,973
Cash and money market funds (c)	4,466	22,185	—	26,651
Insurance contracts and group annuity contracts	—	—	14,480	14,480
Other investments (d)	—	—	87,031	87,031
Total assets	$ 154,493	$ 512,957	$ 101,511	$ 768,961

(a) - This category represents securities of the various market sectors from diverse industries.
(b) - This category represents bonds from diverse industries.
(c) - This category primarily represents money market funds.
(d) - This category represents alternative investments such as hedge funds and other financial instruments.

	Other Postemployment Benefits December 31, 2023			
Asset Category	**Level 1**	**Level 2**	**Level 3**	**Total**
		(Thousands of dollars)		
Investments:				
Equity securities (a)	**$ 7,031**	**$ —**	**$ —**	**$ 7,031**
Government obligations	**—**	**41,863**	**—**	**41,863**
Corporate obligations (b)	**—**	**38,615**	**—**	**38,615**
Cash and money market funds (c)	**751**	**13,245**	**—**	**13,996**
Insurance contracts and group annuity contracts (d)	**—**	**80,102**	**—**	**80,102**
Total assets	**$ 7,782**	**$ 173,825**	**$ —**	**181,607**

(a) - This category represents securities of the various market sectors from diverse industries.
(b) - This category represents bonds from diverse industries.
(c) - This category primarily represents money market funds.
(d) - This category includes equity securities and bonds held in a captive insurance product.

	Other Postemployment Benefits December 31, 2022			
Asset Category	**Level 1**	**Level 2**	**Level 3**	**Total**
		(Thousands of dollars)		
Investments:				
Equity securities (a)	$ 5,983	$ —	$ —	$ 5,983
Government obligations	—	43,291	—	43,291
Corporate obligations (b)	—	38,095	—	38,095
Cash and money market funds (c)	750	7,621	—	8,371
Insurance contracts and group annuity contracts (d)	—	86,137	—	86,137
Total assets	$ 6,733	$ 175,144	$ —	$ 181,877

(a) - This category represents securities of the various market sectors from diverse industries.
(b) - This category represents bonds from diverse industries.
(c) - This category primarily represents money market funds.
(d) - This category includes equity securities and bonds held in a captive insurance product.

Insurance contracts and group annuity contracts include investments in the Immediate Participation Guarantee Fund (“IPG Fund”) with John Hancock and are valued at fair value. John Hancock invests the IPG Fund in its general fund portfolio. The contract value of the IPG Fund at the end of the year, which approximates fair value, is estimated. The difference between this estimated balance and the actual balance, as subsequently determined by John Hancock, is charged or credited to the net assets of the plans.

Certain investments that are categorized as money market funds in Level 2 and “Other investments” in Level 3 represent alternative investments such as hedge funds and other financial instruments measured using the net asset value per share (or its equivalent) practical expedient.

The following tables set forth additional information regarding commitments and redemption limitations of these other investments at the periods indicated:

	December 31, 2023			
	Fair Value	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice Period**
	(in thousands)			*(in days)*
Grosvenor Registered Multi Limited Partnership	**$ 40,872**	**$ —**	**quarterly**	**65**
K2 Institutional Investors II Limited Partnership	**$ 48,254**	**$ —**	**quarterly**	**91**

	December 31, 2022			
	Fair Value	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice Period**
	(in thousands)			*(in days)*
Grosvenor Registered Multi Limited Partnership	$ 40,160	$ —	quarterly	65
K2 Institutional Investors II Limited Partnership	$ 46,871	$ —	quarterly	91

The following table sets forth the reconciliation of Level 3 fair value measurements of our pension plans for the periods indicated:

	Pension Benefits		
	Insurance Contracts	Other Investments	Total
	(Thousands of dollars)		
January 1, 2022	$ 17,301	$ 91,456	$ 108,757
Unrealized gains	1,467	—	1,467
Unrealized losses	—	(7,458)	(7,458)
Purchases	182	3,033	3,215
Settlements	(4,470)	—	(4,470)
December 31, 2022	$ 14,480	$ 87,031	$ 101,511
Unrealized gains	**—**	**2,095**	**2,095**
Unrealized losses	**(618)**	**—**	**(618)**
Purchases	**1,562**	**—**	**1,562**
Settlements	**(3,074)**	**—**	**(3,074)**
December 31, 2023	**$ 12,350**	**$ 89,126**	**$ 101,476**

Pension and Other Postemployment Benefit Payments - Benefit payments for our defined benefit pension and other postemployment benefit plans for the year ended December 31, 2023 were $55.3 million and $16.6 million, respectively. The following table sets forth the pension benefits and other postemployment benefits payments expected to be paid in 2023-2032:

	Pension Benefits	Other Postemployment Benefits
Benefits to be paid in:	*(Thousands of dollars)*	
2024	$ 55,391	$ 14,127
2025	$ 55,988	$ 13,890
2026	$ 56,422	$ 13,505
2027	$ 56,591	$ 13,194
2028	$ 57,296	$ 12,848
2029 through 2033	$ 286,471	$ 59,299

The expected benefits to be paid are based on the same assumptions used to measure our benefit obligations at December 31, 2023, and include estimated future employee service.

Other Employee Benefit Plans

401(k) Plan - We have a 401(k) plan which covers all eligible employees. Employee contributions are discretionary and we match 100 percent of each participant's eligible contribution up to 6 percent of eligible compensation, subject to certain limits. Our contributions to the plan were $ 16.7 million, $ 15.3 million and $ 14.3 million in 2023, 2022 and 2021, respectively.

Effective December 30, 2021, our profit sharing-plan was merged with and into our 401(k) Plan. We plan to make a profit-sharing contribution to the 401(k) Plan each quarter equal to 1 percent of each participant's eligible compensation during the quarter. Additional discretionary profit-sharing contributions may be made at the end of each year. Our profit-sharing contributions made to the plan were $ 12.6 million, $ 10.9 million and $ 9.9 million in 2023, 2022 and 2021, respectively.

12. INCOME TAXES

The following table sets forth our provision for income taxes for the periods indicated:

	Years Ended December 31,		
	2023	**2022**	**2021**
		(*Thousands of dollars*)	
Current income tax provision (benefit)			
Federal	**$ 16,551**	$ 61,745	$ (1,568)
State	**(829)**	6,815	(1,565)
Total current income tax provision (benefit)	**15,722**	68,560	(3,133)
Deferred income tax provision (benefit)			
Federal	**21,905**	(22,234)	37,810
State	**2,868**	200	5,639
Total deferred income tax provision (benefit)	**24,773**	(22,034)	43,449
Total provision for income taxes	**$ 40,495**	$ 46,526	$ 40,316

The following table is a reconciliation of our income tax provision for the periods indicated:

	Years Ended December 31,		
	2023	**2022**	**2021**
		(*Thousands of dollars*)	
Income before income taxes	**$ 271,727**	$ 268,268	$ 246,750
Federal statutory income tax rate	**21 %**	21 %	21 %
Provision for federal income taxes	**57,063**	56,335	51,817
State income taxes, net of federal tax benefit	**3,834**	7,016	4,074
Amortization of excess deferred federal income taxes	**(20,565)**	(17,986)	(17,289)
Amortization of excess deferred state income taxes	**(1,795)**	—	—
Tax (expense) benefit for employee share-based compensation	**418**	350	(469)
Other, net	**1,540**	811	2,183
Total provision for income taxes	**$ 40,495**	$ 46,526	$ 40,316

As of December 31, 2023, we have no uncertain tax positions. Changes in tax laws or tax rates are recognized in the financial reporting period that includes the enactment date.

Income tax expense reflects credits for the amortization of the regulatory liability associated with EDIT that was returned to customers of $ 22.4 million and $ 18.0 million for the years ending December 31, 2023, and 2022, respectively.

The following table sets forth the tax effects of temporary differences that gave rise to significant portions of the deferred tax assets and liabilities for the periods indicated:

	December 31,	
	2023	2022
	(*Thousands of dollars*)	
Deferred tax assets		
Employee benefits and other accrued liabilities	**$ —**	$ 4,256
Regulatory adjustments for enacted tax rate changes	**107,948**	114,551
Net operating loss	**93,255**	161,320
Lease obligation basis	**4,500**	9,158
Purchased-gas cost adjustment	**5,232**	3,384
Other	**—**	3,014
Total deferred tax assets	**210,935**	295,683
Deferred tax liabilities		
Excess of tax over book depreciation	**822,619**	792,570
Winter weather event costs	**56,914**	121,347
Other regulatory assets and liabilities, net	**70,384**	71,180
Employee benefits and other accrued liabilities	**205**	—
Right-of-use asset basis	**4,662**	9,042
Other	**8,219**	—
Total deferred tax liabilities	**963,003**	994,139
Net deferred tax liabilities	**$ 752,068**	$ 698,456

We deduct our purchased gas costs for federal income tax purposes in the period they are paid. As a result of the impacts from government securitization of Winter Storm Uri, we recorded a $ 64.4 million and $ 299.7 million decrease in our deferred tax liability for the years ended December 31, 2023 and 2022, respectively. At December 31, 2023, we had $ 87.6 million (tax effected) of federal net operating loss carryforwards and $ 5.7 million (tax effected) of state net operating loss carryforwards available to offset future taxable income.

We have filed our consolidated federal and state income tax returns for years 2020, 2021 and 2022. We are no longer subject to income tax examination for years prior to 2019.

13. OTHER INCOME AND OTHER EXPENSE

The following table sets forth the components of other income and other expense for the periods indicated:

	Year Ended December 31,		
	2023	2022	2021
		(*Thousands of dollars*)	
Net periodic benefit (cost) other than service cost	**$ 4,017**	$ 3,766	$ (3,930)
Earnings (losses) on investments associated with nonqualified employee benefit plans	**4,826**	(7,197)	3,699
Other income (expense), net	**633**	(752)	(2,976)
Total other income (expense), net	**$ 9,476**	$ (4,183)	$ (3,207)

14. PROPERTY, PLANT AND EQUIPMENT

The following table sets forth our property, plant and equipment by property type, for the periods indicated:

	December 31, 2023	December 31, 2022
	(*Thousands of dollars*)	
Natural gas distribution pipelines and related equipment	**$ 6,716,074**	$ 6,240,236
Natural gas transmission pipelines and related equipment	**713,505**	661,379
General plant and other	**907,946**	782,870
Construction work in process	**131,442**	150,072
Property, plant and equipment	**8,468,967**	7,834,557
Accumulated depreciation and amortization	**(2,333,755)**	(2,205,717)
Net property, plant and equipment	**$ 6,135,212**	$ 5,628,840

We compute depreciation expense by applying composite, straight-line rates of approximately 2.5 percent to 3.5 percent as approved by various regulatory authorities.

We recorded capitalized interest of $ 5.7 million , $ 4.5 million and $ 4.2 million for the years ended December 31, 2023, 2022 and 2021, respectively. We incurred liabilities for construction work in process that had not been paid at December 31, 2023, 2022 and 2021 of $ 36.2 million, $ 28.6 million and $ 25.6 million , respectively. Such amounts are not included in capital expenditures or in the change of working capital items on our consolidated statements of cash flows.

15. COMMITMENTS AND CONTINGENCIES

Leases - See Note 6 of the Notes to Consolidated Financial Statements in this Annual Report for discussion of operating leases.

Environmental Matters - We are subject to multiple laws and regulations regarding protection of the environment and natural and cultural resources, which affect many aspects of our present and future operations. Regulated activities include, but are not limited to, those involving air emissions, storm water and wastewater discharges, handling and disposal of solid and hazardous wastes, wetland preservation, plant and wildlife protection, hazardous materials use, storage and transportation, and pipeline and facility construction. These laws and regulations require us to obtain and/or comply with a wide variety of environmental clearances, registrations, licenses, permits and other approvals. Failure to comply with these laws, regulations, licenses and permits or the discovery of presently unknown environmental conditions may expose us to fines, penalties and/or interruptions in our operations that could be material to our results of operations. In addition, emission controls and/or other regulatory or permitting mandates under the CAA and other similar federal and state laws could require unexpected capital expenditures. We cannot assure that existing environmental statutes and regulations will not be revised or that new regulations will not be adopted or become applicable to us. Revised or additional statutes or regulations that result in increased compliance costs or additional operating restrictions could have a material adverse effect on our business, financial condition and results of operations. Our expenditures for environmental investigation and remediation compliance to-date have not been significant in relation to our financial position, results of operations or cash flows, and our expenditures related to environmental matters had no material effects on earnings or cash flows during 2023, 2022 and 2021.

We own or retain legal responsibility for certain environmental conditions at 12 former MGP sites in Kansas. These sites contain contaminants generally associated with MGP sites and are subject to control or remediation under various environmental laws and regulations. A consent agreement with the KDHE governs all environmental investigation and remediation work at these sites. The terms of the consent agreement require us to investigate these sites and set remediation activities based upon the results of the investigations and risk analysis. Remediation typically involves the management of contaminated soils and may involve removal of structures and monitoring and/or remediation of groundwater. Regulatory closure has been achieved at five of the 12 sites, but these sites remain subject to potential future requirements that may result in additional costs.

We have completed or are addressing removal of the source of soil contamination at all 12 sites and continue to monitor groundwater at seven of the 12 sites according to plans approved by the KDHE. In 2019, we completed a project to remove a source of contamination and associated contaminated materials at the twelfth site where no active soil remediation had previously occurred. In 2022, we completed a remediation project to remove a source of contamination and contaminated materials at one of the MGP sites. In June 2023, we submitted a revised draft remediation plan to the KDHE for review following receipt of agency comments and public feedback. In August 2023, the KDHE approved the remediation plan without comment. We submitted a site investigation work plan for another site and on August 27, 2023 the KDHE approved the document without comment.

We have an AAO that allows Kansas Gas Service to defer and seek recovery of costs necessary for investigation and remediation at, and nearby, these 12 former MGP sites that are incurred after January 1, 2017, up to a cap of $ 15.0 million, net of any related insurance recoveries. Costs approved for recovery in a future rate proceeding would then be amortized over a 15-year period. The unamortized amounts will not be included in rate base or accumulate carrying charges. Following a determination that future investigation and remediation work approved by the KDHE is expected to exceed $ 15.0 million, net of any related insurance recoveries, Kansas Gas Service will be required to file an application with the KCC for approval to increase the $ 15.0 million cap. At December 31, 2023 and 2022, we have deferred $ 32.0 million and $ 29.8 million, respectively, for accrued investigation and remediation costs pursuant to our AAO. Kansas Gas Service expects to file an application for amounts deferred in excess of the cap as soon as practicable after the KDHE approves the remediation plans we have submitted.

We also own or retain legal responsibility for certain environmental conditions at a former MGP site in Texas. At the request of the TCEQ, we began investigating the level and extent of contamination associated with the site under their Texas Risk Reduction Program. A preliminary site investigation revealed that this site contains contaminants generally associated with MGP sites and is subject to control or remediation under various environmental laws and regulations. Impacts have been identified in the soil and groundwater at the site with limited impacts observed in surrounding areas. In April 2022, we submitted a remediation work plan to address the areas impacted to the TCEQ. In August 2023, remediation activities were conducted to address the impacted area in accordance with the remediation work plan. The TCEQ requested acceptable financial assurance for the projected costs on post-response action care activities at the site. At December 31, 2023, estimated costs associated with expected remediation activities for this site are not material.

Our expenditures for environmental evaluation, mitigation, remediation and compliance to date have not been significant in relation to our financial position, results of operations or cash flows, and our expenditures related to environmental matters had no material effects on earnings or cash flows during the years ended December 31, 2023, 2022 and 2021. The reserve for remediation of our MGP sites was $ 14.3 million and $ 12.7 million at December 31, 2023 and December 31, 2022, respectively.

Environmental issues may exist with respect to these MGP sites that are unknown to us. Accordingly, future costs are dependent on the final determination and regulatory approval of any remedial actions, the complexity of the site, level of remediation required, changing technology and governmental regulations, and to the extent not recovered by insurance or recoverable in rates from our customers, could be material to our financial condition, results of operations or cash flows.

We are subject to environmental regulation by federal, state and local authorities. Due to the inherent uncertainties surrounding the development of federal and state environmental laws and regulations, we cannot determine with specificity the impact such laws and regulations may have on our existing and future facilities. With the trend toward stricter standards, greater regulation and more extensive permit requirements for the types of assets operated by us, our environmental expenditures could increase in the future, and such expenditures may not be fully recovered by insurance or recoverable in rates from our customers, and those costs may adversely affect our financial condition, results of operations and cash flows.

Pipeline Safety - We are subject to regulation under federal pipeline safety statutes and any analogous state regulations. These include safety requirements for the design, construction, operation, and maintenance of pipelines, including transmission and distribution pipelines. At the federal level, we are regulated by PHMSA. PHMSA regulations require the following for certain pipelines: inspection and maintenance plans; integrity management programs, including the determination of pipeline integrity risks and periodic assessments on certain pipeline segments; an operator qualification program, which includes certain trainings; a public awareness program that provides certain information; and a control room management plan.

As part of regulating pipeline safety, PHMSA promulgates various regulations. In April 2016, PHMSA published a NPRM, the Safety of Gas Transmission & Gathering Lines Rule, in the Federal Register to revise pipeline safety regulations applicable to the safety of onshore natural gas transmission and gathering pipelines. Proposals included changes to pipeline integrity management requirements and other safety-related requirements, which were split into three separate rulemakings. As of December 31, 2022, all three final rules were published and the potential capital and operating expenditures associated with compliance were not material or did not apply to us.

As part of the Consolidated Appropriations Act, 2021, the PIPES Act reauthorized PHMSA through 2023 and directed the agency to move forward with several regulatory actions, including the “Pipeline Safety: Class Location Change Requirements” and the “Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines” proposed rulemakings. Congress has also instructed PHMSA to issue final regulations that will require operators of new and existing transmission and distribution pipeline facilities to conduct certain leak detection and repair programs and to require facility inspection and maintenance plans to align with those regulations. To the extent such rulemakings impose more stringent requirements on our facilities, we may be required to incur expenditures that may be material.

Legal Proceedings - We are a party to various litigation matters and claims that have arisen in the normal course of our operations. While the results of litigation and claims cannot be predicted with certainty, we believe the reasonably possible losses from such matters, individually and in the aggregate, are not material. Additionally, we believe the probable outcome of such matters will not have a material adverse effect on our results of operations, financial position or cash flows.

16. DERIVATIVE FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS

Derivative Instruments - Our derivatives are comprised of over-the-counter natural gas fixed price swaps and call options.

Swaps - At December 31, 2023, we held over-the-counter natural gas fixed-price swaps for the heating season ending March 2024, with a total notional amount of 5.1 Bcf. We did not hold any swaps at December 31, 2022.

Options - At December 31, 2023, we held natural gas call options for the heating season ending March 2024, with total notional amounts of 0.5 Bcf, for which we paid premiums of $ 0.5 million. At December 31, 2022, we held purchased natural gas call options for the heating season ended March 2023, with total notional amounts of 19.4 Bcf, for which we paid premiums of $ 14.1 million. The fair value of our natural gas call options was insignificant as of December 31, 2023 and 2022.

We have not designated any of our derivative instruments as accounting hedges. These contracts are included in, and recoverable through, our purchased-gas cost adjustment mechanisms. Additionally, premiums paid, changes in fair value and any settlements received associated with these contracts are deferred as part of our unrecovered purchased-gas costs in our consolidated balance sheets. There were no transfers between levels for the periods presented.

Other Financial Instruments - The approximate fair value of cash and cash equivalents, restricted cash and cash equivalents, accounts receivable and accounts payable is equal to book value, due to the short-term nature of these items. Commercial paper is due upon demand and, therefore, the carrying amounts approximate fair value.

The following tables summarize, by level within the fair value hierarchy, our derivative and other assets and liabilities that were accounted for at fair value on a recurring basis at December 31, 2023 and 2022:

	December 31, 2023		
	Level 1	**Level 2**	**Total**
	(Thousands of dollars)		
Assets:			
United States treasury notes (b)	**$ 6,496**	**$ —**	**$ 6,496**
Corporate bonds (b)	**—**	**11,080**	**11,080**
Total assets	**$ 6,496**	**$ 11,080**	**$ 17,576**
Liabilities:			
Derivative instruments - swaps (a)	**$ —**	**$ 13,920**	**$ 13,920**

(a) The fair value is included in other current assets and other current liabilities in our consolidated balance sheets.
(b) The fair value is included in other current and noncurrent assets and other current and noncurrent liabilities in our consolidated balance sheets.

	December 31, 2022		
	Level 1	**Level 2**	**Total**
	(Thousands of dollars)		
Assets:			
United States treasury notes (b)	$ 4,695	$ —	$ 4,695
Corporate bonds (b)	—	9,710	9,710
Total assets	$ 4,695	$ 9,710	$ 14,405

(a) The fair value is included in other current assets and other current liabilities in our consolidated balance sheets.
(b) The fair value is included in other current and noncurrent assets and other current and noncurrent liabilities in our consolidated balance sheets.

The estimated fair value of our long-term debt, including current maturities, was $ 2.8 billion and $ 2.5 billion at December 31, 2023 and December 31, 2022, respectively. The estimated fair value of our long-term debt was determined using quoted market prices, and is classified as Level 2.

17. VARIABLE INTEREST ENTITY

KGSS-I is a special-purpose, wholly owned subsidiary of ONE Gas that was formed for the purpose of issuing securitized bonds to recover extraordinary costs incurred by Kansas Gas Service resulting from Winter Storm Uri. On November 18, 2022, the securitized financing was complete. KGSS-I's assets cannot be used to settle ONE Gas' obligations and the holders of the Securitized Utility Tariff Bonds have no recourse against ONE Gas. See Note 5 for additional information about the securitization financing.

KGSS-I is considered to be a variable interest entity. As a result, KGSS-I is included in the consolidated financial statements of ONE Gas. No gain or loss was recognized upon initial consolidation.

The following table summarizes the impact of KGSS-I on our consolidated balance sheets:

	December 31, 2023	December 31, 2022
	(Thousands of dollars)	
Restricted cash and cash equivalents	**$ 20,552**	$ 8,446
Accounts receivable	**5,133**	4,862
Securitized intangible asset, net	**293,619**	323,838
Current maturities of securitized utility tariff bonds	**27,430**	20,716
Accounts payable	**394**	3,204
Accrued interest	**7,207**	2,202
Securitized utility tariff bonds, excluding current maturities, net of discounts and issuance costs of $ 5.3 million and $ 5.9 million, respectively	**282,506**	309,343
Equity	**1,768**	1,681

The following table summarizes the impact of KGSS-I on our consolidated statements of income:

	Year Ended December 31, 2023	2022
	(Thousands of dollars)	
Operating revenues	**$ 48,677**	$ 5,769
Operating expense	**(440)**	(52)
Amortization expense	**(30,219)**	(3,521)
Interest income	**696**	6
Interest expense	**(18,552)**	(2,202)
Income before income taxes	**$ 162**	**$** —

The following table summarizes the amortization expense related to the securitized intangible asset expected to be recognized in our consolidated statements of income:

For the year ending:	*(Thousands of dollars)*
2024	**$ 27,843**
2025	**$ 29,391**
2026	**$ 31,025**
2027	**$ 32,751**
2028	**$ 34,572**

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer), of the effectiveness of the Company's disclosure controls and procedures, as such term is defined in Rule 13a-15(e) under the Exchange Act. Based on this evaluation, the Company's Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Annual Report based on the evaluation of the controls and procedures required by Rule 13a-15(b) of the Exchange Act.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our Principal Executive Officer and Principal Financial Officer, we evaluated the effectiveness of our internal control over financial reporting based on the framework in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Based on our evaluation under that framework and applicable SEC rules, our management concluded that our internal control over financial reporting was effective as of December 31, 2023.

The effectiveness of our internal control over financial reporting as of December 31, 2023, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein (Item 8).

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2023, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Not applicable.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors of the Registrant

Information concerning our directors is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

Executive Officers of the Registrant

Information concerning our executive officers is included in Part I, Item 1, Business, of this Annual Report.

Compliance with Section 16(a) of the Exchange Act

Information on compliance with Section 16(a) of the Exchange Act is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

Code of Ethics

Information concerning the code of ethics, or code of business conduct, is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

Nominating Procedures

Information concerning the nominating procedures is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

The Audit Committee

Information concerning the Audit Committee is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

The Audit Committee Financial Experts

Information concerning the Audit Committee Financial Experts is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

The Executive Compensation Committee

Information concerning the Executive Compensation Committee is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

The Corporate Governance Committee

Information concerning the Corporate Governance Committee is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

The Executive Committee

Information concerning the Executive Committee is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

Committee Charters

The full text of our Audit Committee charter, Executive Compensation Committee charter, Corporate Governance Committee charter and Executive Committee charter are published on and may be printed from our website at www.onegas.com and are also available from our corporate secretary upon request.

ITEM 11. EXECUTIVE COMPENSATION

Information on executive compensation is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Security Ownership of Certain Beneficial Owners

Information concerning the ownership of certain beneficial owners is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

Security Ownership of Management

Information on security ownership of directors and officers is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

Equity Compensation Plan Information

Information on equity compensation plans is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information on certain relationships and related transactions and director independence is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information on the principal accountant's fees and services is set forth in our 2024 definitive Proxy Statement and is incorporated herein by this reference.

PART IV.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(1) Consolidated Financial Statements		Page No.
(a)	Report of Independent Registered Public Accounting Firm (PCAOB ID: 238)	39
(b)	Consolidated Statements of Income for the years ended December 31, 2023, 2022 and 2021	42
(c)	Consolidated Statements of Comprehensive Income for the years ended December 31, 2023, 2022 and 2021	43
(d)	Consolidated Balance Sheets as of December 31, 2023 and 2022	44
(e)	Consolidated Statements of Cash Flows for the years ended December 31, 2023, 2022 and 2021	46
(f)	Consolidated Statements of Equity for the years ended December 31, 2023, 2022 and 2021	48
(g)	Notes to Consolidated Financial Statements	49

(2) Consolidated Financial Statements Schedules

All schedules have been omitted because of the absence of conditions under which they are required.

(3) Exhibits

3.1	Amended and Restated Certificate of Incorporation of ONE Gas, Inc., dated May 24, 2018 (incorporated by reference to Exhibit 3.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on May 30, 2018 (File No. 1-36108)).
3.2	Amended and Restated By-Laws of ONE Gas, Inc. dated February 21, 2023 (incorporated by reference to Exhibit 3.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on February 21, 2023 (File No. 1-36108)).
3.3	Amended and Restated Limited Liability Company Agreement of Kansas Gas Service Securitization I, L.L.C., dated as of November 16, 2022 (incorporated by reference to Exhibit 3.3 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 18, 2022 (File No. 1-36108)).
4.1	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.2 to ONE Gas, Inc.'s Registration Statement on Form 10, Amendment No. 2 filed on December 23, 2013 (File No. 1-36108)).
4.2	Indenture, dated January 27, 2014, between ONE Gas, Inc. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on January 30, 2014 (File No. 1-36108)).
4.3	Supplemental Indenture No. 1, dated January 27, 2014, between ONE Gas, Inc. and U.S. Bank National Association, as trustee, with respect to the 2.070% Senior Notes due 2019, the 3.610% Senior Notes due 2024 and the 4.685% Senior Notes due 2044-(incorporated by reference to Exhibit 10.2 to ONE Gas, Inc.'s Current Report on Form 8-K filed on January 30, 2014 (File No. 1-36108)).
4.4	Supplemental Indenture No. 2, dated November 5, 2018, among ONE Gas, Inc. and U.S. Bank National Bank Association, as trustee, with respect to the 4.50% Senior Notes due 2048 (incorporated by reference to Exhibit 4.2 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 6, 2018 (File No. 1-36108)).

4.5	Supplemental Indenture No. 3, dated May 4, 2020, among ONE Gas, Inc. and U.S. Bank National Bank Association, as trustee, with respect to the 2.00% Senior Notes due 2030 (incorporated by reference to Exhibit 4.2 to ONE Gas, Inc.'s Current Report on Form 8-K filed on May 4, 2020 (File No. 1-36108)).
4.6	Supplemental Indenture No. 4 , dated as of March 11, 2021, between ONE Gas, Inc. and U.S. Bank National Association, as trustee, with respect to the 0.85% Senior Notes due 2023 and 1.10% Senior Notes due 2024 (incorporated by reference to Exhibit 4.2 to ONE Gas, Inc.'s Current Report on Form 8-K filed on March 11, 2021 (File No. 1-36108)).
4.7	Supplemental Indenture No. 5 , dated as of March 11, 2021, between ONE Gas, Inc. and U.S. Bank National Association, as trustee, with respect to the Floating Rate Senior Notes due 2023 (incorporated by reference to Exhibit 4.3 to ONE Gas, Inc.'s Current Report on Form 8-K filed on March 11, 2021 (File No. 1-36108)).
4.8	Description of the Registrant's securities registered pursuant to Section 12 of the Securities Act of 1934 (incorporated by reference to Exhibit 4.6 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 26, 2021 (File No. 1-36108)).
4.9	Supplemental Indenture No. 6 , dated as of August 8, 2022, between ONE Gas, Inc. and U.S. Bank Trust Company, National Association, as trustee, with respect to the 4.25% Notes due 2032 (incorporated by reference to Exhibit 4.2 of ONE Gas Inc.'s Current Report on Form 8-K filed on August 8, 2022 (File No. 1-36108)).
4.10	Indenture by and among Kansas Gas Service Securitization I, L.L.C., U.S. Bank Trust Company, National Association, as Indenture Trustee, and U.S. Bank National Association, as Securities Intermediary (including the form of the Securitized Utility Tariff Bonds and the Series Supplement), dated as of November 18, 2022 (incorporated by reference to Exhibit 4.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 18, 2022 (File No. 1-36108)).
4.11	Series Supplement by and among Kansas Gas Service Securitization I, L.L.C. and U.S. Bank Trust Company, National Association, as Indenture Trustee, dated as of November 18, 2022 (incorporated by reference to Exhibit 4.2 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 18, 2022 (File No. 1-36108)).
4.12	Supplemental Indenture No. 7, dated as of December 13, 2023, between ONE Gas, Inc. and U.S. Bank Trust Company, National Association, as trustee, with respect to the 5.10% Notes due 2029 (incorporated by reference to Exhibit 4.2 of ONE Gas Inc.'s Current Report on Form 8-K filed on December 13, 2023 (File No. 1-36108)).
10.1*	Form of ONE Gas, Inc. Indemnification Agreement between ONE Gas, Inc. and ONE Gas, Inc. officers and directors (incorporated by reference to Exhibit 10.5 to ONE Gas, Inc.'s Registration Statement on Form 10 filed on October 1, 2013 (File No. 1-36108)).
10.2*	ONE Gas, Inc. Pre-2005 Nonqualified Deferred Compensation Plan (incorporated by reference to Exhibit 10.7 to ONE Gas, Inc.'s Registration Statement on Form 10, Amendment No. 2 filed on December 23, 2013 (File No. 1-36108)).
10.3*	ONE Gas, Inc. Nonqualified Deferred Compensation Plan (incorporated by reference to Exhibit 10.8 to ONE Gas, Inc.'s Registration Statement on Form 10, Amendment No. 2 filed on December 23, 2013 (File No. 1-36108)).
10.4*	ONE Gas, Inc. Pre-2005 Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.9 to ONE Gas, Inc.'s Registration Statement on Form 10, Amendment No. 2 filed on December 23, 2013 (File No. 1-36108)).
10.5*	ONE Gas, Inc. Supplemental Executive Retirement Plan, as amended and restated effective December 1, 2017 (incorporated by reference to Exhibit 10.8 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 22, 2018 (File No. 1-36108)).

10.6*	ONE Gas, Inc. Officer Change in Control Severance Plan (incorporated by reference to Exhibit 10.12 to ONE Gas, Inc.'s Registration Statement filed on Form 10, Amendment No. 2 filed on December 23, 2013 (File No. 1-36108)).
10.7*	ONE Gas, Inc. Equity Compensation Plan, as amended and restated effective December 1, 2017 (incorporated by reference to Exhibit 10.11 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 22, 2018 (File No. 1-36108)).
10.8*	Form of 20 24 Restricted Unit Award Agreement .
10.9*	Form of 20 24 Performance Unit Award Agreement .
10.10*	Form of 2023 Restricted Unit Award Agreemen t (incorporated by reference to Exhibit 10.10 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 23, 2023 (File No. 1-36108)).
10.11*	Form of 2023 Performance Unit Award Agreement (incorporated by reference to Exhibit 10.11 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 23, 2023 (File No. 1-36108)) .
10.12*	ONE Gas, Inc. Amended and Restated Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.16 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 20, 2020 (File No. 1-36108)).
10.13	Form of Commercial Paper Dealer Agreement (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on September 10, 2014 (File No. 1-36108)).
10.14*	Form of 2020 Performance Unit Award Agreement (incorporated by reference to Exhibit 10.20 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 20, 2020 (File No. 1-36108)).
10.15*	Form of 2020 Restricted Unit Award Agreement (incorporated by reference to Exhibit 10.21 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 20, 2020 (File No. 1-36108)).
10.16	Equity Distribution Agreement, dated as of February 24, 2023, among ONE Gas, Inc. and BofA Securities, Inc., J.P. Morgan Securities, LLC, Mizuho Securities USA LLC and RBC Capital Markets, LLC, acting as managers; Bank of America, N.A., JPMorgan Chase Bank, National Association, Mizuho Markets Americas LLC and Royal Bank of Canada, acting as forward purchasers; and BofA Securities, Inc., J.P. Morgan Securities LLC, Mizuho Securities USA LLC and RBC Capital Markets, LLC, acting as forward sellers (incorporated by reference to Exhibit 1.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on February 24, 2023 (File No. 1-36108) .
10.17	Confirmation of Forward Sale Transaction, dated as of March 8, 2023, between ONE Gas, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on March 13, 2023 (File No. 1-36108)).
10.18*	Form of 2021 Restricted Unit Award Agreement (incorporated by reference to Exhibit 10.28 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 26, 2021 (File No. 1-36108)).
10.19*	Form of 2021 Performance Unit Award Agreement (incorporated by reference to Exhibit 10.29 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 26, 2021 (File No. 1-36108)).
10.20	Extension Agreement, dated as of March 16, 2023, among ONE Gas, Inc., Bank of America, N.A., as administrative agent, swing line lender, and a letter of credit issuer, and the other lenders and letter of credit issuers parties thereto (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on March 16, 2023 (File No. 1-36108)) .
10.21*	ONE Gas, Inc. Nonqualified Deferred Compensation Plan, as amended and restated effective January 1, 2018 (incorporated by reference to Exhibit 10.28 to ONE Gas, Inc.'s Annual Report on Form 10-K filed February 22, 2018 (File No. 1-36108)).

10.22	Forward Sale Agreement, dated September 11, 2023, between ONE Gas, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on September 14, 2023 (File No. 1-36108)) .
10.23*	ONE Gas, Inc. Amended and Restated Equity Compensation Plan (2018) (incorporated by reference to Appendix A to ONE Gas, Inc.'s Definitive Proxy Statement on Schedule 14A filed on April 4, 2018 (File No. 1-36108)).
10.24*	ONE Gas, Inc. Amended and Restated Annual Officer Incentive Plan, effective January 1, 2020 (incorporated by reference to Exhibit 10.31 to ONE Gas, Inc.'s Annual Report on Form 10-K filed on February 20, 2020 (File No. 1-36108)).
10.25*	Form of 2022 Restricted Unit Award Agreement (incorporated by reference to Exhibit 10.28 to ONE Gas, Inc's Annual Report on Form 10-K filed on February 24, 2022 (File No. 1-36108)).
10.26*	Form of 2022 Performance Unit Award Agreement (incorporated by reference to Exhibit 10.29 to ONE Gas, Inc's Annual Report on Form 10-K filed on February 24, 2022 (File No. 1-36108)).
10.27*	Form of 2021 Restricted Unit Award Agreement dated June 2021 (incorporated by reference to Exhibit 10.30 to ONE Gas, Inc's Annual Report on Form 10-K filed on February 24, 2022 (File No. 1-36108)).
10.28*	Form of 2021 Performance Unit Award Agreement dated June 2021 (incorporated by reference to Exhibit 10.31 to ONE Gas, Inc's Annual Report on Form 10-K filed on February 24, 2022 (File No. 1-36108)).
10.29*	Form of 2021 Restricted Unit Award Agreement dated September 2021 (incorporated by reference to Exhibit 10.32 to ONE Gas, Inc's Annual Report on Form 10-K filed on February 24, 2022 (File No. 1-36108)).
10.30*	Form of 2021 Performance Unit Award Agreement dated September 2021 (incorporated by reference to Exhibit 10.33 to ONE Gas, Inc's Annual Report on Form 10-K filed on February 24, 2022 (File No. 1-36108)).
10.31*	Form of 2020 Restricted Unit Award Agreement dated July 2020 (incorporated by reference to Exhibit 10.30 to ONE Gas, Inc.'s Annual Report on Form 10-K filed February 26, 2021 (File No. 1-36108)).
10.32*	ONE Gas Inc. Annual Officer Incentive Plan, effective January 1, 2019 (incorporated by reference to Exhibit 10.30 to ONE Gas, Inc.'s Annual Report on Form 10-K filed February 20, 2019 (File No. 1-36108)).
10.33	Additional Forward Sale Agreement, dated September 15, 2023, between ONE Gas, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on September 19, 2023 (File No. 1-36108)) .
10.34	Second Amended and Restated c redit Agreement, dated as of March 16, 2021, among ONE Gas, Inc., the lenders from time to time party thereto and Bank of America, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on March 16, 2021 (File No. 1-36108)).
10.35*	ONE Gas, Inc. Nonqualified Deferred Compensation Plan, as amended and restated effective January 1, 2022 (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Quarterly Report on Form 10-Q filed on November 2, 2021 (File No. 1-36108)).
10.36*	ONE Gas, Inc. Amended and Restated Employee Stock Purchase Plan (incorporated by reference to Appendix A to ONE Gas, Inc.'s Definitive Proxy Statement on Schedule 14A filed on April 7, 2021 (File No. 1-36108)).
10.37	First Amendment to Second Amended and Restated Credit Agreement, dated as of March 16, 2022, among ONE Gas, Inc., Bank of America, N.A., as administrative agent, swing line lender and letter of credit issuer, and the lenders party thereto (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on March 17, 2022 (File No. 1-36108)).

10.38	Securitization Property Purchase and Sale Agreement dated as of August 25, 2022 by and between the Oklahoma Development Finance Authority, as Issuer, and Oklahoma Natural Gas Company, a division of ONE Gas, Inc., as Seller (incorporated by reference to Exhibit 10.1 of ONE Gas, Inc.'s Current Report on Form 8-K filed on August 26, 2022 (File No. 1-36108)).
10.39	ONE Gas, Inc. Deferred Compensation Plan for Non-Employee Directors, amended and restated effective July 18, 2022 (incorporated by reference to Exhibit 10.3 of ONE Gas, Inc.'s Quarterly Report on Form 10-Q filed on November 1, 2022 (File No. 1-36108)).
10.40	Securitized Utility Tariff Property Servicing Agreement between Kansas Gas Service Securitization I, L.L.C. and Kansas Gas Service, a Division of ONE Gas, Inc., as Servicer, dated as of November 18, 2022 (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 18, 2022 (File No. 1-36108)).
10.41	Securitized Utility Tariff Property Purchase and Sale Agreement between Kansas Gas Service Securitization I, L.L.C. and Kansas Gas Service, a Division of ONE Gas, Inc., as Seller, dated as of November 18, 2022 (incorporated by reference to Exhibit 10.2 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 18, 2022 (File No. 1-36108)).
10.42	Administration Agreement between Kansas Gas Service Securitization I, L.L.C. and Kansas Gas Service, a Division of ONE Gas, Inc., as Administrator, dated as of November 18, 2022 (incorporated by reference to Exhibit 10.3 to ONE Gas, Inc.'s Current Report on Form 8-K filed on November 18, 2022 (File No. 1-36108)).
10.43	Commitment Increase Agreement, dated as of October 20, 2023, among ONE Gas, Inc., Bank of America, N.A., as administrative agent, swing line lender, and letter of credit issuer, and the other lenders and letter of credit issuers parties thereto (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on October 23, 2023 (File No. 1-36108)).
10.44	Amendment to Confirmation of Forward Sale Transaction, dated as of December 28, 2023, between ONE Gas, Inc. and Bank of America, N.A. (incorporated by reference to Exhibit 10.1 to ONE Gas, Inc.'s Current Report on Form 8-K filed on December 28, 2023 (File No. 1-36108)).
21.1	Subsidiaries of ONE Gas, Inc.
23.1	Consent of Independent Registered Public Accounting Firm - PricewaterhouseCoopers LLP.
31.1	Certification of Robert S. McAnnally pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of C hris t o pher P. Sighinolfi pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Robert S. McAnnally pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished only pursuant to Rule 13a-14(b)).
32.2	Certification of Christopher P. Sighinolfi pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished only pursuant to Rule 13a-14(b)).

97.1	ONE Gas, Inc. Supplemental Clawback Policy
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Schema Document.
101.CAL	XBRL Calculation Linkbase Document.
101.LAB	XBRL Label Linkbase Document.
101. PRE	XBRL Presentation Linkbase Document.
101.DEF	XBRL Extension Definition Linkbase Document.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document and contained in Exhibit 101).

* Management contract or compensatory plan or arrangement

Attached as Exhibit 101 to this Annual Report are the following XBRL-related documents: (i) Document and Entity Information; (ii) Consolidated Statements of Income for the years ended December 31, 2023, 2022 and 2021; (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2023, 2022 and 2021; (iv) Consolidated Balance Sheets as of December 31, 2023 and 2022; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2023, 2022 and 2021; (vi) Consolidated Statements of Equity for the years ended December 31, 2023, 2022 and 2021; and (vii) Notes to Consolidated Financial Statements.

We also make available on our website the Interactive Data Files submitted as Exhibit 101 to this Annual Report.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURE

Pursuant to the requirements of the Exchange Act, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 22, 2024

ONE Gas, Inc.
Registrant

By: /s/ Christopher P. Sighinolfi
Christopher P. Sighinolfi
Senior Vice President and
Chief Financial Officer
(Principal Financial Officer)

Pursuant to the requirements of the Exchange Act, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on this 22nd day of February 2024.

/s/ John W. Gibson
John W. Gibson
Chairman of the Board

/s/ Robert S. McAnnally
Robert S. McAnnally
President, Chief Executive Officer
and Director

/s/ Christopher P. Sighinolfi
Christopher P. Sighinolfi
Senior Vice President and
Chief Financial Officer

/s/ Brian F. Brumfield
Brian F. Brumfield
Vice President, Chief Accounting Officer
and Controller
(Principal Accounting Officer)

/s/ Robert B. Evans
Robert B. Evans
Director

/s/ Tracy E. Hart
Tracy E. Hart
Director

/s/ Deborah A. P. Hersman
Deborah A. P. Hersman
Director

/s/ Michael G. Hutchinson
Michael G. Hutchinson
Director

/s/ Pattye L. Moore
Pattye L. Moore
Director

/s/ Eduardo A. Rodriguez
Eduardo A. Rodriguez
Director

/s/ Douglas H. Yaeger
Douglas H. Yaeger
Director

Exhibit 10.8

ONE GAS, INC.

RESTRICTED UNIT AWARD AGREEMENT

This Restricted Unit Award Agreement (this "**Agreement**") is made and entered into as of February 19, 2024 (the "**Grant Date**") by and between ONE Gas, Inc., an Oklahoma corporation (the "**Company**") and the "Participant" named below.

Participant: #ParticipantName#

WHEREAS, the Company has adopted the ONE Gas, Inc. Amended and Restated Equity Compensation Plan (2018), as amended from time to time (the "**Plan**"), pursuant to which Restricted Unit Awards may be granted; and

WHEREAS, the Executive Compensation Committee of the Board of Directors (the "Committee") has determined that it is in the best interests of the Company and its shareholders to grant the Restricted Unit Award provided for herein.

NOW, THEREFORE, the parties hereto, intending to be legally bound, agree as follows:

1. Grant of Restricted Units.

1.1 The Company hereby grants to the Participant an award consisting of the number of Restricted Units specified below ("Restricted Units" or the "Award") on the terms and conditions set forth in this Agreement and the Plan.

Number of Restricted Units: #QuantityGranted#

Each Restricted Unit represents the right to receive one share of the Company's common stock ("Share") or, at the Company's option, an amount of cash as set forth in Section 6.3, in either case, at the times and subject to the conditions set forth herein. Capitalized terms that are used but not defined herein have the meanings set forth in the Plan.

1.2 The Restricted Units shall be credited to a separate account maintained for the Participant on the books and records of the Company (the "**Account**"). All amounts credited to the Account shall continue for all purposes to be part of the general assets of the Company.

2. Consideration. The Award is granted in consideration of the Participant's continued employment with the Company.

3. Vesting.

3.1 General. Subject to Participant's continuous employment with the Company during the period beginning on the Grant Date and ending on February 13, 2027 (the "Restricted Period") and subject to the terms of this Agreement, the Participant will vest in such amounts and at such times as are set forth below:

Vesting Date	**Percentage of Award That Vests**
February 13, 2027	100%

For purposes of this Agreement, employment with any Subsidiary of the Company shall be treated as employment with the Company. Likewise, a termination of employment shall not be deemed to occur by reason of a transfer of employment between the Company and any Subsidiary.

Restricted Units that vest pursuant to the terms of this Agreement, including Sections 3.2 and 3.3 below, are referred to as "Vested Units" and the date upon which the Restricted Units vest is referred to as a "Vesting Date." Unless and until the Restricted Units have vested, Participant will have no right to receive any Shares subject thereto. Prior to the actual delivery of any Shares, the Award will represent an unsecured obligation of the Company, payable only from the Company's general assets.

3.2 Termination of Employment.

(a) If the Participant's employment with the Company is terminated prior to the end of the Restricted Period by the Company without Cause or on account of the Participant's Retirement, Total Disability or death, the Participant will vest in a pro-rata portion of the Restricted Units as of the Participant's termination date. The pro-rata portion of the Restricted Units that vest will be determined by multiplying the number of Restricted Units granted hereunder by a fraction, which fraction shall be equal to the number of full calendar months which have elapsed under the Restricted Period at the time of such termination of employment divided by thirty-six. If the Participant's employment with the Company terminates for any other reason, Participant shall immediately forfeit any and all Restricted Units that have not vested or do not vest on or prior to the Participant's termination date and neither the Company nor any Subsidiary shall have any further obligations to the Participant under this Agreement. For purposes of this Agreement:

(i) "Cause" will mean any of the following: (i) the Participant's conviction in a court of law of a felony, or any crime or offense involving misuse or misappropriation of money or property, (ii) the Participant's violation of any covenant, agreement or obligation not to disclose confidential information regarding the business of the Company (or Subsidiary), (iii) any violation by the Participant of any covenant not to compete with the Company (or Subsidiary), (iv) any act of dishonesty by the Participant which adversely effects the business of the Company (or Subsidiary), (v) any willful or intentional act of the Participant which adversely affects the business of, or reflects unfavorably on the reputation of the Company (or Subsidiary), (vi) the Participant's use of alcohol or drugs which interferes with the Participant's duties as an employee of the

Company (or Subsidiary), or (vii) the Participant's failure or refusal to perform the specific directives of the Company's Board, or its officers which directives are consistent with the scope and nature of the Participant's duties and responsibilities with the existence and occurrence of all of such causes to be determined by the Company, in its sole discretion; *provided, that* nothing contained in the foregoing provisions of this Section shall be deemed to interfere in any way with the right of the Company (or Subsidiary), which is hereby acknowledged, to terminate the Participant's employment at any time without Cause.

(ii) "Retirement" means a voluntary termination of employment of the Participant with the Company by the Participant if at the time of such termination of employment the Participant has both completed five (5) years of service with the Company and attained age fifty (50).

(iii) "Total Disability" means that the Participant is permanently and totally disabled and unable to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months, and the Participant has established such disability to the extent and in the manner and form as may be required by the Committee.

3.3 Change in Control. If a Change in Control occurs prior to the end of the Restricted Period and the Participant is employed by the Company at the time of the Change in Control, but subsequently terminates prior to the end of the Restricted Period based on an involuntary termination (without cause) or a voluntary termination with "good reason" within 24 months of the Change in Control date, then the Participant shall become one hundred percent (100%) vested in the Award upon the date of the termination due to the Change in Control. Good reason includes:

- Demotion or material reduction of authority or responsibility;
- Material reduction in base salary;
- Material reduction in annual incentive or LTI targets;
- Relocation of greater than 35 miles; or
- Failure of a successor company to assume the change-in-control plan.

Notwithstanding the foregoing, the provisions set forth in the Plan applicable to a Change in Control shall apply to the Award, and in the event of a Change in Control, the Committee, in its sole discretion and to the extent permitted by Section 409A, may take such actions as it deems appropriate pursuant to the Plan. For purposes of this Agreement, the term "Change in Control" shall have the same meaning as provided in the Plan unless the Award is or becomes subject to Section 409A, in which event "Change in Control" shall have the meaning provided in Section 409A and the related Treasury Regulations.

4. Transfer Restrictions.

4.1 Except as provided in Section 4.2, during the Restricted Period and until such time as the Shares underlying the Vested Units have been issued, the Restricted Units, related Shares or the rights relating thereto may not be sold, pledged, assigned, transferred or otherwise disposed of by the Participant in any manner other than by will or by laws of descent and distribution. Except as provided in Section 4.2, any attempt to sell, pledge, assign, transfer or otherwise dispose of the Restricted Units, related Shares or the rights relating thereto shall be wholly ineffective and, if any such attempt is made, the Restricted Units, related Shares or the rights relating thereto will be forfeited by the Participant and all of the Participant's rights to such units or related Shares shall immediately terminate without any payment or consideration by the Company.

4.2 Notwithstanding the foregoing, the Participant may transfer any part or all of the Participant's rights in the Restricted Units to members of the Participant's immediate family, or to one or more trusts for the benefit of such immediate family members, or partnerships in which such immediate family members are the only partners if the Participant does not receive any consideration for the transfer. In the event of any such transfer, Restricted Units shall continue to be subject to the same terms and conditions otherwise applicable hereunder and under the Plan immediately prior to transfer, except that such rights shall not be further transferable by the transferee inter vivos, except for transfer back to the Participant. For any such transfer to be effective, the Participant must provide prior written notice thereof to the Committee and the Participant shall furnish to the Committee such information as it may request with respect to the transferee and the terms and conditions of any such transfer. For purposes of this Agreement, "immediate family" shall mean the Participant's spouse, children and grandchildren.

5. Dividend Equivalents. During the Restricted Period, the Participant's Account shall be credited with an amount equal to all ordinary cash dividends ("Dividend Equivalents") that would have been paid to the Participant if one Share had been issued on the Grant Date for each Restricted Unit granted to the Participant as set forth in this Agreement. The Dividend Equivalents credited to the Participant's Account will be deemed to be reinvested in additional Restricted Units (or fractional units) and will be subject to the same terms and conditions as the Restricted Units to which they are attributable and shall vest or be forfeited (if applicable) and settled at the same time as the Restricted Units to which they are attributable. Such additional Restricted Units shall also be credited with additional Dividend Equivalents as any further dividends are declared.

6. Settlement of Vested Units; Distribution or Payment.

6.1 Vested Units shall be settled and distributed in Shares (either in book-entry form or otherwise) or, at the Company's option, paid in an amount of cash as set forth in Section 6.3. All distributions in Shares shall be in the form of whole Shares, and any fractional Share shall be distributed in cash in an amount equal to the value of such fractional Share determined based on the Fair Market Value of a Share on the Vesting Date.

6.2 Subject to Section 9 and Section 22.2, the Company shall distribute to the Participant the number of Shares equal to the number of Vested Units within 75 days after the applicable Vesting Date.

6.3 If the Company elects to settle the Participant's Vested Units in cash, the amount of cash payable with respect to each Vested Unit shall be equal to the Fair Market Value of a Share on the Vesting Date.

6.4 To the extent that the Participant does not vest in any Restricted Units on or before the end of the Restricted Period, all interest in such Restricted Units and any additional Restricted Units attributable to Dividend Equivalents shall be forfeited. The Participant has no right or interest in any Restricted Units that are forfeited.

7. Conditions to Issuance or Transfer of Shares. The issuance and transfer of Shares shall be subject to compliance by the Company and the Participant with all applicable laws, rules and regulations ("Applicable Laws") and also to such approvals by governmental agencies as may be deemed appropriate to comply with relevant securities laws and regulations. No Shares shall be issued or transferred unless and until any then applicable requirements of Applicable Laws and regulatory agencies have been fully complied with to the satisfaction of the Company and its counsel.

8. Tax Withholding. Participant shall be required to pay to the Company, and the Company shall have the right to deduct from any compensation paid to the Participant pursuant to the Plan, the amount of any required federal, state and local taxes, domestic or foreign, including payroll taxes, in respect of the Award and to take all such other action as the Committee deems necessary to satisfy all obligations for the payment of such withholding taxes. The Company shall have no obligation to issue any Shares to any Participant unless and until the Participant has made arrangements, satisfactory to the Company in its sole discretion, to satisfy the Participant's tax liability resulting from the vesting or settlement of the Vested Units. The amount of such withholding shall be determined by the Company. The Committee, in its sole discretion, may permit or require the Participant to satisfy any such tax withholding obligation by any of, or a combination of, the following means:

8.1 tendering a cash payment or check payable to the Company.

8.2 authorizing the Company to withhold an amount from any cash amounts otherwise due or to become due from the Company to the Participant.

8.3 authorizing the Company to withhold Shares from the Shares otherwise issuable to the Participant as a result of the vesting of the Restricted Units; provided, however, that no Shares shall be withheld with a Fair Market Value exceeding the maximum amount of tax required to be withheld by Applicable law.

8.4 delivering to the Company previously owned and unencumbered Shares having a then current Fair Market Value not exceeding the maximum amount of tax required to be withheld by Applicable Law.

9. Rights as Shareholder. Except as otherwise provided in the Agreement, the Participant shall not have any of the rights or privileges of a shareholder with respect to the Shares underlying the Restricted Units unless and until the Restricted Units vest and certificates representing such Shares (which may be in book-entry form) have been issued and recorded on the Company's records, and delivered to the Participant or to an escrow account for the Participant's benefit. After such issuance, recordation and delivery, Participant will have the rights of a shareholder of the Company with respect to such Shares, including without limitation, voting rights and the right to receipt of dividends and distributions on such Shares.

10. No Right to Continued Service. Neither the Plan nor this Agreement shall confer upon the Participant any right to serve as an employee or other service provider of the Company or a Subsidiary. Further, nothing in the Plan or this Agreement shall be construed to limit the discretion of the Company or a Subsidiary to terminate the services of the Participant at any time, with or without cause.

11. Adjustments. In the event of a change in capitalization described in Section 13 of the Plan prior to the end of the Restricted Period, other than a dividend described in Section 5 above, the Restricted Units shall be equitably adjusted or terminated in any manner contemplated by the Plan to reflect the effect of such event or change in the Company's capital structure in such a way as to preserve the value of the Award.

12. Required Participant Repayment/Reduction Provision. Notwithstanding anything in the Plan or this Agreement to the contrary, all or a portion of the Award made to the Participant under this Agreement is subject to being called for clawback and repayment to the Company or reduced in any situation required by law or as specified by any and all applicable Company policies, New York Stock Exchange ("NYSE") rule, or Securities and Exchange Commission ("SEC") rule in effect at the time the clawback and repayment or reduction occurs. In any event, even if not required by law, Company policy, NYSE rule, or SEC rule, in any situation where the Board or a committee thereof determines that fraud, negligence, or intentional misconduct by the Participant was a contributing factor to the Company having to restate all or a portion of its financial statement(s), the Committee may request clawback, repayment, and/or reduction. If the method of clawback, repayment, and/or reduction is not specified by applicable law, Company policies, NYSE rule, or SEC rule, the Committee may determine whether the Company shall effect any such clawback, repayment, and/or reduction: (i) by seeking repayment from the Participant, (ii) by reducing (subject to Applicable Law and the Plan's terms and conditions or any other applicable plan, program, or arrangement) the amount that would otherwise be awarded or payable to the Participant under the Award, the Plan or any other compensatory plan, program, or arrangement maintained by the Company, (iii) by withholding payment of future increases in compensation (including the payment of any discretionary bonus amount) or grants of compensatory awards that would otherwise have been made in accordance with the

Company's otherwise applicable compensation practices, or (iv) by any combination of the foregoing. The determination regarding the Participant's conduct, and clawback, repayment and/or reduction under this provision shall be within the Committee's sole discretion and shall be final and binding on the Participant and the Company. The Participant, in consideration of the grant of the Award, and by the Participant's execution of this Agreement, acknowledges the Participant's understanding and agreement to this provision, and hereby agrees to make and allow an immediate and complete repayment or reduction in accordance with this provision in the event of a call for clawback, repayment, and/or other action by the Company or Committee to effect its terms with respect to the Participant, the Award and/or any other compensation described herein.

13. Company Policies. The Participant agrees that the Award will be subject to any applicable insider trading policies, retention policies and other policies that may be implemented by the Board, from time to time.

14. Participant Undertaking. The Participant agrees to take whatever additional actions and execute whatever additional documents the Company may in its reasonable judgment deem necessary or advisable in order to carry out or effect one or more of the obligations or restrictions imposed on the Participant pursuant to the terms of this Agreement. It is intended by the Company that the Plan and Shares covered by the Award are to be registered under the Securities Act of 1933, as amended, prior to the grant date; provided that in the event such registration is for any reason not effective for such Shares, the Participant agrees that all Shares acquired pursuant to the grant will be acquired for investment and will not be available for sale or tender to any third party.

15. Beneficiary. The Participant may designate a Beneficiary(ies) (in accordance with the beneficiary designation procedures of the applicable brokerage account where any Shares (or, as applicable, cash) of an Award's Vested Units will be delivered in accordance with this Agreement upon vesting). Such Beneficiary(ies) will receive any rights of the Participant which may become vested in the event of the Participant's death. If no Beneficiary is designated under such brokerage account, then upon a Participant's death, any vested rights of the Participant will be transferred and distributed from the brokerage account in accordance with the procedures of such brokerage account for use in instances in which no beneficiary is designated.

16. Notices. Any notice required to be delivered to the Company under this Agreement shall be in writing and addressed to the Senior Vice President, Chief Human Resources Officer, or his or her successor in charge of compensation and benefits in Human Resources, of the Company at the Company's principal corporate offices. Any notice required to be delivered to the Participant under this Agreement shall be in writing and addressed to the Participant at the Participant's address as shown in the records of the Company. Either party may designate another address in writing (or by such other method approved by the Company) from time to time.

17. Incorporation of the Plan; Conflicts. The Restricted Units and the Shares issued to Participant hereunder are subject to the terms and conditions set forth in this Agreement and the

Plan, which is incorporated herein by reference. In the event of any inconsistency between (1) the Plan and this Agreement, the Plan will control, or (2) the resolutions and records of the Board or Committee and this Agreement, the resolutions and records of the Board or Committee will control.

18. Successors and Assigns. The Company may assign any of its rights under this Agreement, and this Agreement will be binding upon and inure to the benefit of the Company's successors and assigns. Subject to the restrictions on transfer set forth herein and the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

19. No Impact on Other Benefits. The Company does not intend for the value of the Award or any Vested Units to be included in the Participant's normal or expected compensation for purposes of calculating any severance, retirement, welfare, insurance or similar employee benefit; *provided, however*, that if there is any inconsistency between this Agreement and the terms of another benefit plan, the benefit plan document will control.

20. Discretionary Nature of Plan. The Plan is discretionary and may be amended, cancelled or terminated by the Board at any time, in its discretion. The grant of the Restricted Units in this Agreement does not create any contractual right or other right to receive any Restricted Units or other awards in the future. Future awards, if any, will be at the Committee's sole discretion. Any amendment, modification, or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Participant's employment with the Company.

21. Amendment. In accordance with the Plan, the Committee may amend or otherwise modify, suspend, discontinue or terminate this Agreement at any time, prospectively or retroactively.

22. Section 409A.

22.1 This Award and Agreement is intended to comply with Section 409A or an exemption thereunder and shall be construed and interpreted in a manner that is consistent with the requirements for avoiding additional taxes or penalties under Section 409A. Notwithstanding any other provision of the Agreement, any distributions or payments due hereunder may only be made upon an event and in a manner that complies with Section 409A or an applicable exemption. Any distributions or payments due hereunder upon a termination of employment shall only be made upon a "separation from service" as defined in Section 409A. The right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments. In no event may the Participant, directly or indirectly, designate the calendar year of settlement, distribution or payment.

22.2 If an Award is subject to Section 409A and Participant becomes entitled to settlement of the Award on account of a separation from service and is a "specified employee" within the meaning of Section 409A on the date of the separation from service, then to the extent

necessary to prevent any accelerated or additional tax under Section 409A, such settlement will be delayed until the earlier of: (a) the date that is six months following the Participant's separation from service, and (b) the Participant's death (the "Delayed Payment Date") and the accumulated amounts shall be distributed or paid in a lump sum payment on the Delayed Payment Date.

22.3 The Company does not represent that the Award or this Agreement complies with Section 409A and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Participant on account of non-compliance with Section 409A.

22.4 To the extent that any provision of the Agreement would cause a conflict with the requirements of Section 409A, or would cause the administration of the Agreement to fail to satisfy Section 409A, such provision shall be deemed null and void to the extent permitted by Applicable Law.

23. Entire Agreement. The Plan and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and the Participant with respect to the subject matter hereof.

24. Severability. The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.

25. Governing Law. This Agreement will be construed and interpreted in accordance with the laws of the State of Oklahoma without regard to the conflict of laws provisions thereof.

26. Counterparts. This Agreement may be executed in one or more counterparts, including by way of electronic signature, subject to Applicable Law, each of which shall be deemed an original and all of which together will constitute one instrument.

27. Administration of Award; Acceptance. As a condition of receiving this Award, the Participant agrees that the Committee shall have full and final authority to construe and interpret the Plan and this Agreement, and to make all other decisions and determinations as may be required under the Plan or this Agreement as they may deem necessary or advisable for administration of the Plan or this Agreement, and that all such interpretations, decisions and determinations shall be final and binding on the Participant, the Company and all other interested persons. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Committee for review. The resolution of such dispute by the Committee shall be final and binding on the Participant and the Company. Day-to-day authority and responsibility has been delegated to the Company's ONE Gas, Inc. Benefits Committee and its authorized representatives, and all actions taken thereby shall be entitled to the same deference as if taken by the Committee itself.

The Participant hereby acknowledges receipt of this Agreement and a copy of the Plan. Participant agrees to be bound by all of the provisions set forth in this Agreement and the Plan and acknowledges that there may be adverse tax consequences upon the vesting or settlement of the Restricted Units or disposition of the underlying Shares and that Participant has been advised to consult a tax advisor prior to such vesting, settlement or disposition. Participant accepts the Award under the terms and conditions stated in this Agreement, subject to all terms and provisions of the Plan, by electronic acceptance of the grant.

Exhibit 10.9

ONE GAS, INC.

PERFORMANCE UNIT AWARD AGREEMENT

This Performance Unit Award Agreement (this "**Agreement**") is made and entered into as of February 19, 2024 (the "**Grant Date**") by and between ONE Gas, Inc., an Oklahoma corporation (the "**Company**") and the "Participant" named below.

Participant: #ParticipantName#

WHEREAS, the Company has adopted the ONE Gas, Inc. Amended and Restated Equity Compensation Plan (2018), as amended from time to time (the "**Plan**"), pursuant to which Performance Unit Awards may be granted; and

WHEREAS, the Executive Compensation Committee of the Board of Directors (the "Committee") has determined that it is in the best interests of the Company and its shareholders to grant the Performance Unit Award provided for herein.

NOW, THEREFORE, the parties hereto, intending to be legally bound, agree as follows:

1. Grant of Performance Units.

1.1 The Company hereby grants to the Participant an award consisting of the number of Performance Units specified below ("Performance Units" or the "Award") on the terms and conditions set forth in this Agreement and the Plan.

Number of Performance Units: #QuantityGranted#

The Performance Units are contingently awarded and will be earned if and only to the extent that the performance goal described on Exhibit A (the "Performance Goal") is met and will be vested and distributable only if other conditions in this Agreement are met. Each Performance Unit represents the right to receive one share of the Company's common stock ("Share") or, at the Company's option, an amount of cash as set forth in Section 6.2, in either case, at the times and subject to the conditions set forth herein. The number of Performance Units set forth above is equal to a target number of Shares that the Participant will earn for 100% achievement of the Performance Goal (the "Target Award"). Capitalized terms that are used but not defined herein have the meanings set forth in the Plan.

1.2 The Performance Units shall be credited to a separate account maintained for the Participant on the books and records of the Company (the "**Account**"). All amounts credited to the Account shall continue for all purposes to be part of the general assets of the Company.

1.3 For purposes of this Agreement, the term "Performance Period" shall be the period commencing on January 1, 2024 and ending on December 31, 2026.

2. Consideration. The Award is granted in consideration of the Participant's continued employment with the Company.

3. Vesting.

3.1 General. Except as provided in this Section 3, subject to Participant's continuous employment with the Company during the period beginning on the Grant Date and ending on February 13, 2027 (the "Vesting Date") and subject to the terms of this Agreement, the Participant shall vest on the Vesting Date in the number of Performance Units, if any, earned upon, and certified following, the attainment of the Performance Goal for the Performance Period. Any Performance Units that do not vest as of the Vesting Date shall be forfeited. Performance Units that vest pursuant to the terms of this Agreement, including Sections 3.2 and 3.3 below, are hereinafter referred to as "Vested Units. Unless and until the Performance Units have vested, Participant will have no right to receive any Shares subject thereto. Prior to the actual delivery of any Shares, the Award will represent an unsecured obligation of the Company, payable only from the Company's general assets.

3.2 Termination of Employment. If prior to the Vesting Date, the Participant ceases to be employed by the Company on account of the Participant's Retirement, Total Disability or death, the Participant will vest in a pro-rata portion of the Performance Units as of the Vesting Date if the Performance Goal and requirements of this Agreement are met as of such date. The pro-rata portion of the Performance Units that vest will be determined by multiplying (x) the maximum number of Performance Units in which the Participant could vest, based on the actual level at which the Performance Goal is attained and certified for the Performance Period, as if the Participant remained in the continuous employment of the Company until the Vesting Date, by (y) a fraction, which fraction shall be equal to the number of full calendar months which have elapsed since the Grant Date at the time of such termination of employment divided by the number of months in the Performance Period. If the Participant's employment with the Company terminates prior to the Vesting Date for any other reason, Participant shall immediately forfeit any and all Performance Units that have not vested or do not vest on or prior to the Participant's termination date and neither the Company nor any Subsidiary shall have any further obligations to the Participant under this Agreement. For purposes of this Agreement, employment with any Subsidiary of the Company shall be treated as employment with the Company. Likewise, a termination of employment shall not be deemed to occur by reason of a transfer of employment between the Company and any Subsidiary. For purposes of this Agreement:

(a) "Retirement" means a voluntary termination of employment of the Participant with the Company by the Participant if at the time of such termination of employment the Participant has both completed five (5) years of service with the Company and attained age fifty (50).

(b) "Total Disability" means that the Participant is permanently and totally disabled and unable to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months, and the Participant has established such disability to the extent and in the manner and form as may be required by the Committee.

3.3 Change in Control. If a Change in Control occurs prior to the Vesting Date and the Participant is employed by the Company at the time of the Change in Control, but subsequently terminates prior to the Vesting Date based on an involuntary termination (without cause) or a voluntary termination with "good reason" within 24 months of the Change in Control date, then the Participant's Performance Units will vest at the Target Award level on the date of such termination (the "Change in Control Vesting Date"). Good reason includes:

- Demotion or material reduction of authority or responsibility;
- Material reduction in base salary;
- Material reduction in annual incentive or LTI targets;
- Relocation of greater than 35 miles; or
- Failure of the successor company to assume the change-in-control plan.

Notwithstanding the foregoing, the provisions set forth in the Plan applicable to a Change in Control shall apply to the Award, and in the event of a Change in Control, the Committee, in its sole discretion and to the extent permitted by Section 409A, may take such actions as it deems appropriate pursuant to the Plan. For purposes of this Agreement, the term "Change in Control" shall have the same meaning as provided in the Plan unless the Award is or becomes subject to Section 409A, in which event "Change in Control" shall have the meaning provided in Section 409A and the related Treasury Regulations.

3.4 Certification. The Committee shall, within a reasonably practicable time following the end of the Performance Period, certify to the extent, if any, to which the Performance Goal has been achieved with respect to the Performance Period and the number of Performance Units, if any, earned upon attainment of the Performance Goal and subject to Section 3. Such certification shall be final, conclusive and binding on the Participant, and on all other persons, to the maximum extent permitted by law.

4. Transfer Restrictions.

4.1 Except as provided in Section 4.2, during the Performance Period and until such time as the Shares underlying the Vested Units have been issued, the Performance Units, related Shares or the rights relating thereto may not be sold, pledged, assigned, transferred or otherwise

disposed of by the Participant in any manner other than by will or by laws of descent and distribution. Except as provided in Section 4.2, any attempt to sell, pledge, assign, transfer or otherwise dispose of the Performance Units, related Shares or the rights relating thereto shall be wholly ineffective and, if any such attempt is made, the Performance Units, related Shares or the rights relating thereto will be forfeited by the Participant and all of the Participant's rights to such units or related Shares shall immediately terminate without any payment or consideration by the Company.

4.2 Notwithstanding the foregoing, the Participant may transfer any part or all of the Participant's rights in the Performance Units to members of the Participant's immediate family, or to one or more trusts for the benefit of such immediate family members, or partnerships in which such immediate family members are the only partners if the Participant does not receive any consideration for the transfer. In the event of any such transfer, Performance Units shall continue to be subject to the same terms and conditions otherwise applicable hereunder and under the Plan immediately prior to transfer, except that such rights shall not be further transferable by the transferee inter vivos, except for transfer back to the Participant. For any such transfer to be effective, the Participant must provide prior written notice thereof to the Committee and the Participant shall furnish to the Committee such information as it may request with respect to the transferee and the terms and conditions of any such transfer. For purposes of this Agreement, "immediate family" shall mean the Participant's spouse, children and grandchildren.

5. Dividend Equivalents. The Participant's Account shall be credited with an amount equal to all ordinary cash dividends ("Dividend Equivalents") that would have been paid to the Participant if one Share had been issued on the Grant Date for each Performance Unit granted to the Participant as set forth in this Agreement. The Dividend Equivalents credited to the Participant's Account will be deemed to be reinvested in additional Performance Units (or fractional units) and will be subject to the same terms and conditions as the Performance Units to which they are attributable and shall vest or be forfeited (if applicable) and settled at the same time as the Performance Units to which they are attributable. Such additional Performance Units shall also be credited with additional Dividend Equivalents as any further dividends are declared. No Dividend Equivalents shall be credited with respect to any Performance Units, which as of the record date, have either been settled or forfeited.

6. Time and Form of Payment with Respect to Vested Units.

6.1 Unless an election is made pursuant to Section 7 below and subject to Section 10 and Section 23.2 and subject to certification by the Committee that the Performance Goal has been achieved and other vesting conditions have been satisfied, the Participant will receive a distribution with respect to the Vested Units within 75 days following the earlier of: (i) the Vesting Date (the "Distribution Date") or (ii) the Change in Control Vesting Date described in

Section 3.3. The Vested Units will be settled and distributed in Shares (either in book-entry form or otherwise) or, at the Company's option, paid in an amount of cash as set forth in Section 6.2. All distributions in Shares shall be in the form of whole Shares, and any fractional Share shall be distributed in cash in an amount equal to the value of such fractional Share determined based on the Fair Market Value of a Share on the Vesting Date or Change in Control Vesting Date, as applicable.

6.2 If the Company elects to settle the Participant's Vested Units in cash, the amount of cash payable with respect to each Vested Unit shall be equal to the Fair Market Value of a Share on the Vesting Date or Change in Control Vesting Date, as applicable.

6.3 To the extent that the Participant does not vest in any Performance Units on or before the Vesting Date, all interest in such Performance Units and any additional Performance Units attributable to Dividend Equivalents shall be forfeited. The Participant has no right or interest in any Performance Units that are forfeited.

7. Deferral Election for Officers.

7.1 If the Participant is an officer of the Company, the Participant may irrevocably elect to defer the Distribution Date of Performance Units, Shares and cash that the Participant becomes entitled to receive under this Agreement (the "Deferred Amounts") to a later date, by filing with the Committee, on or before the deferral election date (the "Election Deadline") described in Section 7.2 below, a signed written irrevocable election (the "Election") which shall be in the form substantially the same as attached hereto as Exhibit D, or as otherwise approved by the Committee.

7.2 Any such Election shall be filed with the Committee on or before the Election Deadline, which shall be June 30, 2026, the date that is six (6) months before the end of the Performance Period and shall become effective and irrevocable on such date provided that the Participant performs services for the Company continuously from the later of the beginning of the Performance Period or the date the Performance Goal was established through the Election Deadline. Notwithstanding the foregoing, in no event shall the Participant's Election become effective if any portion of the Deferred Amounts has become readily ascertainable (within the meaning of Section 409A) and is substantially certain to be paid the Participant as of the Election Deadline. To defer the Distribution Date, the Participant must elect to defer one-hundred percent (100%) of the Deferred Amounts. Subject to Section 23.2, the Deferred Amounts shall be distributed to Participant at the time and in the form set forth in the Election (the "Deferred Date"). Notwithstanding a Participant's Election pursuant to this Section 7, if a Change in Ownership or Control (within the meaning of Section 409A) occurs prior to the Deferred Date, the Deferred Amounts will be distributed to the Participant on the date of the Change in Ownership or Control.

7.3 This Section 7 shall be applicable solely to the Award and shall not apply to any other compensation payable to the Participant under the Plan or otherwise. The right to make a deferral election under this Section 7 is expressly limited to officers of the Company or any subset thereof as determined by the Committee from time to time. This Agreement shall not permit a subsequent election to delay or modify the form of payment unless authorized and agreed upon in writing by the Company and Participant and such subsequent election complies with Section 409A.

8. Conditions to Issuance or Transfer of Shares. The issuance and transfer of Shares shall be subject to compliance by the Company and the Participant with all applicable laws, rules and regulations ("Applicable Laws") and also to such approvals by governmental agencies as may be deemed appropriate to comply with relevant securities laws and regulations. No Shares shall be issued or transferred unless and until any then applicable requirements of Applicable Laws and regulatory agencies have been fully complied with to the satisfaction of the Company and its counsel.

9. Tax Withholding. Participant shall be required to pay to the Company, and the Company shall have the right to deduct from any compensation paid to the Participant pursuant to the Plan, the amount of any required federal, state and local taxes, domestic or foreign, including payroll taxes, in respect of the Award and to take all such other action as the Committee deems necessary to satisfy all obligations for the payment of such withholding taxes. The Company shall have no obligation to issue any Shares to any Participant unless and until the Participant has made arrangements, satisfactory to the Company in its sole discretion, to satisfy the Participant's tax liability resulting from the vesting or settlement of the Vested Units. The amount of such withholding shall be determined by the Company. The Committee, in its sole discretion, may permit or require the Participant to satisfy any such tax withholding obligation by any of, or a combination of, the following means:

9.1 tendering a cash payment or check payable to the Company.

9.2 authorizing the Company to withhold an amount from any cash amounts otherwise due or to become due from the Company to the Participant.

9.3 authorizing the Company to withhold Shares from the Shares otherwise issuable to the Participant as a result of the vesting of the Performance Units; provided, however, that no Shares shall be withheld with a Fair Market Value exceeding the maximum amount of tax required to be withheld by Applicable law.

9.4 delivering to the Company previously owned and unencumbered Shares having a then current Fair Market Value not exceeding the maximum amount of tax required to be withheld by Applicable Law.

10. Rights as Shareholder. Except as otherwise provided in the Agreement, the Participant shall not have any of the rights or privileges of a shareholder with respect to the Shares underlying the Performance Units unless and until the Performance Units vest and certificates representing such Shares (which may be in book-entry form) have been issued and recorded on the Company's records and delivered to the Participant or to an escrow account for the Participant's benefit. After such issuance, recordation and delivery, Participant will have the rights of a shareholder of the Company with respect to such Shares, including without limitation, voting rights and the right to receipt of dividends and distributions on such Shares.

11. No Right to Continued Service. Neither the Plan nor this Agreement shall confer upon the Participant any right to serve as an employee or other service provider of the Company or a Subsidiary. Further, nothing in the Plan or this Agreement shall be construed to limit the discretion of the Company or a Subsidiary to terminate the services of the Participant at any time, with or without cause.

12. Adjustments. In the event of a change in capitalization described in Section 13 of the Plan prior to the Vesting Date, other than a dividend described in Section 5 above, the Performance Units shall be equitably adjusted or terminated in any manner contemplated by the Plan to reflect the effect of such event or change in the Company's capital structure in such a way as to preserve the value of the Award.

13. Required Participant Repayment/Reduction Provision. Notwithstanding anything in the Plan or this Agreement to the contrary, all or a portion of the Award made to the Participant under this Agreement is subject to being called for clawback and repayment to the Company or reduced in any situation required by law or as specified by any and all applicable Company policies, New York Stock Exchange ("NYSE") rule, or Securities Exchange Commission ("SEC") rule in effect at the time the clawback and repayment or reduction occurs. In any event, even if not required by law, Company policy, NYSE rule, or SEC rule, in any situation where the Board or a committee thereof determines that fraud, negligence, or intentional misconduct by the Participant was a contributing factor to the Company having to restate all or a portion of its financial statement(s), the Committee may request clawback, repayment, and/or reduction. If the method of clawback, repayment, and/or reduction is not specified by applicable law, Company policies, NYSE rule, or SEC rule, the Committee may determine whether the Company shall effect any such clawback, repayment, and/or reduction: (i) by seeking repayment from the Participant, (ii) by reducing (subject to Applicable Law and the Plan's terms and conditions or any other applicable plan, program, or arrangement) the amount that would otherwise be awarded or payable to the Participant under the Award, the Plan or any other compensatory plan, program, or arrangement maintained by the Company, (iii) by withholding payment of future increases in compensation (including the payment of any discretionary bonus amount) or grants of compensatory awards that would otherwise have been made in accordance with the Company's otherwise applicable compensation practices, or (iv) by any combination of the

foregoing. The determination regarding the Participant's conduct, and clawback, repayment, and/or reduction under this provision shall be within the Committee's sole discretion and shall be final and binding on the Participant and the Company. The Participant, in consideration of the grant of the Award, and by the Participant's execution of this Agreement, acknowledges the Participant's understanding and agreement to this provision, and hereby agrees to make and allow an immediate and complete repayment or reduction in accordance with this provision in the event of a call for clawback, repayment, and/or other action by the Company or Committee to effect its terms with respect to the Participant, the Award and/or any other compensation described herein.

14. Company Policies. The Participant agrees that the Award will be subject to any applicable insider trading policies, retention policies and other policies that may be implemented by the Board, from time to time.

15. Participant Undertaking. The Participant agrees to take whatever additional actions and execute whatever additional documents the Company may in its reasonable judgment deem necessary or advisable in order to carry out or effect one or more of the obligations or restrictions imposed on the Participant pursuant to the terms of this Agreement. It is intended by the Company that the Plan and Shares covered by the Award are to be registered under the Securities Act of 1933, as amended, prior to the grant date; provided that in the event such registration is for any reason not effective for such Shares, the Participant agrees that all Shares acquired pursuant to the grant will be acquired for investment and will not be available for sale or tender to any third party.

16. Beneficiary. The Participant may designate a Beneficiary(ies) (in accordance with the beneficiary designation procedures of the applicable brokerage account where any Shares (or, as applicable, cash) of an Award's Vested Units will be delivered in accordance with this Agreement upon vesting). Such Beneficiary(ies) will receive any rights of the Participant which may become vested in the event of the Participant's death. If no Beneficiary is designated under such brokerage account, then upon a Participant's death, any vested rights of the Participant will be transferred and distributed from the brokerage account in accordance with the procedures of such brokerage account for use in instances in which no beneficiary is designated.

17. Notices. Any notice required to be delivered to the Company under this Agreement shall be in writing and addressed to the Senior Vice President, Chief Human Resource Officer, or his or her successor in charge of compensation and benefits in Human Resources, of the Company at the Company's principal corporate offices. Any notice required to be delivered to the Participant under this Agreement shall be in writing and addressed to the Participant at the Participant's address as shown in the records of the Company. Either party may designate another address in writing (or by such other method approved by the Company) from time to time.

18. Incorporation of the Plan; Conflicts. The Performance Units and the Shares issued to Participant hereunder are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between (1) the Plan and this Agreement, the Plan will control, or (2) the resolutions and records of the Board or Committee and this Agreement, the resolutions and records of the Board or Committee will control.

19. Successors and Assigns. The Company may assign any of its rights under this Agreement, and this Agreement will be binding upon and inure to the benefit of the Company's successors and assigns. Subject to the restrictions on transfer set forth herein and the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

20. No Impact on Other Benefits. The Company does not intend for the value of the Award or any Vested Units to be included in the Participant's normal or expected compensation for purposes of calculating any severance, retirement, welfare, insurance or similar employee benefit; *provided, however*, that if there is any inconsistency between this Agreement and the terms of another benefit plan, the benefit plan document will control.

21. Discretionary Nature of Plan. The Plan is discretionary and may be amended, cancelled or terminated by the Board at any time, in its discretion. The grant of the Performance Units in this Agreement does not create any contractual right or other right to receive any Performance Units or other awards in the future. Future awards, if any, will be at the Committee's sole discretion. Any amendment, modification, or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Participant's employment with the Company.

22. Amendment. In accordance with the Plan, the Committee may amend or otherwise modify, suspend, discontinue or terminate this Agreement at any time, prospectively or retroactively.

23. Section 409A.

23.1 This Award and Agreement is intended to comply with Section 409A or an exemption thereunder and shall be construed and interpreted in a manner that is consistent with the requirements for avoiding additional taxes or penalties under Section 409A. Notwithstanding any other provision of the Agreement, any distributions or payments due hereunder may only be made upon an event and in a manner that complies with Section 409A or an applicable exemption. Any distributions or payments due hereunder upon a termination of employment shall only be made upon a "separation from service" as defined in Section 409A. The right to a series of installment payments under this Agreement shall be treated as a right to a series of

separate payments. Except as provided in Section 7, in no event may the Participant, directly or indirectly, designate the calendar year of settlement, distribution or payment.

23.2 If an Award is subject to Section 409A and Participant becomes entitled to settlement of the Award on account of a separation from service and is a "specified employee" within the meaning of Section 409A on the date of the separation from service, then to the extent necessary to prevent any accelerated or additional tax under Section 409A, such settlement will be delayed until the earlier of: (a) the date that is six months following the Participant's separation from service, and (b) the Participant's death (the "Delayed Payment Date") and the accumulated amounts shall be distributed or paid in a lump sum payment on the Delayed Payment Date.

23.3 The Company does not represent that the Award or this Agreement complies with Section 409A and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Participant on account of non-compliance with Section 409A.

23.4 To the extent that any provision of the Agreement would cause a conflict with the requirements of Section 409A, or would cause the administration of the Agreement to fail to satisfy Section 409A, such provision shall be deemed null and void to the extent permitted by Applicable Law.

24. Entire Agreement. The Plan and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and the Participant with respect to the subject matter hereof.

25. Severability. The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.

26. Governing Law. This Agreement will be construed and interpreted in accordance with the laws of the State of Oklahoma without regard to the conflict of laws provisions thereof.

27. Counterparts. This Agreement may be executed in one or more counterparts, including by way of electronic signature, subject to Applicable Law, each of which shall be deemed an original and all of which together will constitute one instrument.

28. Administration of Award; Acceptance. As a condition of receiving this Award, the Participant agrees that the Committee shall have full and final authority to construe and interpret the Plan and this Agreement, and to make all other decisions and determinations as may be required under the Plan or this Agreement as they may deem necessary or advisable for

administration of the Plan or this Agreement, and that all such interpretations, decisions and determinations shall be final and binding on the Participant, the Company and all other interested persons. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Committee for review. The resolution of such dispute by the Committee shall be final and binding on the Participant and the Company. Day-to-day authority and responsibility has been delegated to the Company's ONE Gas, Inc. Benefits Committee and its authorized representatives, and all actions taken thereby shall be entitled to the same deference as if taken by the Committee itself.

The Participant hereby acknowledges receipt of this Agreement and a copy of the Plan. Participant agrees to be bound by all of the provisions set forth in this Agreement and the Plan and acknowledges that there may be adverse tax consequences upon the vesting or settlement of the Performance Units or disposition of the underlying Shares and that Participant has been advised to consult a tax advisor prior to such vesting, settlement or disposition. Participant accepts the Award under the terms and conditions stated in this Agreement, subject to all terms and provisions of the Plan, by electronic acceptance of the grant.

Exhibit A
Performance Unit Performance Goal
2024-2026 Performance Period

Subject to the terms of the Agreement, Participant shall vest in a percentage of the Target Award (including any Dividend Equivalents) on the Vesting Date, based on the Company's ranking for Total Stockholder Return ("TSR") for the Performance Period against the ONE Gas Peer Group listed in Exhibit C, all as determined by the Committee in its sole discretion. TSR for the Performance Period is the measure of the stock price appreciation plus any dividends paid during the Performance Period, expressed as a percentage. The TSR beginning stock price for the Performance Period is the average of the closing stock price for the 20 trading days immediately preceding the beginning of the Performance Period. The TSR ending stock price for the Performance Period is the average of the closing stock price for the 20 trading days leading up to and including the last day of the Performance Period. Exhibit B provides an illustration of a Hypothetical Performance Period calculation.

The number of Performance Units earned at the time of vesting is based on the Company's TSR percentile rank for the Performance Period as set forth in the following chart. If the actual TSR percentile rank falls between the stated percentile ranks set forth in the chart, the payout percentage is interpolated between the percentile rank above and below the actual percentile rank, except that no Performance Units are earned if ONE Gas's TSR ranking at the end of the Performance Period is below the 25th percentile.

Percentile Rank	Payout (as a % of Target)
90th percentile and above	200%
75th percentile	150%
50th percentile	100%
25th percentile	50%
Below the 25th percentile	0%

Exhibit B
Illustration of Hypothetical 2024-2026 Performance Period
Performance Unit Award Calculation

Illustration assumes 500 Performance Units Granted in February 2024

Total Stockholder Return ("TSR") vs. ONE Gas Peer Group
Hypothetical ONE Gas TSR Ranking = 40th percentile A 40th percentile TSR ranking earns 80% of Performance Units granted (i.e., 500 units) as interpolated between 50% and 100% from Exhibit A (see chart above) 400 Performance Units earned*

Total Performance Units Earned
400 Performance Units 400* Performance Units earned out of 500 units granted = 80% "earn-out" [80% of 500 shares paid and distributed in the form of Shares]

*In addition, applicable Dividend Equivalents will be added with an 80% "earn-out."

Exhibit C

2024-2026 ONE GAS TSR Peer Group

Company Name	Sym
Alliant Energy Corporation	LNT
Atmos Energy Corporation	ATO
Avista Corporation	AVA
Black Hills Corporation	BKH
CenterPoint Energy, Inc.	CNP
Chesapeake Utilities Corporation	CPK
CMS Energy Corporation	CMS
New Jersey Resources Corporation	NJR
NiSource Inc.	NI
Northwest Natural Holding Company	NWN
NorthWestern Energy Group, Inc.	NWE
Southwest Gas Holdings, Inc.	SWX
Spire Inc.	SR

In the event that any of the Peer Group companies are not available for performance comparison either by going out of business, being sold, being merged into another company or any other reason, then that company will be dropped from the list and the performance comparison will be made with the remaining Peer Group companies.

Exhibit D

ONE Gas, Inc.
Amended and Restated Equity Compensation Plan (2018)
Performance Unit Deferral Election

INSTRUCTIONS: This Deferral Election must be completed and returned to the plan administrator at ONE Gas, Inc. no later than June 30, 2026 (the "Election Deadline"). This election becomes irrevocable as of the Election Deadline; provided, however, this election shall only become effective to the extent permitted by Section 409A.

This Election is made by the undersigned Participant pursuant to the terms of the ONE Gas, Inc. Amended and Restated Equity Compensation Plan (2018), as amended from time to time (the "Plan") and that certain Performance Unit Award Agreement issued to me under the Plan on **#GrantDate#** (the "Agreement"). Capitalized terms that are used but not defined herein have the meanings set forth in the Agreement.

1. Irrevocable Elections as to the Time and Form of Payment

I hereby irrevocably elect to defer the payment and my receipt of all Performance Units, Shares and cash that I may become entitled to receive pursuant to the Agreement (the "Deferred Amounts") from the regularly scheduled time of payment set forth in Section 6 of the Agreement until a later date as follows:

A. Specified Time of Payment Election (**Put initials by your choice)**

___ I elect to have the Deferred Amounts deferred and paid to me on the later of: (i) the date of my separation from service as an employee of the Company, or (ii) [_____, 20__] in the form specified below.

___ I elect to have the Deferred Amounts deferred and paid to me on the date of my separation from service as an employee of the Company in the form specified below.

B. Form of Payment Election **(Put initials by your choice)**

___ I elect to receive the Deferred Amounts in a single lump sum payment.

____ I elect to receive the Deferred Amounts in _____ **(specify 2, 3, 4 or 5)** equal annual installments commencing on the Specified Time of Payment that I have elected in Part A above, until fully paid. The number of Shares or cash received in each installment will equal the number and amount, respectively, that have not been paid as of the date immediately preceding the installment payment date, divided by the number of installments remaining to be paid as of the date immediately preceding the installment payment date. The resulting number shall

be rounded down to the next whole number, except that the final installment shall be rounded up to the next whole number.

C. Election in the Event of Death **(Put initials by your choice)**

___ In the event of my death prior to, or after, the Specified Time of Payment that I have elected above, I elect to have my Deferred Amounts paid and distributed in a single sum within 60 days of my death to the brokerage account where any Shares (or, as applicable, cash) of an Award's Vested Units would otherwise have transferred upon vesting, to be further paid and distributed in accordance with the beneficiary procedures of such brokerage account to my brokerage account named Beneficiary(ies), or in the case of no Beneficiary designation under the procedures established by such brokerage account for use in instances when there is no such Beneficiary designation.

___ In the event of my death prior to, or after, the Specified Time of Payment that I have elected above, I elect to have my Deferred Amounts paid and distributed to the brokerage account where any Shares (or, as applicable, cash) of an Award's Vested Units would otherwise have transferred upon vesting in _____ (**specify 2, 3, 4 or 5**) equal annual installments commencing within 60 days following my death, until fully paid, to be further paid and distributed in accordance with the beneficiary procedures of such brokerage account to my brokerage account named Beneficiary(ies), or in the case of no beneficiary designation under the procedures established by such brokerage account for use in instances when there is no such Beneficiary designation. The number of Shares or cash received in each installment will equal the number and amount, respectively, that have not been paid as of the date immediately preceding the installment payment date, divided by the number of installments remaining to be paid as of the same date. The resulting number shall be rounded down to the next whole number, except that the final installment shall be rounded up to the next whole number.

D. Change in Ownership or Control **(Mandatory Distribution)**

Notwithstanding the above elections, if a Change in Ownership or Control (within the meaning of Section 409A) occurs prior to the full distribution of the Deferred Amounts, all Deferred Amounts that have not been paid and transferred will be paid and transferred on the date of the Change in Ownership or Control. In the event Shares no longer exist at the time of payment and transfer, each of the deferred Performance Units shall be converted in a manner that is consistent with the manner in which Shares held by shareholders of the Company were treated with respect to the Change in Ownership or Control.

2. Additional Terms

A. Unforeseeable Emergency. You may request an accelerated payment of all or a portion of the Deferred Amounts if you experience an Unforeseeable Emergency (as defined in the Plan), subject to the requirements set forth in Plan Section 11.5. If approved, payment shall be made in a single lump sum within 90 days after the approval date.

B. Specified Employee. If you become entitled to a distribution on account of a separation from service and you are "specified employee" (within the meaning of Section 409A) on the date of your separation from service, payment of all or a portion of your Deferred Amounts may be delayed in accordance with Plan Section 11.4.

C. Re-deferrals and Changing the Form of Payment. You may, at the Committee's discretion, be permitted to make a re-deferral election with respect to the amounts deferred hereunder in accordance with Plan Section 11.3.

D. Withholding. You will be required to satisfy any tax withholding obligations relating to the Deferred Amounts, and delivery of the Shares or cash will be conditional upon your satisfaction of such obligations.

3. Acknowledgment

By executing this Election, I acknowledge that:

A. I have read the terms of the Plan, the Agreement and this Election and agree to all the terms and conditions.

B. I understand that any amounts that I defer hereunder are unfunded and unsecured and subject to the claims of the Company's creditors in the event of the Company's insolvency.

C. I understand that the Plan, the Agreement and this Election are intended to comply with Section 409A and that they will be interpreted accordingly. However, I understand that the Company will have no liability with respect to any failure to comply with Section 409A.

D. I understand that this Election will become irrevocable as of the Election Deadline.

E. I have consulted with my own legal, tax, and financial advisors regarding the legal, financial, and tax consequences of participating in the Plan and making this election.

I hereby make this election as of this ___ day of ____, 20__.

_____
Participant Signature

_____
Print Participant's Name

_____
Employee ID Number

Copy received this ____ day of _____, 20__,

_____
For the Committee

Exhibit 21.1

SUBSIDIARIES OF ONE Gas, Inc.

1. ONE Gas Properties, L.L.C., an Oklahoma limited liability company.
2. Utility Insurance Company, an Oklahoma company.
3. Kansas Gas Service Securitization I, L.L.C., a Delaware limited liability company.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (Nos. 333-269966 and 333-269962) and Form S-8 (Nos. 333-226394, 333-205099, 333-193690, and 333-256556) of ONE Gas, Inc. of our report dated February 22, 2024, relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers, LLP

Tulsa, Oklahoma
February 22, 2024

Exhibit 31.1

Certification

I, Robert S. McAnnally, certify that:

I have reviewed this annual report on Form 10-K of ONE Gas, Inc.;

Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2024

/s/ Robert S. McAnnally
Robert S. McAnnally
Chief Executive Officer

Exhibit 31.2

Certification

I, Christopher P. Sighinolfi, certify that:

I have reviewed this annual report on Form 10-K of ONE Gas, Inc.;

Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2024

/s/ Christopher P. Sighinolfi
Christopher P. Sighinolfi
Chief Financial Officer

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of ONE Gas, Inc. (the "Registrant") for the period ending December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robert S. McAnnally, Chief Executive Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition of the Registrant and results of operations of the Registrant.

/s/ Robert S. McAnnally
Robert S. McAnnally
Chief Executive Officer

February 22, 2024

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to ONE Gas, Inc. and will be retained by ONE Gas, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of ONE Gas, Inc. (the "Registrant") for the period ending December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Christopher P. Sighinolfi, Chief Financial Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and the results of operations of the Registrant.

/s/ Christopher P. Sighinolfi
Christopher P. Sighinolfi
Chief Financial Officer

February 22, 2024

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to ONE Gas, Inc. and will be retained by ONE Gas, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 97.1

ONE GAS, INC.

SUPPLEMENTAL CLAWBACK POLICY

The Executive Compensation Committee (the "Committee") of the Board of Directors (the "Board") of ONE Gas, Inc. (the "Company") believes that it is appropriate for the Company to adopt this Supplemental Clawback Policy (the "Policy") to be applied to the Executive Officers of the Company and adopts this Policy to be effective as of the Effective Date.

1. Definitions

For purposes of this Policy, the following definitions shall apply:

a) "Company Group" means the Company and each of its Subsidiaries, as applicable.

b) "Covered Compensation" means any Incentive-Based Compensation granted, vested or paid to a person who served as an Executive Officer at any time during the performance period for the Incentive-Based Compensation and that was Received (i) on or after the effective date of the NYSE listing standard, (ii) after the person became an Executive Officer and (iii) at a time that the Company had a class of securities listed on a national securities exchange or a national securities association.

c) "Effective Date" means October 2, 2023.

d) "Erroneously Awarded Compensation" means the amount of Covered Compensation granted, vested or paid to a person during the fiscal period when the applicable Financial Reporting Measure relating to such Covered Compensation was attained that exceeds the amount of Covered Compensation that otherwise would have been granted, vested or paid to the person had such amount been determined based on the applicable Restatement, computed without regard to any taxes paid (i.e., on a pre-tax basis). For Covered Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in a Restatement, the Committee will determine the amount of such Covered Compensation that constitutes Erroneously Awarded Compensation, if any, based on a reasonable estimate of the effect of the Restatement on the stock price or total shareholder return upon which the Covered Compensation was granted, vested or paid and the Committee shall maintain documentation of such determination and provide such documentation to the NYSE.

e) "Exchange Act" means the Securities Exchange Act of 1934.

f) "Executive Officer" means each "officer" of the Company as defined under Rule 16a-1(f) under Section 16 of the Exchange Act, which shall be deemed to include any individuals identified by the Company as executive officers pursuant to Item 401(b) of Regulation S-K under the Exchange Act. Both current and former Executive Officers are subject to the Policy in accordance with its terms.

g) "Financial Reporting Measure" means (i) any measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures derived wholly or in part from such measures and may consist of GAAP or non-GAAP financial measures (as defined under Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Exchange Act), (ii) stock price or (iii) total shareholder return. Financial Reporting Measures may or may not be filed with the SEC and may be presented outside the Company's financial statements, such as in Managements' Discussion and Analysis of Financial Conditions and Result of Operations or in the performance graph required under Item 201(e) of Regulation S-K under the Exchange Act.

h) "Home Country" means the Company's jurisdiction of incorporation.

i) "Incentive-Based Compensation" means any compensation that is granted, earned or vested based wholly or in part upon the attainment of a Financial Reporting Measure.

j) "Lookback Period" means the three completed fiscal years (plus any transition period of less than nine months that is within or immediately following the three completed fiscal years and that results from a change in the Company's fiscal year) immediately preceding the date on which the Company is required to prepare a Restatement for a given reporting period, with such date being the earlier of: (i) the date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Restatement, or (ii) the date a court, regulator or other legally authorized body directs the Company to prepare a Restatement. Recovery of any Erroneously Awarded Compensation under the Policy is not dependent on if or when the Restatement is actually filed.

k) "NYSE" means the New York Stock Exchange.

l) "Received": Incentive-Based Compensation is deemed "Received" in the Company's fiscal period during which the Financial Reporting Measure specified in or otherwise relating to the Incentive-Based Compensation award is attained, even if the grant, vesting or payment of the Incentive-Based Compensation occurs after the end of that period.

m) "Restatement" means a required accounting restatement of any Company financial statement due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including (i) to correct an error in previously issued financial statements that is material to the previously issued financial statements (commonly referred to as a "Big R" restatement) or (ii) to correct an error in previously issued financial statements that is not material to the previously issued financial statements but that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (commonly referred to as a "little r" restatement). Changes to the Company's financial statements that do not represent error corrections under the then-current relevant accounting standards will not constitute Restatements. Recovery of any Erroneously Awarded Compensation under the Policy is not dependent on fraud or misconduct by any person in connection with the Restatement.

n) "SEC" means the United States Securities and Exchange Commission.

o) "Subsidiary" means any domestic or foreign corporation, partnership, association, joint stock company, joint venture, trust or unincorporated organization "affiliated" with the Company, that is, directly or indirectly, through one or more intermediaries, "controlling", "controlled by" or "under common control with", the Company. "Control" for this purpose means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of such person, whether through the ownership of voting securities, contract or otherwise.

2. Recoupment of Erroneously Awarded Compensation

In the event of a Restatement, any Erroneously Awarded Compensation Received during the Lookback Period prior to the Restatement (a) that is then-outstanding but has not yet been paid shall be automatically and immediately forfeited and (b) that has been paid to any person shall be subject to reasonably prompt repayment to the Company Group in accordance with Section 3 of this Policy. The Committee must pursue (and shall not have the discretion to waive) the forfeiture and/or repayment of such Erroneously Awarded Compensation in accordance with Section 3 of this Policy, except as provided below.

Notwithstanding the foregoing, the Committee (or, if the Committee is not a committee of the Board responsible for the Company's executive compensation decisions and composed entirely of independent directors, a majority of the independent directors serving on the Board) may determine not to pursue the forfeiture and/or recovery of Erroneously Awarded Compensation from any person if the Committee determines that such forfeiture and/or recovery would be impracticable due to any of the following circumstances: (i) the direct expense paid to a third party (for example, reasonable legal expenses and consulting fees) to assist in enforcing the Policy would exceed the amount to be recovered (following reasonable attempts by the Company Group to recover such Erroneously Awarded Compensation, the documentation of such attempts, and the provision of such documentation to the NYSE), (ii) pursuing such recovery would violate the Company's Home Country laws adopted prior to November 28, 2022 (provided that the Company obtains an opinion of Home Country counsel acceptable to the NYSE that recovery would result in such a violation and provides such opinion to the NYSE), or (iii) recovery would likely cause any otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of Company Group, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

3. Means of Repayment

In the event that the Committee determines that any person shall repay any Erroneously Awarded Compensation, the Committee shall provide written notice to such person by email or certified mail to the physical address on file with the Company Group for such person, and the person shall satisfy such repayment in a manner and on such terms as required by the Committee, and the Company Group shall be entitled to set off the repayment amount against any amount owed to the person by the Company Group, to require the forfeiture of any award granted by the Company Group to the person, or to take any and all necessary actions to reasonably promptly recoup the repayment amount from the person, in each case, to the fullest extent permitted under applicable law, including without limitation, Section

409A of the Internal Revenue Code and the regulations and guidance thereunder. If the Committee does not specify a repayment timing in the written notice described above, the applicable person shall be required to repay the Erroneously Awarded Compensation to the Company Group by wire, cash or cashier's check no later than thirty (30) days after receipt of such notice.

4. No Indemnification

No person shall be indemnified, insured or reimbursed by the Company Group in respect of any loss of compensation by such person in accordance with this Policy, nor shall any person receive any advancement of expenses for disputes related to any loss of compensation by such person in accordance with this Policy, and no person shall be paid or reimbursed by the Company Group for any premiums paid by such person for any third-party insurance policy covering potential recovery obligations under this Policy. For this purpose, "indemnification" includes any modification to current compensation arrangements or other means that would amount to *de facto* indemnification (for example, providing the person a new cash award which would be cancelled to effect the recovery of any Erroneously Awarded Compensation). In no event shall the Company Group be required to award any person an additional payment if any Restatement would result in a higher incentive compensation payment.

5. Miscellaneous

This Policy generally will be administered and interpreted by the Committee, provided that the Board may, from time to time, exercise discretion to administer and interpret this Policy, in which case, all references herein to "Committee" shall be deemed to refer to the Board. Any determination by the Committee with respect to this Policy shall be final, conclusive and binding on all interested parties. Any discretionary determinations of the Committee under this Policy, if any, need not be uniform with respect to all persons, and may be made selectively amongst persons, whether or not such persons are similarly situated.

This Policy is intended to satisfy the requirements of Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, as it may be amended from time to time, and any related rules or regulations promulgated by the SEC or the NYSE, including any additional or new requirements that become effective after the Effective Date which upon effectiveness shall be deemed to automatically amend this Policy to the extent necessary to comply with such additional or new requirements.

The provisions in this Policy are intended to be applied to the fullest extent of the law. To the extent that any provision of this Policy is found to be unenforceable or invalid under any applicable law, such provision will be applied to the maximum extent permitted and shall automatically be deemed amended in a manner consistent with its objectives to the extent necessary to conform to applicable law. The invalidity or unenforceability of any provision of this Policy shall not affect the validity or enforceability of any other provision of this Policy. Recoupment of Erroneously Awarded Compensation under this Policy is not dependent upon the Company Group satisfying any conditions in this Policy, including any requirements to provide applicable documentation to the NYSE.

The rights of the Company Group under this Policy to seek forfeiture or reimbursement are in addition to, and not in lieu of, any rights of recoupment, or remedies or rights other than recoupment, that may be available to the Company Group pursuant to the terms of any law, government regulation or

stock exchange listing requirement or any other policy, code of conduct, employee handbook, employment agreement, equity award agreement, or other plan or agreement of the Company Group.

6. Amendment and Termination

To the extent permitted by, and in a manner consistent with applicable law, including SEC and NYSE rules, the Committee may terminate, suspend or amend this Policy at any time in its discretion.

7. Successors

This Policy shall be binding and enforceable against all persons and their respective beneficiaries, heirs, executors, administrators or other legal representatives with respect to any Covered Compensation granted, vested or paid to or administered by such persons or entities.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal period ended December 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number	*Exact name of registrant as specified in its charter and principal office address and telephone number*	*State of Incorporation*	*I.R.S. Employer Identification No.*
001-37976	Southwest Gas Holdings, Inc. 8360 S. Durango Dr. Post Office Box 98510 Las Vegas, Nevada 89193-8510 (702) 876-7237	Delaware	81-3881866
1-7850	Southwest Gas Corporation 8360 S. Durango Dr. Post Office Box 98510 Las Vegas, Nevada 89193-8510 (702) 876-7237	California	88-0085720

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Southwest Gas Holdings, Inc. Common Stock, $1 par value	SWX	New York Stock Exchange
Preferred Stock Purchase Rights	N/A	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Southwest Gas Holdings, Inc. **Yes** ☒ **No** ☐

Southwest Gas Corporation **Yes** ☐ **No** ☒

Indicate by check mark if each registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. **Yes** ☐ **No** ☒

Indicate by check mark whether each registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. **Yes** ☒ **No** ☐

Indicate by check mark whether each registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). **Yes** ☒ **No** ☐

Indicate by check mark whether each registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

1

Southwest Gas Holdings, Inc.:			
Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Southwest Gas Corporation:			
Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Exchange Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether each registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). **Yes** ☐ **No** ☒

Aggregate market value of the voting and non-voting common stock held by nonaffiliates of the registrant

Southwest Gas Holdings, Inc.

$4,549,286,493 as of June 30, 2023

The number of shares outstanding of Southwest Gas Holdings, Inc. common stock:

Common Stock, $1 Par Value, 71,595,491 shares as of February 15, 2024

All of the outstanding shares of common stock ($1 par value) of Southwest Gas Corporation were held by Southwest Gas Holdings, Inc. as of February 15, 2024.

SOUTHWEST GAS CORPORATION MEETS THE CONDITIONS SET FORTH IN GENERAL INSTRUCTION (I)(1)(a) and (b) OF FORM 10-K AND IS THEREFORE FILING THIS REPORT WITH THE REDUCED DISCLOSURE FORMAT AS PERMITTED BY GENERAL INSTRUCTION I(2).

DOCUMENTS INCORPORATED BY REFERENCE

Description	Part Into Which Incorporated
2024 Proxy Statement	Part III

FILING FORMAT		4
PART I		4
Item 1.	BUSINESS	4
	NATURAL GAS DISTRIBUTION	5
	General Description	5
	Rates and Regulation	6
	Competition	8
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FILING FORMAT

This annual report on Form 10-K is a combined report being filed by two separate registrants: Southwest Gas Holdings, Inc. and Southwest Gas Corporation. Except where the content clearly indicates otherwise, any reference in the report to "we," "us" or "our" is to the holding company or the consolidated entity of Southwest Gas Holdings, Inc. and all of its subsidiaries, including Southwest Gas Corporation, which is a distinct registrant that is a wholly owned subsidiary of Southwest Gas Holdings, Inc. Information contained herein relating to any individual company is filed by such company on its own behalf. Each company makes representations only as to itself and makes no other representation whatsoever as to any other company.

Part II—Item 8. Financial statements and supplementary data in this Annual Report on Form 10-K includes separate financial statements (i.e., balance sheets, statements of income, statements of comprehensive income, statements of cash flows, and statements of equity) for Southwest Gas Holdings, Inc. and Southwest Gas Corporation, in that order. The notes to consolidated financial statements are presented on a combined basis for both entities. All Items other than Part II – Item 8 are combined for the reporting companies.

PART I

Item 1. BUSINESS

Southwest Gas Holdings, Inc., a Delaware corporation, is a holding company headquartered in Las Vegas, Nevada, which either on its own or together with its subsidiaries is referred to herein as the "Company." Through its wholly owned subsidiaries, Southwest Gas Corporation ("Southwest" or the "natural gas distribution" segment), Centuri Group, Inc. ("Centuri" or the "utility infrastructure services" segment), and prior to the closing of the MountainWest Sale (as defined below) on February 14, 2023, MountainWest Pipelines Holding Company ("MountainWest," or the "pipeline and storage" segment), the Company operated three business segments: natural gas distribution operations, utility infrastructure services, and pipeline and storage. Following the sale of MountainWest, the Company operates two business segments. Southwest Gas Holdings, Inc. is incorporated in Delaware and Southwest Gas Corporation is incorporated in California.

In December 2022, the Company announced that its Board of Directors (the "Board") unanimously determined to take strategic actions to simplify the Company's portfolio of businesses. These actions included entering into a definitive agreement to sell 100% of MountainWest to Williams Partners Operating LLC ("Williams") for $1.5 billion in total enterprise value, subject to certain adjustments (collectively, the "MountainWest Sale"). The MountainWest Sale closed on February 14, 2023. As such, limited information with respect to MountainWest is included in this Annual Report on Form 10-K.

Additionally, in December 2022, as part of the simplification strategy, the Company communicated it would pursue a separation of Centuri to form a new independent publicly traded utility infrastructure services company. In September 2023, the Company announced that Centuri Holdings, Inc., a wholly owned subsidiary of the Company formed for purposes of completing the separation ("Centuri Holdings") had confidentially submitted a draft Registration Statement on Form S-1 with the U.S. Securities and Exchange Commission (the "SEC") for a proposed initial public offering (the "Centuri Holdings IPO") of newly issued shares of Centuri Holdings common stock. On December 4, 2023, the Board announced the Centuri Holdings IPO as the preferred path to advance the separation of Centuri as an independent publicly-traded infrastructure services company. The execution of the Centuri Holdings IPO is subject to market and other conditions, the completion of the SEC's review process, and final Board approval to proceed with the transaction. Following the Centuri Holdings IPO, the Company intends to reduce its ownership in Centuri Holdings in one or more disposition transactions, including by way of distributions to Company stockholders, one or more distributions in exchange for Company shares or other securities, a sell-down of its remaining owned shares of Centuri Holdings common stock or any combination thereof. Separately, on November 3, 2023, the Board adopted a tax-free spin protection plan to help preserve the Company's ability to effectuate a tax-free separation of Centuri as it considers additional separation alternatives either following, or in lieu of, a potential Centuri Holdings IPO as well as other transaction alternatives. See **Note 15 - Acquisitions and Dispositions** in the Notes to the Consolidated Financial Statements in this Annual Report on Form 10-K for more information.

Southwest and its subsidiaries provide regulated natural gas delivery services to customers in portions of Arizona, Nevada, and California to meet heating, cooking, and other household needs in residential communities across these territories, as well as to facilitate the ongoing business operations of commercial and industrial customers. Southwest makes investments in infrastructure to support customer demand associated with population growth and economic development activity and the safe and reliable operation of its system through adherence to integrity management programs. Public utility rates, practices, facilities, and service territories of Southwest are subject to regulatory oversight. The timing and amount of rate relief can materially impact results of operations. Natural gas purchases and the timing of related recoveries can materially impact liquidity. Results for the natural gas distribution segment are higher during winter periods due to the seasonality incorporated in its regulatory rate structures.

Centuri is a strategic utility infrastructure services company dedicated to partnering with North America's electric and gas providers to build and maintain the energy network that powers millions of homes across the United States ("U.S.") and Canada. Centuri's skilled workforce delivers a comprehensive and integrated array of solutions through its primary operating companies: NPL Construction Co. ("NPL"), NPL Canada Ltd. ("NPL Canada"), New England Utility Constructors, Inc. ("Neuco"), Linetec Services, LLC ("Linetec"), and Riggs Distler & Company, Inc. ("Riggs Distler"). Centuri has strategically expanded its geographic reach and service offerings through organic and inorganic growth to better meet diverse customer needs across both electric and gas infrastructure, including growing customer attention to achieving environmental objectives. Utility infrastructure services activity is seasonal in most of Centuri's operating areas. Peak periods are the summer and fall months in colder climate areas, such as the northeastern and midwestern U.S. and in Canada. In warmer climate areas, such as the southwestern and southeastern U.S., utility infrastructure services activity continues year round. The availability of customer-provided materials, input costs, nature of specific customer contracts, and timing of incorporation of costs in change orders, if at all, can materially impact results.

Financial information concerning the Company's business segments is included in **Note 13 - Segment Information** of the Notes to the Consolidated Financial Statements in this Annual Report on Form 10-K.

Southwest Gas Holdings maintains a website (www.swgasholdings.com) for the benefit of stockholders, investors, customers, and other interested parties. Similarly, Southwest maintains a website (www.swgas.com) mainly focused on utility operations. The annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports are available, free of charge, through the SEC's website at www.sec.gov and the www.swgasholdings.com website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. All Company SEC filings are also available on the www.swgasholdings.com website. Nothing included on our website shall be deemed to be a part of the annual report on Form 10-K. The Corporate Governance Guidelines, Code of Business Conduct and Ethics, and charters of the Nominating and Corporate Governance, Audit, and Compensation Committees of the Board are also available on the www.swgasholdings.com website. Print versions of these documents are available to stockholders upon request directed to the Corporate Secretary, Southwest Gas Holdings, Inc., 8360 S. Durango Drive, Las Vegas, NV 89113.

NATURAL GAS DISTRIBUTION

General Description

Southwest is subject to regulation by the Arizona Corporation Commission (the "ACC"), the Public Utilities Commission of Nevada (the "PUCN"), and the California Public Utilities Commission (the "CPUC"). These commissions regulate public utility rates, practices, facilities, and service territories in their respective states. The CPUC also regulates the issuance of all debt securities by Southwest, with the exception of short-term borrowings. Certain accounting practices, transmission facilities, and rates are subject to regulation by the Federal Energy Regulatory Commission (the "FERC"). Centuri, by contrast, is not rate regulated by the state utilities commissions or by the FERC in any of its operating areas.

As of December 31, 2023, Southwest purchased and distributed or transported natural gas to 2,226,000 residential, commercial, and industrial customers in geographically diverse portions of Arizona, Nevada, and California. Southwest added 40,000 new customers during 2023.

The table below lists the percentage of operating margin (operating revenues less net cost of gas) by major customer class for the years indicated:

	Distribution		
For the Year Ended December 31,	Residential and Small Commercial	Other Sales Customers	Transportation
2023	85 %	4 %	11 %
2022	85 %	4 %	11 %
2021	85 %	4 %	11 %

Southwest is not dependent on any one or a few customers such that the loss of any one or several would have a significant adverse impact on earnings or cash flows.

Transportation of customer-secured gas to end-users accounted for 38% of total system throughput in 2023, but represents only 11% of operating margin as shown in the table above. Customers who utilized this service transported 86 million dekatherms in 2023, 93 million dekatherms in 2022, and 95 million dekatherms in 2021.

The demand for natural gas is seasonal, with greater demand in the colder winter months and decreased demand in the warmer summer months. It is the opinion of management that comparisons of earnings for interim periods do not reliably reflect overall trends and changes in operations due to this seasonality. The decoupled rate mechanisms in place in the three state service

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territories, as described below, are structured with seasonal variations. Also, earnings for interim, or any, periods can be significantly affected by the timing of general rate relief.

Rates and Regulation

Rates that Southwest is authorized to charge its distribution system customers are determined by the ACC, PUCN, and CPUC in general rate cases and are derived using rate base, cost of service, and cost of capital experienced in an historical test year, as adjusted in Arizona and Nevada, and projected for a future test year in California. The FERC regulates the northern Nevada transmission and liquefied natural gas ("LNG") storage facilities of Great Basin Gas Transmission Company ("Great Basin"), a wholly owned subsidiary, and the rates it charges for transportation of gas directly to certain end-users and to various local distribution companies ("LDCs"). The LDCs transporting on the Great Basin system are NV Energy (serving Reno and Sparks, Nevada) and Southwest (serving Truckee, South and North Lake Tahoe in California, and various locations throughout northern Nevada).

Rates charged to customers vary according to customer class and rate jurisdiction and are set at levels that are intended to allow for the recovery of all commission-approved costs, including a return on rate base sufficient to pay interest on debt as well as a reasonable return on common equity in financing rate base investments. Rate base consists generally of the original cost of utility plant in service, net of amounts associated with costs borne by third parties, plus certain other assets such as working capital and inventories, less accumulated depreciation on utility plant in service, net deferred income tax liabilities, and certain other deductions. Southwest files rate cases frequently, as necessary or required, to reduce the effect regulatory lag may have on revenue levels necessary to support its cost to serve customers, and in turn, to better align actual returns with allowable returns designed/authorized in rate proceedings.

Rate structures in all service territories allow Southwest to separate or "decouple" the recovery of operating margin from natural gas consumption, though decoupled structures (alternative revenue programs) vary by state. In California, authorized operating margin levels vary by month. In Nevada and Arizona, the decoupled rate structures apply to most customer classes on the basis of margin per customer, which varies by month. Collectively, these mechanisms provide stability in annual operating margin. Nearly all of our customers, and resulting revenue and margin, are included as part of mechanisms that reduce the impact of weather and volume variability on our earnings.

Rate schedules in all service areas contain deferred energy or purchased gas adjustment provisions, which allow Southwest to file for rate adjustments as the cost of purchased gas changes. Deferred energy and purchased gas adjustment (collectively "PGA") rate changes affect cash flows, but have no direct impact on profit margin. Filings to change rates in accordance with PGA clauses are subject to audit by the appropriate state regulatory commission staff.

Information with respect to recent general rate cases, PGA filings, and other regulatory proceedings can be found in the Rates and Regulatory Proceedings section of Management's Discussion and Analysis included in Item 7.

The table below lists recent docketed general rate filings and the status of such filing within each ratemaking area:

Ratemaking Area	Type of Filing	Month Filed	Month Final Rates Effective
Arizona*	General rate case	December 2021	February 2023
California:			
Northern, Southern, and South Lake Tahoe	General rate case	August 2019	January 2021
Nevada:			
Northern and Southern**	General rate case	August 2021	April 2022
FERC:			
Great Basin	General rate case	May 2019	February 2020

*Southwest filed a general rate case in Arizona in February 2024, with rates expected to be effective in April 2025.
** Southwest filed a general rate case in Nevada in September 2023, with rates expected to be effective in April 2024.

Demand for Natural Gas

Deliveries of natural gas by Southwest are made under a priority system established by state regulatory commissions. The priority system is intended to ensure that the gas requirements of higher-priority customers, primarily residential customers and other customers who use 500 therms or less of gas per day, are fully satisfied on a daily basis before lower-priority customers, primarily electric utility and large industrial customers able to use alternative fuels, are provided any quantity of gas or capacity.

Demand for natural gas is greatly affected by temperature. On cold days, use of gas by residential and commercial customers can be as much as seven times greater than on warm days because of increased use of gas for space heating. To fully satisfy this increased high-priority demand, gas is withdrawn from storage in certain service areas, or peaking supplies are purchased from

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suppliers. If necessary, service to interruptible lower-priority customers may be curtailed to provide the needed delivery system capacity. Southwest maintains no significant backlog on its orders for gas service.

Natural Gas Supply

Southwest is responsible for acquiring and arranging delivery of natural gas to its system in sufficient quantities to meet its customers' needs. Southwest's primary natural gas procurement objective is to ensure that adequate supplies of natural gas are available at a reasonable cost. Southwest acquires natural gas from a wide variety of sources with a mix of purchase provisions, which includes spot market and firm supplies. The purchases may have terms from one day to several years and utilize both fixed and indexed pricing. During 2023, Southwest acquired natural gas from 48 suppliers. Southwest regularly monitors the number of suppliers, their performance, and their relative contribution to the overall customer supply portfolio. New suppliers are contracted when possible, and solicitations for supplies are extended to the largest practicable list of suppliers, taking into account each supplier's creditworthiness. Competitive pricing, flexibility in meeting Southwest's requirements, and demonstrated reliability of service are instrumental to any one supplier's inclusion in Southwest's portfolio. The goal of this practice is to mitigate the risk of nonperformance by any one supplier and ensure competitive prices in the portfolio.

Balancing reliability with supply cost results in a continually changing mix of purchase provisions within the supply portfolios. To address the unique requirements of its various market areas, Southwest assembles and administers a separate natural gas supply portfolio for each of its jurisdictional areas. Southwest facilitates most natural gas purchases through competitive bid processes.

To mitigate customer exposure to short-term market price volatility, during 2023 Southwest sought to fix the price on a portion of its forecasted annual normal-weather volume requirement (up to 25% in the California jurisdiction and to a limited extent, in the Arizona jurisdiction), primarily using firm, fixed-price purchasing arrangements that are secured periodically throughout the year. Southwest's price volatility mitigation program previously included the use of financial derivatives, in the form of fixed-for-floating-index-price swaps combined with indexed-price physical purchases, to secure a portion of the fixed-price portfolio, most recently, for the Arizona rate jurisdiction. The combination of fixed-price contracts and financial derivatives was designed to increase flexibility for Southwest and increase supplier diversification. The cost of such financial derivatives combined with the associated indexed-price physical purchases was historically recoverable from customers through the PGA mechanism. Southwest does not currently plan to make fixed-price term purchases broadly in other than California (as set forth above), nor engage in swap transactions for any of its territories. However, plans could change as Southwest monitors conditions and collaborates with regulatory commissions over time.

For the 2023/2024 heating season, firm fixed-price physical commodity purchases ranged from approximately $5.60 to approximately $7.50 per dekatherm. Southwest makes natural gas purchases, not covered by firm fixed-price contracts, under variable-price contracts with firm quantities or on the spot market. Prices for these contracts are determined at the beginning of each month to reflect that month's published first-of-month index price or based on a published daily price index. These monthly or daily index prices are not published or known until the purchase period begins.

The baseload firm natural gas supply arrangements are structured such that Southwest must nominate a stated volume of natural gas and the supplier must confirm that nomination. Contracts provide for fixed or market-based penalties to be paid by the non-performing party.

Storage availability may influence the average annual price of natural gas, as storage may allow a company to purchase natural gas quantities during the off-peak season and store it for use in high demand periods when prices may be greater or supplies/capacity, tighter. Dependent upon the rate jurisdiction, Southwest has some access to storage services, but overall there are small quantities of storage services available for Southwest's use. For available storage services, Southwest purchases natural gas for injection during the off-peak period for use in the high demand months; however, since storage is limited, its impact is also limited in regard to Southwest's annual average price of natural gas. Additionally, Southwest utilizes most available storage services for operational purposes to meet customer demand and not for economic purposes. This also limits the influence the available storage services have on Southwest's average annual price of natural gas.

In 2022, Southwest began receiving supply area storage services from Spire Storage West that is used for the southern Nevada rate jurisdiction, but could also be used to service the northern Nevada or northern California rate jurisdictions. Southwest generally has limited market area storage services availability for the southern and northern California, northern Nevada, and Arizona rate jurisdictions. The following summarizes Southwest's access to storage services for those rate jurisdictions.

Southwest has a storage services contract with Southern California Gas Company for use only within Southwest's southern California rate jurisdiction.

Southwest contracts for storage services from Great Basin's above-ground LNG facility. This storage service generally provides vaporization and injection, as well as peaking capability only for the northern Nevada and northern California rate jurisdictions.

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Southwest also has interruptible storage contracts with Northwest Pipeline Corporation ("NWPL") for the northern Nevada and northern California rate jurisdictions. NWPL has the discretion to limit Southwest's ability to inject or withdraw from this interruptible storage, which consequently limits Southwest's use of this interruptible storage capacity. As such, this storage provides limited operational flexibility to adjust daily flowing supplies to meet demand.

For the Arizona rate jurisdiction, Southwest operates a 233,000 dekatherm above-ground LNG facility in southern Arizona. This facility is intended to enhance service reliability and flexibility in natural gas deliveries in the area by providing a local storage option that is operated by Southwest and connected directly to its distribution system.

Natural gas supplies for Southwest's southern system (Arizona, southern Nevada, and southern California jurisdictions) are primarily obtained from producing regions in Colorado and New Mexico (San Juan basin), Texas (Permian basin), and Rocky Mountain areas. For its northern system (northern Nevada and northern California properties), Southwest primarily obtains natural gas from Rocky Mountain producing areas and from Canada.

The landscape for national natural gas supply is continuously changing, including impacts related to governmental policies. Advanced drilling techniques continue to provide access to abundant and sustainable natural gas supplies. The natural gas market has responded to the abundant supply of natural gas at prices that are competitive with other forms of energy; however, the market price of natural gas has spiked in recent periods as a result of numerous market forces, including historically low storage levels, upstream maintenance events, and cold weather conditions across the central United States ("U.S.") in December 2022 and regional pricing dislocation on the west coast in January 2023. In 2021, winter storms in the central U.S. also led to unprecedented price spikes over a number of days. As a result of these types of price escalation events, Southwest has undertaken incremental borrowing in some cases in order to fund increased supply costs, including when it entered into a $450 million term loan in January 2023 (since repaid) for this purpose. Southwest may be required to incur additional indebtedness in connection with future spikes in natural gas prices as a result of extreme weather events, or otherwise. Current forecasts show that an ample and diverse natural gas supply continues to be available to Southwest's customers at a competitive price when compared to competing energy forms.

Southwest arranges for transportation of natural gas to its Arizona, Nevada, and California service territories through the pipeline systems of El Paso Natural Gas Company ("El Paso"), Kern River Gas Transmission Company ("Kern River"), Transwestern Pipeline Company ("Transwestern"), NWPL, Tuscarora Gas Pipeline Company ("Tuscarora"), Southern California Gas Company, Great Basin, and Ruby Pipeline LLC ("Ruby"), costs for which are recovered from Southwest's customers through the PGA mechanism. Southwest regularly monitors short- and long-term supply and pipeline capacity availability to ensure the reliability of service to its customers. Southwest currently receives firm transportation service, both on a short- and long-term basis, for all its service territories on the pipeline systems noted above. Southwest also contracts for firm natural gas supplies that are delivered to its city gates to supplement its firm capacity on the interstate pipelines and to meet projected peak-day demands. Southwest could also utilize its interruptible contracts on the interstate pipelines for the transportation of additional natural gas supplies.

Southwest believes that the current levels of contracted firm interstate capacity and delivered purchases are sufficient to serve each of its service territories' forecasted peak-day requirements. As the need arises to acquire additional capacity on one of the interstate pipeline transmission systems and to secure additional supply, primarily due to customer growth, Southwest will continue to consider available options to obtain that capacity (either through the use of firm contracts with a pipeline company or by purchasing capacity on the open market), and will also consider options for the purchase of additional firm delivered natural gas supplies.

Competition

Electric utilities are the principal competitors of Southwest for the residential and small commercial markets throughout its service areas. Competition for space heating, general household, and small commercial energy needs generally occurs at the initial installation phase when the customer/builder typically makes the decision as to which type of equipment to install and operate. The customer will generally continue to use the chosen energy source for the life of the equipment, meaning that notwithstanding a premise vacancy, customers will continue their service each month and on an ongoing basis. Southwest interfaces with regulators and directly with the various home builders and commercial property developers in its service territories to ensure that natural gas appliances are considered in new developments and commercial centers. As a result of these efforts, Southwest has continued to experience growth in the new construction market among residential and small commercial customer classes. In 2023, Southwest provided natural gas to a large majority of the new homes constructed during the year in the major metropolitan markets composing our service territories.

Certain large commercial, industrial, and electric generation customers have the capability to switch to alternative energy sources. To date, Southwest has been successful in retaining most of these customers by setting rates (subject to conditions of the respective state tariffs) at levels competitive with commercially available alternative energy sources such as electricity and fuel oils. However, high natural gas prices or policies surrounding electrification could impact Southwest's ability to retain

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some of these customers. Reducing fossil fuel use has gained momentum in governmental policy overall in recent years. Southwest has taken steps to align with these efforts by supporting energy efficiency in our jurisdictions, being part of greenhouse gas protocols and initiatives in California, partnering on hydrogen blending innovation, and creating new biogas and renewable natural gas ("RNG") tariff schedules in Arizona, California, and Nevada. In 2023, the legislature passed Senate Bill 281 ("SB 281") in Nevada that establishes a long-term planning process for gas utilities before the PUCN. Under SB 281, natural gas utilities are required to file a three-year plan to include current and projected demands, significant projects and investments, energy efficiency and load management programs, and renewable energy and low carbon fuel initiatives. The bill creates an opportunity to seek regulatory pre-approval for certain investments and reinforces natural gas' role in providing safe, reliable, and affordable energy. The rulemaking is currently underway at the PUCN and the first plan under the new law is required to be filed by October 1, 2025. In 2020, House Bill 2687 was passed, prohibiting municipalities and counties from banning or restricting natural gas use in Arizona. Specifically, it prevents municipalities and counties from adopting a code, ordinance, land use regulation, or general or specific plan that would prohibit or have the effect of restricting a person's or entity's ability to use the services of a utility provider that is capable and authorized to provide service. The legislation also prevents municipalities and counties from denying a building permit or imposing discriminatory fees or requirements on a building permit based on the utility provider proposed to serve a project. The legislation was passed by bipartisan majorities in the House of Representatives and Senate and signed into law by Governor Doug Ducey on February 21, 2020. The law became effective on August 25, 2020. While certain forms of renewable energy initiatives compete with natural gas, the abundance, low cost, resiliency, and reliability of natural gas, as well as the convenience and comfort it provides to our customers, result in competitive advantages across our portfolio of customers. Overall, management does not anticipate any material adverse impact on operating margin from fuel switching or alternative energy initiatives over the near term. See also "Environmental Matters" below.

Southwest competes with interstate transmission pipeline companies, such as El Paso, Kern River, Transwestern, Tuscarora, and Ruby to provide service to certain large end-users. End-use customers located in proximity to these interstate pipelines pose a potential bypass threat. Southwest closely monitors each customer situation and provides competitive service in order to retain the customer. Southwest has remained competitive through the use of negotiated transportation contract rates (subject to conditions of the respective state tariffs), special long-term contracts with electric generation and cogeneration customers, and other tariff programs. These competitive response initiatives have mitigated the loss of operating margin earned from large customers.

Environmental Matters

Federal, state, and local laws and regulations governing the discharge of materials into the environment have a direct impact upon Southwest. Environmental efforts, with respect to matters such as storm water management, emissions of air pollutants, hazardous material management, and protection of endangered species and archaeological resources, directly impact the complexity and time required to obtain pipeline rights-of-way and construction permits. There have also been several federal and state legislative and regulatory initiatives proposed and implemented in recent years attempting to control or limit the effects of global warming and overall climate change, including those focused on greenhouse gas emissions ("GHGs"), such as carbon dioxide or methane. The adoption of this type of legislation by Congress or similar legislation by state governments mandating a substantial reduction in GHGs, reduction in pipeline or project permitting, or decarbonization generally, could have significant impacts on the energy industry. Such new legislation or regulations could result in increased energy costs overall, increased compliance costs or additional operating restrictions on our business, affect the demand for natural gas, or impact the supply costs we incur and prices we charge our customers. At this time, we cannot predict the potential impact of such laws or regulations, if adopted, on our future business, financial condition, or results. However, increased environmental legislation and regulation can also be beneficial to the natural gas industry. Natural gas can be more environmentally friendly than many other fuels currently available and its use can help energy users comply with stricter environmental air quality standards. While motor vehicle transportation is typically cited as the leading source of carbon dioxide emissions in the U.S., natural gas for residential consumption/use is cited as accounting for less than 6% of total U.S. GHG emissions.

Southwest remains committed to providing customers with safe, reliable, sustainable, and affordable natural gas service and continues to work with policy makers and regulators to support and adopt renewable initiatives and expanded use of RNG and compressed natural gas ("CNG") as a transportation fuel. Additionally, Southwest is investigating blending hydrogen into its gas supply. Southwest serves multiple companies with CNG across Arizona and Nevada, in addition to supporting a regional transportation customer in Nevada with its fleet's RNG and CNG needs. Southwest also received favorable cost recovery regarding the conversion of part of its own vehicle fleet to CNG, in support of the state's GHG emission reduction goals. In recent years, regulatory activity in Arizona, California, and Nevada led to provisions allowing for the development of RNG projects. In addition, proposals were previously made in all three states to allow Southwest to purchase RNG as part of its gas supply portfolio; in the California and Nevada jurisdictions, those proposals have been accepted by regulators or legislative bodies.

The United States Environmental Protection Agency (the "EPA") and State of California Environmental Protection Agency (the "Cal/EPA") regulations require the reporting of GHGs from large sources and suppliers in order to facilitate the development of

policies and programs to reduce GHGs. Southwest reports required information to the EPA and Cal/EPA under respective rules, including the volumes of natural gas that it receives for distribution to LDC customers, and the GHG emissions that result from the operation of its LDC pipelines.

California legislation and regulations promulgated by the California Air Resources Board (the "CARB") require Southwest to comply with the California GHG Emissions Reporting Program and the California Cap and Trade Program, which is intended to help the state reach its goal of reducing GHG emissions to 40% below 1990 levels by 2030. Southwest must report annual GHGs each year. The CARB annually allocates to Southwest a certain number of allowances based on Southwest's reported 2011 GHGs. Of those allocated allowances, Southwest must consign a certain percentage to the CARB for auction. Southwest can use any allocated allowances that remain after consignment, along with allowances it can purchase through CARB auctions or reserve sales, or through over the counter purchases with other market participants, to meet its compliance obligations.

As part of this program, there are ongoing three-year compliance periods established. The current compliance period ended on December 31, 2023. Southwest successfully met its earlier compliance obligations by surrendering a sufficient number of allowances prior to the required date, the most recent of which was November 1, 2021. Southwest will meet the 2023 compliance obligation by surrendering sufficient allowances prior to November 1, 2024, or may also surrender carbon offsets to meet a portion of the 2023 compliance obligation. In 2022, Southwest purchased carbon offsets that will partially meet the 2023 compliance obligation. Carbon offsets can only be used to satisfy a portion of the 2023 compliance obligation, and those combined with ongoing allowance purchases will support compliance years through 2023. The CPUC previously issued a decision that provides for the regulatory treatment of the program costs. The decision also implemented the California Climate Credit in October 2018, representing a return of auction proceeds, which is updated annually and normally distributed each April. There is no expected direct impact on earnings.

California legislation and regulations require Southwest to incorporate RNG produced from diverted waste into its California gas supply portfolios. Southwest representatives have been actively working with the other major California natural gas distribution companies and the state's regulatory bodies on the processes, procedures, and plans needed to meet this requirement. During the fourth quarter of 2023, Southwest issued a request for proposal seeking RNG supplies compatible with the requirements and expects responses in early 2024. Prior to completing the purchase of any desirable RNG supplies, Southwest will need to file with the CPUC for approval of the RNG purchase agreements and to receive regulatory treatment for any above market costs. There is no expected direct impact on earnings.

In October 2023, California Governor Gavin Newsom signed into law two state senate bills and one state assembly bill that collectively require certain public and private U.S. companies that perform certain business activities in California to provide disclosures about their GHG emissions, climate-related financial risks, voluntary carbon offsets ("VCOs"), and certain climate-related emission claims. The two senate bills, SB-253, Climate Corporate Data Accountability Act, and SB-261, Greenhouse Gases: Climate-Related Financial Risks, will establish the first U.S. regulations that mandate the corporate reporting of GHG emissions and climate risks in the U.S. The assembly bill, AB-1305, Voluntary Carbon Market Disclosures, is intended to combat companies' "greenwashing" of climate-related emission claims and establishes requirements for both U.S. and international entities that market or sell VCOs within California as well as entities that operate in California and make certain climate-related emission claims (whether or not they purchase or use VCOs). Reporting under SB-253 is required starting in 2026, reporting under SB-261 is required on or before January 1, 2026, and AB-1305 is effective January 1, 2024.

UTILITY INFRASTRUCTURE SERVICES

Centuri is a strategic utility infrastructure services company dedicated to partnering with North America's gas and electric providers to build and maintain the energy network that powers millions of homes across the U.S. and Canada. Centuri's skilled workforce delivers a comprehensive and integrated array of solutions through its operating companies. Centuri derives revenue primarily from installation, replacement, repair, and maintenance of energy networks. The primary focus of Centuri operations is the replacement of natural gas distribution pipelines and electric service lines, as well as new infrastructure installations. Centuri has formalized a service offering for emergency utility system restoration services to bring customers' above-ground utility infrastructure back online following regional storms and other extreme weather events. Utility infrastructure services work varies from relatively small projects to the installation of infrastructure for entire residential communities or business parks. Centuri seeks to build long-term relationships with customers to meet their needs across geographies and across both gas and electric infrastructure. Utility infrastructure services activity is seasonal in many of Centuri's operating areas. Peak periods are the summer and fall months in colder climate areas, such as the northeastern and midwestern U.S. and Canada. In warmer climate areas, such as the southwestern and southeastern U.S., utility infrastructure services activity typically continues year round.

During recent years, various factors resulted in an increase in large multi-year utility system replacement programs and expanded protocols. The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") instituted Distribution Integrity Management Programs ("DIMP"), which required operators of gas distribution

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pipelines to develop and implement integrity management programs to enhance safety by identifying and reducing pipeline integrity risks as well as the establishment of transmission planning requirements to encourage development of electric transmission infrastructure projects. In 2020, PHMSA issued its final "Mega Rule," including requirements for reconfirming transmission pipeline maximum allowable operating pressure and verification of pipeline materials, in addition to expanding assessments and requirements for work in moderate consequence areas, among other things. Then, in March 2022, and August 2022, PHMSA issued rules amending federal pipeline safety regulations applicable to valve installation and minimum rupture detection standards for transmission pipelines, and amendments applicable to transmission pipeline integrity management, effective in October 2022 and May 2023, respectively. Even with the regulations in place having spurred significant investment in recent years, substantial opportunity is believed to continue to exist, given multi-decade infrastructure modernization demand expected across North America due to PHMSA-related reports on early vintage systems in operation and in need of upgrade.

Likewise, there has been significant attention placed on electric grid modernization through national infrastructure legislation and related initiatives such as the U.S. Energy Policy Act of 2005, which established mandatory electric grid reliability standards and incentivized investments in transmission and distribution systems. The recently passed Inflation Reduction Act also includes a number of provisions to accelerate the deployment of clean energy technologies, including incentives for the buildout of necessary electric infrastructure. According to the Department of Energy, almost 70% of electric infrastructure in North America is over 25 years old. Recent legislation and the result of aging electric utility infrastructure creates a growing need for investment in the electrical grid as well as related delivery system hardening, which will also help withstand more frequent adverse weather events and support renewable energy innovation. Given the expected demand for replacements and upgrades, Centuri is well positioned to support continued growth in the industries it serves.

Centuri's contract terms with utility customers generally specify unit-price or time-and-materials ("T&M") terms under master service agreements, and occasionally, fixed-price arrangements for bid work. Unit-price contracts establish prices for all of the various services to be performed during the contract period. These contracts often have annual pricing reviews that provide an opportunity for Centuri to reflect anticipated increases in labor costs. Centuri customers supply materials required for building and maintenance services under the majority of Centuri's contracts, and thus, increased costs of materials generally do not present a direct material risk to Centuri. During 2023, approximately 77% of revenue was earned under unit-price and T&M contracts. Storm restoration services are often contracted under T&M rates and generally involve a higher number of hours worked per day given the emergency response nature of the work performed. Backlog represents the dollar amount of revenue Centuri expects to recognize in the future from contracts awarded and in progress as of the end of the reporting period. Reported backlog differs from the concept of remaining performance obligations as defined by accounting principles generally accepted in the U.S. ("U.S. GAAP") and is not a measure of contract profitability. As of December 31, 2023, backlog of approximately $293 million existed with respect to outstanding fixed-priced contracts. Centuri maintains an average customer relationship tenure of more than 20 years, supported by its unwavering commitments to safety, quality, community engagement, and workforce development.

Materials used by Centuri in its utility infrastructure service activities are typically specified, purchased, and supplied by Centuri's customers. Contracts with customers also contain provisions which make customers generally liable for remediating environmental hazards encountered during the construction process. Such hazards might include digging in an area that was contaminated prior to construction, finding endangered animals, digging in historically significant sites, etc. Otherwise, Centuri's operations have limited environmental impact (dust control, normal waste disposal, handling harmful materials, etc.).

Competition within the industry has traditionally been limited to several regional and numerous local competitors in what has been a largely fragmented industry. Some national competitors also exist within the industry. Centuri operates in 87 primary locations across 45 states and provinces in the U.S. and Canada, with its corporate headquarters located in Phoenix, Arizona. During 2023, Centuri served over 400 customers. Southwest accounted for approximately 4% of total revenue. Four additional customers accounted for approximately 26% of total revenue. No other customers individually accounted for 5% or more of total revenue.

Centuri is not directly affected by regulations promulgated by the ACC, PUCN, CPUC, or FERC. Centuri is an unregulated subsidiary of the Company. However, because Centuri performs work for Southwest, its associated costs are subject indirectly to "prudency reviews" like any other capital work performed by third parties or directly by Southwest. However, these reviews do not bring Centuri under the regulatory jurisdiction of any of the commissions noted above.

HUMAN CAPITAL

Throughout our collective operations, employees are critical to our success. Their talent and dedication are what allow us to provide safe and reliable service to customers and explore new opportunities that align with our strategies, while carrying out organizational core values related to safety, quality, stewardship, integrity, relationships, and sustainability, among others. The Board oversees matters relating to our vision, values, and culture where employee health and safety; diversity, equity, and inclusion; and human and workplace rights are priorities. The Board receives regular reports from management and subject

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matter experts in these areas, and in turn provides guidance on current and future initiatives. The Board also assists management in integrating responsibility and sustainability into strategic activities to create long-term customer and shareholder value.

Our Company and the Board are committed to a culture of continuous improvement over the safety of our employees and the communities we serve every day. Employees and contract workers receive initial safety orientation training to learn practices, procedures, and policies established by our businesses. New and recurring safety training occurs at regular intervals thereafter. Frontline safety strategies, developed with executive leadership, contribute to the improvement of our safety management systems. Safety metrics also form part of incentive compensation programs for leaders of the Company's business segments, reinforcing our top priority to safeguard our communities, our employees, and our assets. At Southwest, such metrics include Damages per 1,000 Tickets and Incident Response Time; at Centuri, they include Total Recordable Incident Rate and Days Away/Restricted/Transferred ("DART"). In each case, the measures are widely used in the respective industries comprising our businesses. All segments maintain additional behavioral-based programs and extensive employee training initiatives to promote safe work.

At December 31, 2023, Southwest had 2,371 regular full-time equivalent employees. Southwest believes that a skilled, highly trained workforce is a key to success in the utility industry, and a driver of Southwest's safety performance and high customer satisfaction ratings. Southwest has a positive reputation as an employer and strong relationships with employees. The compensation, benefits, and working conditions are comparable to those generally found in the utility industry. Employee engagement surveys are periodically deployed to gauge the extent to which employees feel connected and valued. Flexible working arrangements are available to employees, which support work-life balance. No Southwest employees are represented by a labor union. A stable workforce has been important to knowledge transfer and succession processes, with the average tenure of Southwest employees being approximately 11 years. Germane to attracting and retaining employees are our compensation and benefits programs, which are regularly reviewed. For employees hired on or before December 31, 2021, Southwest offers an employee pension and employer matching contributions to the employee defined contribution plan. Employees hired on or after January 1, 2022 do not participate in the employee pension plan, but receive non-elective employer contributions and increased employer matching contributions to the employee defined contribution plan. The health and wellness of our workforce are supported by group insurance programs, incentive programs in support of total health, and related employee programs. In 2024, Southwest added a preferred provider organization option to our health care coverage, providing more choices for our employees. Southwest also offers a tuition assistance program and encourages employees to leverage these programs to remain current in their role or to acquire new skills for career advancement. Regular succession planning helps ensure that talent is identified and prospective leaders are developed in order to build their skills and be prepared for future roles.

At December 31, 2023, Centuri had 12,572 regular full-time equivalent employees working across 45 states and provinces throughout the U.S. and Canada. Employee counts fluctuate between seasonal periods, normally heaviest in the summer and fall. Typical of the segment's industry, a majority of Centuri employees are represented by unions and covered by collective bargaining agreements. Centuri maintains a market-based total rewards strategy to attract, retain, motivate, and develop employees. Additionally, Centuri has a scholarship program, which awards more than half of the grants to minority students who are dependents of Centuri employees. Similar employee engagement and succession planning protocols to those existing at Southwest are deployed at Centuri.

Collectively, we embrace a culture of diversity, equity, and inclusion to not only protect employees under laws designed to do so regardless of protected status, but to reinforce the value that diversity brings to the workplace. We strive to have a workforce that reflects the communities we serve, and engage experts from time to time to update management on the trends and benefits of diverse backgrounds, cultures, and perspectives. Our belief is that adherence to these principles forms the genesis of a workforce that is both diverse and inclusive. Southwest and Centuri have several programs, including employee resource groups, diversity councils, a diversity ambassadors (champions) network, educational outreach programs, and other initiatives designed to attract and retain a diverse workforce. We commit to creating a safe and respectful workplace by encouraging employees to value diversity through unconscious bias training, and by inviting them to engage in meaningful conversations about diversity, equity, and inclusion topics. Through these and other efforts, we place value in our people and nurture their development, while ensuring that all employees have an equitable opportunity for success.

Item 1A. RISK FACTORS

*Described below (and in **Item 7A. Quantitative and Qualitative Disclosures about Market Risk** of this report) are risk factors that we have identified that may have a negative impact on our future financial performance or affect whether we achieve the goals or expectations expressed or implied in any forward-looking statements contained herein. References below to "we," "us," and "our" should be read to refer to Southwest Gas Holdings, Inc. and any combination of its subsidiaries, including Southwest Gas Corporation and Centuri Group, Inc.*

Operational Risks

Southwest relies on having access to interstate pipelines' transportation capacity. If these pipelines and related transportation capacity were not available, it could impact Southwest's ability to meet customers' full requirements.

Southwest must acquire both sufficient natural gas supplies and interstate pipeline capacity to meet customer requirements. We must contract for reliable and adequate delivery capacity for our distribution system, while considering the dynamics of the interstate pipeline capacity market, our own on-system resources, as well as the characteristics of our customer base. Interruptions to or reductions of interstate pipeline service caused by physical constraints, excessive customer usage, cyber attacks, or other force majeure could reduce our normal supply of gas. Restrictions placed on pipelines or the extractive and mid-stream industries could disrupt our business and reduce cash flows and earnings. A prolonged interruption or reduction of interstate pipeline service or availability of natural gas in any of our jurisdictions, particularly during the winter heating season, would reduce cash flow and earnings.

Failure to attract and retain an appropriately qualified employee workforce, including executives and other management, could adversely affect our collective operations and ability to timely deploy on our plans.

Our ability to implement our business strategy and serve our customers is dependent upon our continuing ability to attract and retain talented professionals, including executives and other management, and a technically skilled workforce, and impacts our ability to transfer the knowledge and expertise of our workforce to new employees as our aging employees retire. It also impacts our ability to timely deploy on strategic initiatives we plan. Failure to attract, hire, onboard, and adequately train replacement employees, including strategic leaders, and to transfer significant internal historical knowledge and expertise to the new employees and management, or the future availability and cost of contract labor could adversely affect our ability to manage and operate our business, and to execute on our strategic plans, or to do so within the timeframes we plan.

In particular, the productivity of Centuri's labor force and its ongoing relationship with clients is largely dependent on those serving in foreman, general foreman, regional, and executive level management positions. The ability to retain these individuals, due in large part to the competitive nature of the utility infrastructure service business, is necessary for the ongoing success and growth of Centuri. Further, the competitive environment within which Centuri performs work creates pricing pressures, specifically when its unionized business segment is bidding against non-union competitors. This workforce competition, including that which exists for resources across our businesses, could adversely impact our business, financial condition, results of operations, and cash flows.

Our collective businesses have recently experienced turnover, including at the executive ranks at Centuri in 2024. Turnover at these ranks can limit or delay our ability to deploy on plans, including strategic plans, which could adversely impact our business, stock price, financial condition, results of operations, and cash flows. In addition, executive leadership transition periods can often be difficult and may result in changes in leadership strategy and style. We can provide no assurances that any associated organizational change or changes in business strategy will be beneficial or have the desired impact on the Company.

Loss of, or a reduction in business from, one or more significant customers at Centuri could adversely affect results.

During 2023, over half of our utility infrastructure services revenues were generated from eleven customers. This concentration of risk could impact operating results if construction work slowed or halted with one or more of these customers, if competition for work increased, or if existing contracts were not renewed or extended.

Certain of our costs, such as operating expenses (including labor, fuel, and materials) at Southwest and Centuri, and interest and general and administrative expenses at both segments and the Company could be adversely impacted by periods of heightened inflation, which could have an adverse impact on our results of operations.

Recently, the consumer price index increased substantially and may continue to remain at elevated levels for an extended period of time. Federal policies and recent global events, such as the volatility in prices of oil and natural gas, and the conflicts between Russia-Ukraine and Israel-Hamas, may have exacerbated, and may continue to exacerbate, increases in the consumer price index. In addition, during periods of rising inflation, including by government action, variable interest rates and the interest rates of any debt securities we, Southwest, or Centuri issue will likely be higher than earlier periods or than for earlier fixed-rate debt issuances, which will reduce our earnings. A sustained or further increase in inflation could have a material adverse impact on expenses incurred in connection with our labor force, general and administrative expenses, operating supplies and expenses, and maintenance of our system, as well increasing outlays for gas supply passed on to customers and the cost of capital improvements at Southwest, in addition to requiring us to borrow amounts to fund the incremental outlays.

With regard to Southwest, rate schedules in each of its service territories contain purchased gas adjustment clauses which permit Southwest to file for rate adjustments to recover increases in the cost of purchased gas. Increases in the cost of purchased gas have no direct impact on our profit margins, but do affect cash flows and can therefore impact the amount of our capital resources. In order to help cope with the effects of inflation on its operations, Southwest has filed and may file requests for rate

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increases to cover the increased cost of purchased gas included in a regulatory asset or expense items noted above. However, there can be no assurance that Southwest will be able to obtain timely rate relief to offset the effects of inflation or to timely or adequately cover borrowing costs to fund the increased cost of purchased gas and capital expenditures; and any non-recovery of costs or regulatory lag will reduce our cash flows and earnings. As a result, during periods in which the inflation rate exceeds customer rate increases, we may not adequately mitigate the impact of inflation, which may adversely affect our business, financial condition, results of operations, and cash flows.

Additionally, inflationary pricing has had and may continue to have a negative effect on the construction costs necessary to complete projects at Centuri, particularly with respect to fuel, labor, and subcontractor costs, in addition to increasing other operating and general and administrative expenses. Centuri has experienced and continues to experience pressures on fuel, materials, and certain labor costs as a result of the inflationary environment and recent general labor shortage, which has resulted in increased competition for skilled labor and wage inflation. Centuri has not been able to (except in limited circumstances), and may not be able to, fully adjust its contract pricing to compensate for these cost increases, which has adversely affected, and may continue to adversely affect, Centuri's profitability and cash flows.

Inflationary pressures and related recessionary concerns in light of governmental and central bank efforts to mitigate inflation could also impact our customers, causing uncertainty for Centuri's customers and affecting the level of their project activity, which could also adversely affect Centuri's profitability and cash flows. Inflationary pressures on customers of both Southwest and Centuri may influence the timely remittance (or any remittance) of customer payments for service, which may adversely affect our cash flows and associated reserves for uncollectible accounts and earnings. As inflation persists, the Board of Governors of the United States Federal Reserve Bank has raised during 2023 and may continue to raise benchmark interest rates during 2024, which likely will cause Centuri's borrowing costs to increase over time.

As a result of the inflationary factors discussed above affecting the Company, Southwest, and Centuri, our business, financial condition, results of operations, cash flows, and liquidity could be adversely affected over time.

Certain contracts at Centuri are subject to potential losses that could adversely affect results of operations.

Centuri enters into a variety of types of contracts customary in the underground utility construction industry. These contracts include unit-priced contracts (including unit-priced contracts with revenue caps), time and material (cost plus) contracts, and fixed-price (lump sum) contracts. Contracts with caps and fixed-price arrangements can be susceptible to constrained profits, or even losses, especially those contracts that cover an extended-duration performance period. This is due, in part, to the necessity of estimating costs far in advance of the completion date (at bid inception). Unforeseen inflation, or other costs unanticipated at inception, can detrimentally impact profitability for these types of contracts, which could have an adverse impact on Centuri's financial condition, results of operations, and cash flows.

The nature of our operations presents inherent risks of loss that could adversely affect our results of operations.

Our natural gas distribution operations are subject to inherent hazards and risks such as gas leaks, fires, natural disasters, catastrophic accidents, explosions, pipeline ruptures, and other hazards and risks that may cause unforeseen interruptions, personal injury, or property damage. Our utility infrastructure services operations are reliant on skilled personnel who are trained and qualified to install utility infrastructure under established safety protocols and operator qualification programs, and in conformance with mandated engineering design specifications. Lapses in judgment or failure to follow protocol could lead to warranty and indemnification liabilities or catastrophic accidents, causing property damage or personal injury. Additionally, our facilities, machinery, and equipment, including our pipelines, are subject to third-party damage from construction activities, vandalism, or acts of terrorism. Such incidents could result in severe business disruptions, significant decreases in revenues, and/or significant additional costs to us. Any such incident could have an adverse effect on our financial condition, earnings, and cash flows. In addition, any of these or similar events could result in legal claims against us, cause environmental pollution, personal injury or death claims, damage to our properties or the properties of others, or loss of revenue by us or others.

The Company maintains liability insurance that covers Southwest for some, but not all, risks associated with the operation of our natural gas pipelines and facilities, and the utility infrastructure services of Centuri. In connection with these liability insurance policies, each entity is responsible for an initial deductible or self-insured retention amount per incident, after which the insurance carriers would be responsible for amounts up to the policy limits. Liability insurance policies at Southwest require us to be responsible for the first $1 million (self-insured retention) of each incident plus the first $4 million in total claims above our self-insured retention in the policy year; while Centuri's self-insured retention amount is $750,000 per occurrence. We cannot predict the likelihood that any future event will occur which will result in a claim exceeding these amounts; however, a large claim for which we were deemed liable would reduce our earnings up to and including these self-insurance maximums, and uninsured claims for which we were deemed liable would reduce our earnings in the amount of the claim.

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Weather conditions in our operating areas can adversely affect operations, financial position, and cash flows.

Centuri's results of operations, financial position, and cash flows can be significantly impacted by changes in weather that affect the ability of Centuri to provide utility companies with contracted-for trenching, installation, and replacement of underground pipes, as well as maintenance services for energy distribution systems. Generally, Centuri's revenues are lowest during the first quarter of the year due to less favorable winter weather conditions. These conditions also require certain areas to scale back their workforce at times during the winter season, presenting challenges associated with maintaining an adequately skilled labor force when it comes time to re-staff its work crews following the winter layoffs.

Southwest's revenues are highest during the first and fourth quarters of the year as customer consumption increases during the winter months. While Southwest has decoupling mechanisms in place in all three states in which it operates, warmer than normal weather can reduce the amount of billed revenue, as well as amounts collected or returned related to regulatory tracking mechanisms under various programs, thereby impacting cash flows. Deviations from normal weather conditions, as well as the seasonal nature of our businesses, can create fluctuations in short-term cash requirements of both Southwest and Centuri, and earnings, primarily related to Centuri.

Regulatory and legislative developments related to climate change may adversely affect our operations and financial results.

While natural gas can be more environmentally friendly than many other fuels currently available, and its use has assisted energy users to comply with stricter environmental air quality standards, there have been several federal and state legislative and regulatory initiatives proposed and implemented in recent years attempting to control or limit the effects of global warming and overall climate change, including focus on GHGs, such as carbon dioxide or methane. The adoption of this type of legislation by Congress or similar legislation by state governments mandating a substantial reduction in GHGs, or decarbonization generally, could have significant impacts on the utility industry. Any resulting legislation or regulations could result in increased compliance costs or additional operating restrictions on our business, affect the demand for natural gas and utility infrastructure services, or impact the prices we charge our customers. At this time, we cannot predict the potential impact of such laws or regulations, if adopted, on our future business, financial condition, or results.

Southwest and Centuri may be impacted by the effects of weather and climate change, including physical and transition risks.

Extreme weather events and climate change could adversely impact our businesses. To the extent climate change or extreme weather events materially increase temperatures, financial results or our financial position could be adversely affected through lower gas volumes and revenues. While Southwest has in place decoupling mechanisms to guard against weather and volume variability in all three states, lower volumes could protract the period of recovery of certain regulatory mechanisms, and, for jurisdictions in which decoupling benchmarks are designed on a per-customer basis, earnings may deteriorate if climate change causes shifts in population, notably, customers moving away from our service territories.

While Centuri is at times able to benefit by providing storm-restoration services in regard to its customers' above-ground utility infrastructure, and this type of work generates a higher profit margin than core infrastructure services (due to improved operating efficiencies related to equipment utilization and absorption of fixed costs), climate change could detrimentally result in more frequent and more severe weather events, such as hurricanes, tornadoes, extreme precipitation/flooding, and extreme snow events, increasing the cost of supporting restoration or limiting access to perform the necessary work efficiently or at all. Weather extremes such as drought and high temperature variations are common occurrences in the southwestern U.S. and could impact Southwest's growth and results of operations. In addition, if we were unable to obtain a sufficient supply of natural gas as a result of extreme weather events impacting our suppliers, or if extreme weather events impact our ability to deliver natural gas to our customers, our reputation may suffer, and financial results could be impacted by insufficient cash flows from lower billed revenues and higher borrowing costs, even if decoupling mechanisms permit recognition of revenues for later cash collection under the mechanisms.

Additionally, if the Company does not evolve its business practices to participate in a lower-carbon economy, its business and reputation may be negatively impacted. Although the number of renewable energy sources is growing, it will take time for North America to transition to a lower-carbon economy and will require innovation and technological advancements that result in new low- and no-carbon energy options. As a builder of both energy and renewable energy infrastructure, and as a natural gas service provider, the Company plays a vital role in this transition. Transition activities, such as reducing GHG emissions; investing in RNG, hydrogen, and other sustainable sources of energy; increasing customer participation in energy efficiency programs; displacing higher carbon intensive fuels with natural gas and reducing carbon intensity of fuels we deliver; working with upstream suppliers on certified or responsibly sourced gas; and, taking additional measures by offering and using carbon offset purchases, could result in significant capital outlays and increased expenses.

A cybersecurity incident has the potential to disrupt normal business operations, expose sensitive information, and/or lead to physical damages, and may result in legal claims or damage to our reputation.

As a utility provider and infrastructure services provider, maintaining business operations is critical for our customers, business partners, suppliers, and employees. Our operations and information technology systems may be vulnerable to an attack by individuals or organizations intending to disrupt our business operations and information technology systems, even though the Company has implemented policies, procedures, and controls to prevent and detect these activities. Third-party service providers, including those in our supply chain or who have access to customer and employee data or our systems, can also be the target of cyber attacks. We use our information technology systems to manage our intrastate and interstate pipeline and storage operations and other business processes. Disruption of those systems could adversely impact our ability to safely deliver natural gas to our customers and operate our pipeline and storage systems, result in harm to our reputation, and result in adverse financial impacts, including possible legal claims.

We process and store sensitive information, including certain personal identifiable information ("PII"), intellectual property, and business proprietary information as part of normal business operations. A cybersecurity breach of this information could expose us to monetary and other damages from customers, suppliers, business partners, government agencies, and others. The federal and state legislative and regulatory environment surrounding PII, information security, and data privacy is evolving and is likely to become increasingly demanding. Should the Company experience a material breach and/or become subject to additional regulation, it could face substantial compliance costs, reputational damage, and uncertain litigation risks.

Physical damage due to a cybersecurity incident or acts of cyber terrorism could impact our utility sales, transportation, storage, and related services provided to customers and could lead to material liabilities. The Company has taken the initiative in fortifying the core infrastructure that supports the provision of these services. While these measures provide layers of defense to mitigate these risks, there can be no assurance that the measures will be effective against any particular cyber attack. Even though we have insurance coverage in place for cyber-related risks, if such an attack or act of terrorism were to occur, the Company's operations and financial results could be adversely affected to the extent not fully covered by such insurance.

Reliance on third-party suppliers and subcontractors.

While Centuri maintains oversight of third-party suppliers and subcontractors it utilizes to assist with certain aspects of the work it performs for clients, any delay or failure by these parties in the completion of their portion of a given project may result in delays in the overall progress of the project or cause us to incur additional costs, thereby potentially impacting Centuri's overall profitability. Furthermore, if Centuri's relationship with its third-party suppliers and subcontractors were to be damaged, it may be difficult to replace them in a cost-effective manner.

Reliance on similar services, and their availability, may also impact the ability of Southwest to execute on its objectives for projects undertaken.

Challenges related to supply chain constraints have negatively affected, and may in the future negatively affect, Centuri's work mix and volumes and could adversely impact our results of operations overall.

The global supply market for certain customer-provided components, including, but not limited to, electric transformers and gas risers needed to complete customer projects at Centuri, can experience isolated performance constraints and disruptions. This constrained supply environment has adversely affected, and could further adversely affect, customer-provided component availability, lead times and costs, and could increase the likelihood of unexpected cancellations or delays of supply of key components to customers, thereby leading to delays in Centuri's ability to timely deliver projects to customers. To mitigate such risks, Centuri has redirected efforts to projects for which the customer has provided necessary materials. However, delays in obtaining necessary materials and redirecting workforces can lead to inefficiencies in absorption of fixed costs, higher labor costs for teams waiting to be deployed, and delays in pivoting to projects where necessary materials are available. Centuri's efforts to adapt quickly or redeploy to other projects may fail to reduce the impact of these adverse supply chain conditions on Centuri's business.

Despite such mitigation efforts, constrained supply conditions may materially and adversely impact Centuri's revenues and results of operations. Inflationary pressure, the labor market, and the conflict in Ukraine have also contributed to and exacerbated this strain within and outside the U.S., and there can be no assurance that these impacts on the supply chain will not worsen in the future, negatively impacting any of Centuri's operating business lines and their results. Supply chain challenges could also result in increased use of cash, engineering design changes, and delays in the completion of customer or other capital projects, each of which could adversely impact our business and results of operations for the Company over an extended period.

Disruptions in labor relations with Centuri's employees could adversely affect results of operations.

The majority of Centuri's labor force is covered by collective bargaining agreements with labor unions, which is typical of the utility infrastructure services industry. Labor disruptions, boycotts, strikes, or significant negotiated wage and benefit increases at Centuri, whether due to employee turnover or otherwise, could have a material adverse effect on Centuri's business and results of operations and cash flows.

Changing and uncertain work environment and conditions at Centuri.

Centuri performs work in a variety of geographic locations, each presenting unique environmental, surface, and subsurface conditions. As a consequence of work being performed under change orders when unexpected conditions are encountered, Centuri periodically experiences delays relating to billing and payment under these altered conditions.

Risks Related to Previously Announced Strategic Transactions

Our options for separating Centuri may be limited by market conditions and tax considerations. Any separation transaction of Centuri may not occur on the anticipated timeline and may not have the anticipated benefits.

On December 15, 2022, we announced our intention to pursue a separation of Centuri into an independent publicly-traded company, subject to the satisfaction of certain conditions, including receipt of favorable rulings from the IRS and receipt of other regulatory approvals. On September 22, 2023, we announced that Centuri Holdings had confidentially submitted a draft registration statement with respect to an initial public offering of its shares of common stock (the "Centuri Holdings IPO"). On November 6, 2023, we announced that the IRS had advised us that it had exercised its discretion not to rule on certain tax questions related to a potential separation of Centuri due to the fact-intensive nature of the questions presented. We remain committed to separating Centuri and continue to assess the value of a potential tax-free separation of Centuri, either following, or in lieu of, a potential initial public offering by Centuri. Following the Centuri Holdings IPO, the Company intends to reduce its ownership in Centuri Holdings in one or more disposition transactions, including by way of distributions to Company stockholders, one or more distributions in exchange for Company shares or other securities, a sell-down of its remaining owned shares of Centuri Holdings common stock or any combination thereof.

The Centuri Holdings IPO may not occur for a number of reasons, including, but not limited to, adverse market conditions, negative investor feedback or declines in business performance. If the Centuri Holdings IPO does not occur, our options for separating Centuri will be limited, and we may be forced to pursue a separation of Centuri even if such separation may be taxable to us.

While we currently intend a spin-off transaction, if effected, to qualify as a tax-free transaction to our stockholders and the Company, the availability of a tax-free spin-off will depend on the continuing satisfaction of a number of requirements, including a requirement that we own, and distribute in the spin-off, at least 80% of the outstanding voting stock of Centuri and at least 80% of any non-voting stock of Centuri. Although the agreements implementing the spin-off contain a number of provisions intended to ensure this "control" requirement and other tax-free spin-off requirements will be met, we cannot provide assurances that ultimately be the case. For example, an issuance of additional equity by Centuri prior to a spin-off could mean that a tax-free separation would no longer be possible. In addition, the ability to effect a tax-free separation to the Company (as opposed to our stockholders) could be lost if certain stock purchases (including by existing or new holders in the open market) are treated as part of a plan pursuant to which one or more persons directly or indirectly acquire a 50% or greater interest in the Company (a "355 Ownership Change") occurs within applicable time periods for purposes of Section 355(e) of the Internal Revenue Code. We have taken certain actions, including the adoption of a plan to help preserve the tax-free nature of any separation transaction. However, we can provide no assurance that such actions will ultimately permit us to complete a separation that is tax-free to us or that our existing net operating losses will fully offset the impact of any separation that is taxable to us. In addition, a separation transaction other than a spin-off, such as a sell-down, would be taxable, causing substantial taxes to be paid or exhaust other tax net operating loss benefits otherwise available to the Company.

In addition, if we pursue a separation of Centuri without the Centuri Holdings IPO, we or Centuri may not realize any cash proceeds from the separation, which may cause us to pay transaction expenses and taxes, if applicable, out of cash on hand, to the extent available, or to incur additional indebtedness, and would likely cause Centuri to continue to have significant outstanding indebtedness. If we are required to seek additional third-party financing either for us or for Centuri in connection with a separation it may delay the timing of the transaction.

Executing the proposed separation also requires significant time and attention from management, which could distract them from other tasks in operating our business and disrupt our operations. We cannot provide assurances that the Centuri Holdings IPO and the other transactions described above, if consummated, will yield greater net benefits to the Company and its shareholders than if the Centuri Holdings IPO and/or other transactions described above do not occur. If we fail to achieve some or all of the benefits expected to result from the Centuri Holdings IPO and/or other potential separation transactions

described above, or if such benefits are delayed, our business, operating results and financial condition could be materially and adversely affected.

If the separation of Centuri is completed, our and Centuri's operational and financial profiles will change and each will be a less diversified company than Southwest Gas Holdings as it exists today.

The Centuri separation, if effected, will result in us and Centuri being less diversified companies with more limited businesses concentrated in their respective industries. As a result, each company may be more vulnerable to changing market conditions, which could have a material adverse effect on its business, financial condition, and results of operations. In addition, the diversification of revenues, costs, and cash flows will diminish, such that each company's results of operations, cash flows, working capital, effective tax rate, and financing requirements may be subject to increased volatility and its ability to fund capital expenditures and investments, pay dividends, and service debt may be diminished. It is anticipated that the effective tax rate for each separate company will differ from the Southwest Gas Holdings consolidated effective tax rate.

If the separation of Centuri is completed, there may be changes in our stockholder base, which may cause the price of our common stock to fluctuate.

Investors holding our common stock may hold our common stock because of a decision to invest in a company that operates in multiple markets with a diversified portfolio. If the Centuri separation is completed, shares of our common stock will represent an investment in a business concentrated in the natural gas distribution industry, and shares of the common stock of Centuri will represent an investment in the utility infrastructure services business. This change may not align with some stockholders' investment strategies, which could cause them to sell their shares of our common stock or the common stock of Centuri, and excessive selling pressure could cause the market price to decrease following the consummation of the Centuri separation. Additionally, we cannot predict whether the market value of our common stock and the common stock of Centuri after the Centuri separation will be, in the aggregate, less than, equal to, or greater than the market value of our common stock prior to the Centuri separation.

Our goodwill and other assets have been subject to impairment and may be subject to further impairment in the future.

We assess long-lived assets, including intangible assets associated with acquisitions, for impairment whenever events or circumstances indicate that an asset's carrying amount may not be recoverable. To the extent that circumstances change, there may be additional goodwill impairment that could have a material impact on our results of operations. We cannot predict the amount and timing of any future impairments, if any. Any future impairment of our goodwill or intangible assets could have an adverse effect on results of operations, as well as the trading price of our common stock.

Financial, Economic, and Market Risks

As a holding company, Southwest Gas Holdings, Inc. depends on operating subsidiaries to meet financial obligations.

Southwest Gas Holdings, Inc. has no significant assets other than the stock of operating subsidiaries and is not expected to have significant operations on its own. Southwest Gas Holdings' ability to pay dividends to stockholders is dependent on the ability of its subsidiaries to generate sufficient net income and cash flows to service debt and pay upstream dividends. Because of the relative size of subsidiary operations, and their relative impacts to net income and cash flows, substantial dependency on the utility operations of Southwest and the infrastructure services of Centuri exists. The ability of Southwest Gas Holdings' subsidiaries to pay upstream dividends and make other distributions are subject to relevant debt covenant restrictions of subsidiaries and applicable state law.

Centuri's clients' budgetary constraints, regulatory support or decisions, and financial condition could adversely impact work awarded.

The majority of Centuri's clients are regulated utilities, whose capital budgets are influenced significantly by the various public utility commissions. As a result, the timing and volume of work performed by Centuri is largely dependent on the regulatory environment in its operating areas and related client capital constraints. If budgets of Centuri's clients are reduced, or regulatory support for capital projects and programs is diminished, it could have a material adverse effect on our business, results of operations, and cash flows. Additionally, the impact of new regulatory and compliance requirements could result in productivity inefficiencies and adversely impact Centuri's results of operations and cash flows, or timing delays in their realization.

Southwest's liquidity, and in certain circumstances its earnings, may be reduced from historical amounts or expectations during periods in which natural gas prices are rising significantly or are more volatile.

Increases in the cost of natural gas may arise from a variety of factors, including weather, changes in demand, the level of production and availability of natural gas, transportation constraints, transportation capacity cost increases, federal and state energy and environmental regulation and legislation, the degree of market liquidity, natural disasters, wars and other

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catastrophic events, national and worldwide economic and political conditions, the price and availability of alternative fuels, and the success of our strategies in managing price risk.

Rate schedules in each of Southwest's service territories contain purchased gas adjustment clauses which permit Southwest to file for rate adjustments to recover increases in the cost of purchased gas. Increases in the cost of purchased gas have no direct impact on our profit margins, but do affect cash flows and can therefore impact the amount of our capital resources. Southwest has used short-term borrowings in the past to temporarily finance increases in purchased gas costs, and would expect to do so again if the need arises.

Southwest may file requests for rate increases to cover the rise in the cost of purchased gas. Due to the nature of the regulatory process, there is a risk of disallowance of full recovery of these costs during any period in which there has been a substantial run-up of these costs or our costs are more volatile. Any disallowance of purchased gas costs would reduce cash flows and earnings.

Southwest's earnings may be materially impacted due to volatility in the cash surrender value of our company-owned life insurance policies during periods in which stock market changes are significant.

Southwest has life insurance policies on members of management and other key employees to indemnify against the loss of talent, expertise, and knowledge, as well as to provide indirect funding for certain nonqualified benefit plans. Cash surrender values are directly influenced by the investment portfolio underlying the insurance policies. This portfolio includes both equity and fixed income (mutual fund) investments. As a result, the cash surrender value (but not the net death benefits) moves up and down consistent with the movements in the broader stock and bond markets. Current tax regulations provide for tax-free treatment of life insurance (death benefit) proceeds. Therefore, changes in the cash surrender value components of company-owned life insurance policies, as they progress towards the ultimate death benefits, are also recorded without tax consequences. Currently, we intend to hold the company-owned life insurance policies for their duration. Changes in the cash surrender value of company-owned life insurance policies, except as related to the purchase of additional policies, affect our earnings but not our cash flows.

The cost of providing pension and postretirement benefits is subject to changes in pension asset values, changing demographics, and actuarial assumptions which may have an adverse effect on our financial results.

Southwest provides pension and postretirement benefits to eligible employees. The costs of providing such benefits are subject to changes in the market value of our pension fund assets, changing demographics, life expectancies of beneficiaries, current and future legislative changes, and various actuarial calculations and assumptions. The actuarial assumptions used may differ materially from actual results due to changing market and economic conditions, withdrawal rates, interest rates, and other factors. These differences may result in a significant impact on the amount of pension expense or other postretirement benefit costs recorded in future periods. For example, lower than assumed returns on investments and/or reductions in bond yields could result in increased contributions and higher pension expense which would have a negative impact on our cash flows and reduce net income. While a treasury futures overlay is part of the pension plan starting in 2024 to provide protection, notably with regard to changes in discount rates in order to help maintain a strong funded ratio and reduce costs, there is no assurance that intended results will sufficiently materialize.

Uncertain economic conditions may affect Southwest's ability to finance capital expenditures.

Southwest's business is capital intensive. Our ability to finance capital expenditures and other matters will depend upon general economic conditions in the capital markets. Declining interest rates are generally believed to be favorable to utilities while rising interest rates are believed to be unfavorable because of the high capital costs of utilities. In addition, our authorized rate of return is based upon certain assumptions regarding interest rates. If interest rates are lower than assumed rates, our authorized rate of return in the future could be reduced. If interest rates are higher than assumed rates, it will be more difficult for us to earn our currently authorized rate of return. Furthermore, declines in our stock price resulting from economic downturns or otherwise could impact our ability to finance our operations as planned. Historically, we have frequently used an at-the-market equity offering program ("ATM Program") to fund certain liquidity requirements. During 2023, we did not use our ATM Program. We intend to establish a new ATM program in 2024. If we are unable to execute under an ATM Program, we may be required to issue additional debt at the Company and Southwest; and, if necessary, we may have to explore alternative financing sources, which may not be available to us on attractive terms or at all. Future issuances of securities could be more expensive than ATM issuances and may dilute our existing stockholders' percentage of ownership.

Continued increases in market interest rates may have an adverse effect on the market price of our common stock.

One of the factors that investors may consider in deciding whether to buy or sell our common stock is our dividend yield, which is our dividend rate as a percentage of the share price of our common stock, relative to market interest rates. If market interest rates continue to increase, prospective investors may desire a higher dividend yield on our common stock or may seek securities paying higher dividends or interest. As a result, interest rate fluctuations and capital market conditions may affect the market

price of our common stock and such effects could be significant. For instance, if interest rates rise without an increase in our dividend rate, the market price of our common stock could decrease because potential investors may require a higher dividend yield on our common stock as market rates on interest-bearing securities, such as bonds, rise.

Regulatory, Legislative, and Legal Risks

The Company is currently subject to, and may in the future be subject to, litigation or threatened litigation, which may result in liability exposure that could have a material adverse effect on its business and results of operations.

We are currently subject, and may be subject in the future, to litigation or threatened litigation, including claims brought by stockholders and otherwise in the ordinary course of business. Although we believe that adequate insurance coverage is maintained to protect against risk exposure, it is difficult to predict with absolute certainty the costs associated with litigation, indemnity obligations, or other claims asserted in any given year. Moreover, it is possible that not all liabilities and costs experienced will be covered by third-party insurance and potential further claims against us may result in significant additional defense costs and potentially significant judgments against us, some of which may not be, or cannot be, insured against. Additionally, whether or not any dispute actually proceeds to litigation, we may be required to pay damages or expenses, which may be significant, or involve our agreement with terms that restrict the operation of our business. Resolution of these types of matters against us may result in our having to pay significant fines, judgments, or settlements, which, if in excess of insured levels, could have an adverse effect on our financial condition, results of operations, cash flows and our ability to pay dividends on, and the per share trading price of, our common stock. As a consequence, liability exposure could materially and adversely affect our business and results of operations to the extent it is not fully mitigated by such insurance coverage.

Governmental policies and regulatory actions can reduce Southwest's earnings or cash flows.

Regulatory commissions set our utility customer rates and determine what we can charge for our rate-regulated services. Our ability to obtain timely future rate increases depends on regulatory discretion. Governmental policies and regulatory actions, including those of the ACC, CPUC, PUCN, and FERC relating to allowed rates of return, allowable rate base, rate structure, purchased gas and investment recovery, operation and construction of facilities, present or prospective wholesale and retail competition including electrification or decarbonization policies or proposed policies by governmental entities or other parties, changes in tax laws and policies (including regulatory recovery or refunds thereof), and changes in and compliance with environmental and safety laws, including state or federal EPA or PHMSA regulations, and regulations placed on us or our customers regarding the product we deliver in meeting customer energy needs could reduce our earnings. Risks and uncertainties relating to delays in obtaining, or failure to obtain, regulatory approvals, conditions imposed in regulatory approvals, and determinations in regulatory investigations can also impact financial performance. The timing and amount of rate relief can materially impact results of operations. The timing and amount associated with the recovery of regulatory assets and associated with the return of regulatory liabilities can materially impact cash flows.

In general, we are unable to predict what types of conditions might be imposed on Southwest or what types of determinations might be made in pending or future regulatory proceedings or investigations. We nevertheless believe that it is not uncommon for conditions to be imposed in regulatory proceedings, for our regulated operations to agree to conditions as part of a settlement of a regulatory proceeding, or for determinations to be made in regulatory investigations that reduce our earnings and liquidity. For example, we may request recovery of a particular operating expense in a general rate case filing that a regulator disallows, negatively impacting our earnings if the expense continues to be incurred. Southwest records regulatory assets in the consolidated financial statements to reflect the ratemaking and regulatory decision-making authority of the regulators, or expected ratemaking treatment to be upheld, as allowed by U.S. GAAP. The creation of a regulatory asset allows for the deferral of costs which, absent a mechanism to recover such costs from customers in rates approved by regulators, would be charged to expense in the consolidated income statement in the period incurred. If there was a change in regulatory positions surrounding the collection of these deferred costs, there could be a material impact on financial position, results of operations, and cash flows.

Southwest may not be able to rely on rate decoupling to maintain stable financial position, results of operations, and cash flows.

Management has worked with regulatory commissions in designing rate structures that strive to provide affordable and reliable service to our customers while mitigating the volatility in prices to customers and stabilizing returns to investors. Rate structures in all service territories allow Southwest to separate or "decouple" the recovery of operating margin from natural gas consumption, though decoupled structures vary by state. In California, authorized operating margin levels vary by month. In Nevada and Arizona, the decoupled rate structures apply to most customer classes on the basis of margin per customer, which varies by month. Collectively, these mechanisms provide stability in annual operating margin. Significantly warmer-than-normal weather conditions in our service territories and other factors, such as climate change and alternative energy sources, may result in decreased cash flows attributable to lower natural gas sales and delays in recovering regulatory asset balances.

Furthermore, continuation of the decoupled rate designs currently in place is subject to regulatory discretion, and if unfavorably modified or discontinued, could adversely impact Southwest's financial position and results of operations.

Southwest may be subject to increased costs related to the operation of natural gas pipelines under recent regulations concerning natural gas pipeline safety, which could have an adverse effect on our results of operations, financial condition, and/or cash flows.

We are committed to consistently monitoring and maintaining our distribution and transmission systems and storage operations to ensure that natural gas is acquired, stored, and/or delivered safely, reliably, and efficiently. Due to the combustible nature of our (or our customers') product, we anticipate that the natural gas industry could be the subject of increased federal, state, and local regulatory oversight over time. We continue to work diligently with industry associations and federal, state, and local regulators to ensure compliance with any applicable laws. We expect there to be increased costs associated with compliance (and potential penalties for any non-compliance) with applicable laws over time. If these costs are not recoverable in our customer rates, or if there are delays in recoverability due to regulatory lag, they could have a negative impact on our operating costs and financial results.

Our delivery and related systems require numerous permits and other approvals from various federal, state, and local governmental agencies, and others to operate its business, including for pipeline expansion or infrastructure development; any failure to obtain or maintain required permits or approvals, or other factors that could prevent or delay planned development, could negatively affect our business and results of operations.

Southwest's existing and planned development projects require multiple permits and approvals. The acquisition, ownership and operation of natural gas pipelines and storage facilities require numerous permits, rights-of-way, approvals and certificates from federal, state, and local governmental agencies or others. Various factors may prevent or delay us from completing such projects or may make completion more costly, including the inability to obtain approval, public opposition to the project, regulatory opposition to one or more projects or related programs or their delayed recovery and returns thereon, inability to obtain adequate financing, competition for labor and materials, construction delays, cost overruns, and inability to negotiate acceptable agreements relating to rights-of-way, construction, or other material development components. Once received, approvals may be subject to litigation, and projects may be delayed or approvals reversed. If there is a delay in obtaining any required approvals, or if we fail to obtain or maintain any required approvals, easements or rights of way, or to comply with any applicable laws or regulations, we may not be able to construct or operate our facilities, may not be able to adequately service existing customers or support customer growth, or such conditions could cause us to incur additional costs. These circumstances could negatively impact our earnings.

General Risks

The Company's operating results may be adversely impacted by an economic downturn.

If an economic slowdown occurs, our financial condition, results of operations, and cash flows could be adversely affected. Fluctuations and uncertainties in the economy make it challenging for us to accurately forecast and plan future business activities and to identify risks that may affect our business, financial condition, and operating results. However, current global economic events such as the war in Ukraine and Israel, rising inflation, and increasing interest rates may cause the global economy to enter a period of economic slowdown or recession. We cannot predict the timing, strength, or duration of any future economic slowdown or recession. If the economy or the markets in which we operate decline from present levels, it may have an adverse effect on our business, financial condition, and results of operations.

A significant reduction in Southwest Gas Holdings, Inc., Centuri's, and Southwest's credit ratings could materially and adversely affect our business, financial condition, and results of operations.

We cannot be certain that any of our current credit ratings will remain in effect for any given period of time or that a rating will not be lowered or withdrawn entirely by a rating agency if, in its judgment, circumstances in the future so warrant. Our credit ratings are subject to change at any time at the discretion of the applicable ratings agencies. Numerous factors, including many which are not within our control, are considered by the ratings agencies in connection with assigning credit ratings.

Any downgrade could increase our future borrowing costs, which would diminish our financial results. We would likely be required to pay a higher interest rate in certain current, as well as future, financings, and our potential pool of investors and funding sources could decrease. A downgrade could require additional support in the form of letters of credit or cash or other collateral and otherwise adversely affect our business, financial condition, and results of operations.

We may be unable to successfully integrate business acquisitions into our business and realize the anticipated benefits of such acquisitions.

Business acquisitions are expected to result in various benefits, including, among other things, being accretive to earnings in future periods. The achievement of the anticipated benefits of such acquisitions is subject to a number of uncertainties,

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including whether the businesses are integrated efficiently and effectively. Failure to achieve the anticipated benefits of acquisitions could result in increased costs, decreases in the amount of expected revenues generated, and the potential diversion of management's time and energy, all of which could have an adverse effect on the consolidated financial position, results of operations, cash flows, credit ratings, or market price of our common stock. Acquisitions may also cause us to issue equity securities which would dilute our existing stockholders' percentage of ownership.

Natural disasters, public health crises and epidemic or pandemic related illness (including COVID-19), war, or terrorist activities and other extreme events could adversely affect the Companies' business, results of operations, financial condition, liquidity and/or cash flows.

Local or national natural disasters, pandemic, or epidemic illness (including COVID-19), actual or threatened acts of war or terrorist activities, including the political and economic disruption and uncertainty related to Russia's military invasion of Ukraine and the conflict in Israel, catastrophic failure of pipeline systems and other extreme events are a threat to our assets and operations. Our service territories may face a heightened risk due to exposure to acts of terrorism that could target or impact our natural gas distribution, transmission, and storage facilities and disrupt our operations and ability to meet customer requirements. In addition, the threat of terrorist activities could lead to increased economic instability and volatility in the price of natural gas that could affect our operations. Natural disasters, political unrest or actual or threatened terrorist activities may also disrupt capital markets and our ability to raise capital or may impact our suppliers or our customers directly. A local disaster, pandemic, or epidemic illness (including COVID-19) could result in part of our workforce being unable to operate or maintain our infrastructure or perform other tasks necessary to conduct our business. In addition, these risks could result in loss of human life, significant damage to property, environmental damage, impairment of our operations and substantial loss to the Company. Our regulators may not allow us to recover from our customers part or all of the increased cost related to the foregoing events, which could negatively affect our financial condition, results of operations, and cash flows.

A slow or inadequate response to events that could cause business interruption may have an adverse impact on operations and earnings. We may be unable to obtain sufficient insurance to cover all risks associated with local and national disasters, pandemic or epidemic illness, terrorist activities, catastrophic failure of the pipeline system and other events, which could increase the risk that an event adversely affects our financial condition, results of operations and cash flows.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 1C. CYBERSECURITY

Risk Management and Strategy

We recognize the importance of assessing, identifying, and managing material risks associated with cybersecurity threats. These risks include, among other things: operational risks; intellectual property and proprietary business information theft; fraud; extortion; harm to employees or customers; violation of privacy or security laws and other litigation and legal risk; physical damage to utility and transmission infrastructure; and reputational harm. We have implemented cybersecurity processes, technologies, and controls to aid in our efforts to assess, identify, and manage these risks. As part of our enterprise risk management program, we consider cybersecurity risks alongside other risks in our overall risk assessment process. Our enterprise risk professionals collaborate with subject matter specialists, as necessary, to gather insights for identifying material cybersecurity threats, assessing their severity, and deploying potential mitigations. We have implemented cybersecurity programs at both Southwest and Centuri that are tailored to the distinct businesses of our two segments.

Southwest's cybersecurity program focuses on people, processes, and technology, and takes a defense-in-depth approach by seeking to align with industry best practices. We invest in annual cybersecurity awareness training and testing for employees. We teach employees about remaining vigilant in daily work activities and practicing good security awareness. Specialized cybersecurity training is provided to those in specific job functions particularly susceptible to cyber incidents and phishing simulations are conducted monthly. Annually, a cybersecurity fair is held, and every employee is encouraged to participate. During this fair, outside experts present current and relevant information in an engaging and educational atmosphere. Tabletop exercises are periodically conducted to evaluate controls, processes, and procedures within Southwest and with our partners in the handling of a cybersecurity incident. Southwest maintains partnerships with law enforcement and other participants within the natural gas and electric utility industries. We also participate in the Information Sharing and Analysis Center to share threat intelligence and collaborate on cybersecurity issues affecting our industry.

As a natural gas local distribution company, Southwest's objective is to comply with the U.S. Department of Homeland Security Transportation Security Administration ("TSA") security directives for our gas monitoring and control systems. Pursuant to these directives, Southwest engages outside consultants to regularly review our technical architecture and alignment with the TSA security directives. In addition to complying with these regulations, Southwest takes a quantitative approach to

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cybersecurity risk to identify areas for future cybersecurity investment and periodically engages experts to attempt to infiltrate our information systems to further strengthen our security posture. We invest in a range of cybersecurity technologies within the perimeter, network, and endpoints, creating a defense-in-depth architecture designed for prevention and response to cybersecurity events and to help minimize exposure to risks.

To provide for the availability of critical data and systems, maintain regulatory compliance, manage our risks from cybersecurity threats, and to protect against, detect, and respond to cybersecurity incidents, Southwest undertakes the following activities:

- deploys a defense-in-depth approach with security measures in place at multiple layers;
- closely monitors information systems using a suite of technologies and a specialized cybersecurity team;
- reviews emerging data protection laws and implements changes to our processes designed for compliance;
- trains each new employee who handles individual customer data on handling and use requirements for such data;
- avoids, where possible, storing sensitive customer information like social security numbers or banking information for individual customers on our information systems;
- conducts regular phishing email simulations for employees and contractors with access to corporate email systems to enhance awareness and responsiveness to possible threats;
- through policy, practice, and contracts (as applicable) encourages employees, as well as third parties who provide services on our behalf, to treat customer information and data with care;
- runs tabletop exercises to simulate response activities to a cybersecurity incident and use the findings to improve our processes and technologies;
- leverages the National Institute of Standards and Technology ("NIST") Computer Security Incident Handling Process as a framework to help identify, protect, detect, respond, and recover when there is an actual or potential cybersecurity incident; and
- conducts vulnerability and penetration assessments, with associated remediation activities.

Southwest's incident response plan is designed to coordinate the activities we take to prepare for, detect, respond to, and recover from cybersecurity incidents. These activities include processes to triage, assess severity, communicate, contain, investigate, and remediate the incident, as well as comply with any applicable legal obligations and mitigate reputational damage.

Southwest's processes also address cybersecurity threat risks associated with our use of third-party service providers, including those in our supply chain or who have access to customer and employee data or our systems. Third-party risks are included within our cybersecurity-specific risk identification program. In addition, cybersecurity considerations affect the selection and oversight of our third-party service providers. We perform diligence on third parties that have access to our systems, data, or facilities that house such systems or data, and monitor cybersecurity threat risks identified through our diligence review. Our due diligence process involves the use of questionnaires that are completed by third-party service providers and reviewed by business unit representatives and cybersecurity specialists to identify risks associated with third-party service providers. We use the responses provided in the questionnaires to assist in finding ways to mitigate risks presented by a particular third-party service provider consistent with the services provided. Additionally, contracts with third parties that could introduce significant cybersecurity risk to Southwest include terms to assist in the mitigation of cybersecurity risks, including but not limited to, requiring counterparties to report data privacy or cybersecurity incidents to us and to agree to be subject to periodic cybersecurity audits as appropriate.

Centuri conducts quarterly cybersecurity reviews with its Executive Leadership Team. The review outlines the state of cybersecurity practices at Centuri through the lens of the NIST Cybersecurity Framework ("NIST CSF"). Details relative to the progress of specific goals and objectives are communicated to ensure alignment with leadership expectations. Centuri has developed policies and implemented procedures to meet the security control objectives provided within the NIST CSF, as well as applicable Centuri policies. Centuri's cybersecurity team performs a variety of internal operational risk assessment activities to track and mitigate risks to the organization. These operational practices cross a variety of management activities and a list of these activities is maintained in a Cybersecurity Risk Register for tracking the status of risk mitigation activities, as well as the overall maturity of the organization relative to the NIST CSF. Centuri further engages third parties to perform both targeted and holistic evaluations of Centuri cybersecurity practices on a regular basis.

Centuri's cybersecurity team performs independent reviews of new vendors whose services may be potentially integrated within the Centuri enterprise. As part of a standardized review process, Centuri's cybersecurity team maintains a Control Assurance Toolkit to review vendor activities, practices, and controls for alignment with Centuri's policies and procedures. Resulting control recommendations are coordinated to ensure appropriate implementation during integration activities.

Centuri undertakes vulnerability, attack, and penetration testing via a third-party audit. As part of its general control practices, Centuri performs a review of service organizational controls reports for in-scope vendors to ensure adherence to generally

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accepted cybersecurity practices. Any reported weaknesses and associated responses are captured and evaluated for impact, and subsequently provided to Centuri leadership for review and response.

We describe whether and how risks from identified cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected or are reasonably likely to materially affect us, including our business strategy, results of operations, or financial condition, under the heading "Operational Risks" as part of our risk factor disclosures at Item 1A of this Annual Report on Form 10-K, which disclosures are incorporated by reference herein. In the last three fiscal years, we have not experienced any material cybersecurity incidents and the expenses we have incurred from cybersecurity incidents were immaterial. However, because Southwest operates in the area of critical infrastructure, as defined under federal law and by the TSA, we have been and will continue to be the target of cybersecurity attacks from time to time.

Governance

Cybersecurity is an important part of our risk management processes and an area of increasing focus for our Board and management. The responsibility for oversight of risks from cybersecurity threats rests with our entire Board, but the Audit Committee oversees certain cybersecurity related items as described below. At least twice per year the entire Board receives an overview from management on our cybersecurity threat risk management and strategy processes covering topics such as data security posture, results from third-party assessments, and cybersecurity threat risks or incidents and developments, as well as the steps management took to respond to such risks. Additionally, our Chief Information Officer attends Audit Committee meetings to present cybersecurity information for consideration in financial reporting, as necessary, and attends private Executive Sessions with the Audit Committee. Our Director of Internal Audit reports to the Audit Committee regarding attack and penetration exercise results and remediation. Members of the Board are also encouraged to regularly engage in ad hoc conversations with management on cybersecurity-related news or events and discuss any significant updates to our cybersecurity risk management and strategy programs. Material cybersecurity threat risks are also considered during separate Board meeting discussions of matters such as enterprise risk management, operational budgeting, mergers and acquisitions, and other relevant matters. The Board has also recently participated in a tabletop exercise associated with cyber threats.

At the management level for Southwest, our cybersecurity risk management and strategy processes, which are discussed in greater detail above, are led by Southwest's President and the Vice President/Information Services/Chief Information Officer, along with the Director of Information Security, Manager of Cybersecurity Services, and Manager of Information Security Compliance and Administration. A Cybersecurity Executive Committee, consisting of officer-level management appointees representing key areas of our business, exists to maintain situational awareness of cybersecurity risks, support methods of addressing cybersecurity risks, and support the Chief Information Officer's efforts to help Southwest follow natural gas sector-specific regulations and reporting. The Cybersecurity Executive Committee meets regularly with legal advisors and cybersecurity professionals. In our Information Services Department, the cybersecurity management team members hold degrees in information technology or cybersecurity and industry-recognized certifications in cybersecurity, and each has many years of relevant work experience in various roles involving managing information security, developing cybersecurity strategy, and implementing effective information and cybersecurity programs. Cybersecurity team members are expected to keep their knowledge, skills, and training current by participating in industry events and continuing education programs as applicable.

These members of management and the Cybersecurity Executive Committee are informed about and monitor the prevention, mitigation, detection, and remediation of cybersecurity incidents through their management of, and participation in, the cybersecurity risk management and strategy processes described above, including the operation of our incident response plan. Our cybersecurity playbooks and incident response plan outline our procedures, communication protocols, and information escalation processes applicable throughout the lifecycle of a cybersecurity incident. The playbooks and plans cover information flow from discovery of a possible issue through the reporting of it to Information Services management and to the Cybersecurity Executive Committee and Board as necessary. In the event of a cybersecurity event at Centuri, Centuri's leadership team informs Southwest's cybersecurity team, and the Company's Audit Committee or entire Board is briefed, as appropriate. As discussed above, members of management (our President, Chief Information Officer, and Director of Information Security) report to the entire Board about cybersecurity threat risks, among other cybersecurity related matters, at least twice per year, with the Audit Committee receiving more frequent updates as needed to assist in including cybersecurity items in financial reporting and monitoring attack and penetration testing results.

Item 2. PROPERTIES

The plant investment of Southwest consists primarily of transmission and distribution mains, compressor stations, peak shaving/storage facilities, service lines, meters, and regulators, which comprise the pipeline systems and facilities located in and around the communities served. Southwest also includes other properties such as land, buildings, furnishings, work equipment, vehicles, and software systems in utility plant. The northern Nevada and northern California properties of Southwest are referred to as the northern system; the Arizona, southern Nevada, and southern California properties are referred to as the

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southern system. Total gas plant at December 31, 2023 was $10.3 billion at Southwest, including construction work in progress. It is the opinion of management that the properties of Southwest are suitable and adequate for its purposes.

Substantially all gas main and service lines are constructed across property owned by others under right-of-way grants obtained from the record owners thereof, under the streets and on the grounds of municipalities under authority conferred by franchises or otherwise, or beneath public highways or public lands under authority of various federal and state statutes. None of the numerous county and municipal franchises are exclusive, and some are of limited duration. These franchises are renewed regularly as they expire, and Southwest anticipates no serious difficulties in obtaining future renewals.

With respect to the right-of-way grants, Southwest generally has had continuous and uninterrupted possession and use of such rights-of-way, and the associated gas mains and service lines, commencing with the initial stages of construction of such facilities. Permits have been obtained from public authorities and other governmental entities in certain instances to cross or to lay facilities along roads and highways. These permits typically are revocable at the election of the grantor, and Southwest occasionally must relocate its facilities when requested to do so by the grantor. Permits have also been obtained from railroad companies to cross over or under railroad lands or rights-of-way, which in some instances require annual or other periodic payments and are revocable at the election of the grantors.

Southwest, through two subsidiaries, operates two primary pipeline transmission systems:

- a system (including an LNG storage facility) owned by Great Basin extending from the Idaho-Nevada border to the Reno, Sparks, and Carson City areas and communities in the Lake Tahoe area in both California and Nevada and other communities in northern and western Nevada; and
- a system extending from the Colorado River at the southern tip of Nevada to the Las Vegas distribution area.

Southwest provides natural gas service in parts of Arizona, Nevada, and California. Service areas in Arizona include most of the central and southern areas of the state, including Phoenix, Tucson, Yuma, and surrounding communities. Service areas in northern Nevada include Carson City, Yerington, Fallon, Lovelock, Winnemucca, Elko, and Spring Creek. Service areas in southern Nevada include the Las Vegas valley (including Henderson and Boulder City), Laughlin, and Mesquite. Service areas in southern California include Barstow, Big Bear, Needles, and Victorville. Service areas in northern California include the Lake Tahoe area and Truckee.

Information on properties of Centuri can be found in this Form 10-K under Utility Infrastructure Services under Part I.

Item 3. LEGAL PROCEEDINGS

The Company and Southwest are named as a defendant in various legal proceedings. The ultimate dispositions of these proceedings are not presently determinable; however, it is the opinion of management that none of this litigation individually or in the aggregate will have a material adverse impact on the Company's or Southwest's financial position or results of operations.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

The principal market on which the common stock of the Company is traded is the New York Stock Exchange and the ticker symbol of the stock is "SWX." At February 15, 2024, there were 10,353 holders of record of common stock, and the market price of the common stock was $60.25.

Dividends are payable on the Company's common stock at the discretion of the Board. In setting the dividend rate, the Board considers, among other factors, current and expected future earnings levels, our ongoing capital expenditure plans and expected external funding needs, our payout ratio, and our ability to maintain strong credit ratings and liquidity. The Company has paid dividends on its common stock since 1956. The quarterly dividend was $0.62 in 2023, and in February 2024, the Board determined to retain the quarterly dividend at $0.62 per share effective with the June 2024 payment. Although no assurances can be provided on our future dividend payments, the Board currently intends to reevaluate the dividend upon the completion of the Centuri separation, and it is anticipated that we will pay a dividend at a level consistent with industry peers.

Item 6. [RESERVED]

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

About Southwest Gas Holdings, Inc.

Southwest Gas Holdings, Inc. is a holding company that owns all of the shares of common stock of Southwest Gas Corporation ("Southwest" or the "natural gas distribution" segment), all of the shares of common stock of Centuri Group, Inc. ("Centuri" or the "utility infrastructure services" segment), and until February 14, 2023, all of the common stock of MountainWest Pipelines Holding Company ("MountainWest" or "pipeline and storage" segment). Southwest Gas Holdings, Inc. and its subsidiaries are collectively referred to as the "Company."

In December 2022, the Company announced that its Board of Directors (the "Board") unanimously determined to take strategic actions to simplify the Company's portfolio of businesses. These actions included entering into a definitive agreement to sell 100% of MountainWest in an all-cash transaction to Williams Partners Operating LLC ("Williams") for $1.5 billion in total enterprise value, subject to certain adjustments. The MountainWest transaction closed on February 14, 2023.

In December 2023, the Company announced its intent to pursue an initial public offering (the "Centuri Holdings IPO") of newly issued shares of Centuri Holdings, Inc. ("Centuri Holdings"). The Board has determined that the Centuri Holdings IPO is the optimal path to advance the separation of Centuri as an independent utility infrastructure services company to maximize value for stockholders. Centuri Holdings has confidentially submitted a draft Registration Statement on Form S-1 with the U.S. Securities and Exchange Commission (the "SEC"). The execution of the Centuri Holdings IPO is subject to market and other conditions, the completion of the SEC's review process, and final Board approval to proceed with the transaction.

Following the Centuri Holdings IPO, the Company intends to reduce its ownership in Centuri Holdings in one or more disposition transactions, including by way of distributions to Company stockholders, one or more distributions in exchange for Company shares or other securities, a sell-down of its remaining owned shares of Centuri Holdings common stock or any combination thereof. As of December 31, 2023, the Company had a U.S. federal net operating loss carryforward of $1.03 billion, which could be available to offset a taxable gain incurred by the Company in connection with a taxable disposition of the Centuri stock. The Company also retains strategic flexibility to separate Centuri through a tax-free spin-off of all or a part of Centuri in the event market conditions are not conducive to an IPO or secondary sales by the Company following an IPO.

On November 3, 2023, the Board authorized a dividend of one preferred stock purchase right (a "Right") for each outstanding share of common stock, $1 par value per share, of the Company to stockholders on record at the close of business on November 17, 2023. The description and terms of the Rights are set forth in a Tax-Free Spin Protection Plan, dated as of November 5, 2023 (as may be amended from time to time, the "Plan"), between the Company and Equiniti Trust Company, LLC, as rights agent. Each right entitles the registered holder to purchase from the Company one ten-thousandth of a share of Series A Junior Participating Preferred Stock, no par value per share, of the Company, at a purchase price of $300.00 per one ten-thousandth of a share of Series A Preferred, subject to adjustment. By adopting the Plan, the Board is seeking to preserve the Company's ability to effectuate a separation of Centuri Holdings that would be tax-free to the Company (the "Tax-Free Status"). The Board believes it is in the best interest of the Company and its stockholders to preserve the Company's ability to effectuate a spin-off transaction with Tax-Free Status.

Our business includes Southwest, which is engaged in the business of purchasing, distributing, and transporting natural gas for customers in portions of Arizona, Nevada, and California. Southwest is the largest distributor of natural gas in Arizona and Nevada, and distributes and transports natural gas for customers in portions of California. Additionally, through its subsidiaries, Southwest operates two regulated interstate pipelines serving portions of Nevada and California. Southwest makes investments in infrastructure to support customer demand associated with population growth and economic development activity and the safe and reliable operation of its system through adherence to integrity management programs.

As of December 31, 2023, Southwest had 2,226,000 residential, commercial, industrial, and other natural gas customers, of which 1,192,000 customers were located in Arizona, 828,000 in Nevada, and 206,000 in California. First-time meter sets were approximately 40,000 in 2023, compared to 41,000 in 2022. Residential and commercial customers represented over 99% of the total customer base. During 2023, 55% of operating margin (gas operating revenues less the net cost of gas sold) was earned in Arizona, 33% in Nevada, and 12% in California. During this same period, Southwest earned 85% of its operating margin from residential and small commercial customers, 4% from other sales customers, and 11% from transportation customers. These general patterns are expected to remain materially consistent for the foreseeable future.

Southwest recognizes operating revenues from the distribution and transportation of natural gas (and related services) to customers. Operating margin is a financial measure defined by management as Regulated operations revenues less the net cost of gas sold. However, operating margin is not specifically defined in accounting principles generally accepted in the United States ("U.S. GAAP"). Thus, operating margin is considered a non-GAAP measure. Management uses this financial measure

because Regulated operations revenues include the net cost of gas sold, which is a tracked cost that is passed through to customers without markup under purchased gas adjustment ("PGA") mechanisms. Fluctuations in the net cost of gas sold impact revenues on a dollar-for-dollar basis, but do not impact operating margin or operating income. Therefore, management believes operating margin provides investors and other interested parties with useful and relevant information to analyze Southwest's financial performance in a rate-regulated environment. The principal factors affecting changes in operating margin are general rate relief (including impacts of infrastructure program recoveries) and customer growth. Commission decisions on the amount and timing of relief may impact our earnings. Refer to the Summary Operating Results table below for a reconciliation of gross margin to operating margin, and refer to *Rates and Regulatory Proceedings* in this Management's Discussion and Analysis for details of various rate proceedings.

The demand for natural gas is seasonal, with greater demand in the colder winter months and decreased demand in the warmer summer months. All of Southwest's service territories have decoupled rate structures (alternative revenue programs), which are designed to eliminate the direct link between volumetric sales and revenue, thereby mitigating the impacts of weather variability and conservation on operating margin, allowing Southwest to pursue energy efficiency initiatives. Nearly all of our customers, and resulting revenue and margin, are included as part of mechanisms that reduce the impact of weather and volume variability on our earnings.

Centuri is a strategic infrastructure services company that partners with regulated utilities to build and maintain the energy network that powers millions of homes and businesses across the U.S. and Canada. With a commitment to serve as long-term partners to customers and communities, Centuri's employees enable regulated utilities to safely and reliably deliver natural gas and electricity, as well as achieve their goals for environmental sustainability. Centuri operates in 87 primary locations across 45 states and provinces in the U.S. and Canada. Centuri operates in the U.S., primarily as NPL, Neuco, Linetec, and Riggs Distler, and in Canada, primarily as NPL Canada.

Utility infrastructure services activity can be impacted by changes in infrastructure replacement programs of utilities, weather, and local and federal regulation (including tax rates and incentives). Utilities continue to implement or modify system integrity management programs to enhance safety pursuant to federal and state mandates. These programs have resulted in multi-year utility system replacement programs throughout the U.S. Likewise, there has been similar attention placed on electric grid modernization through national infrastructure legislation and related initiatives. The Department of Energy estimates more than 70% of the nation's grid transmission lines and power transformers are over 25 years old, creating vulnerability exacerbated by seasonal storm and extreme weather events. This, along with continued gas pipeline replacements expected to be necessary across North America, result in management expectations that Centuri will continue to benefit from these collective electric and gas infrastructure replacement programs for the foreseeable future. The amount that may be awarded to Centuri compared to its industry competitors is not presently known. Generally, Centuri revenues are lowest during the first quarter of the year due to less favorable winter weather working conditions. Revenues typically improve as more favorable weather conditions occur during the summer and fall months. In cases of severe weather, such as following a regional storm, Centuri may be engaged to perform restoration activities related to above-ground utility infrastructure, and related results impacts are not solely within the control of management. In addition, in certain circumstances, such as with large bid contracts (especially those of a longer duration), or unit-price contracts with revenue caps, results may be impacted by differences between costs incurred and those anticipated when the work was originally bid. Work awarded, or failing to be awarded, by individual large customers can impact operating results.

All of our businesses may be impacted by economic conditions that impact businesses generally, such as inflationary impacts on goods and services consumed in the business, rising interest rates, labor markets and other costs (including in regard to contracted or professional services), and the availability of those resources. Certain of these impacts may be more predominant in certain of our operations, such as with regard to fuel costs for work equipment and skilled/trade labor costs at Centuri.

Executive Summary

The items discussed in this Executive Summary are intended to provide an overview of the results of the Company's and Southwest's operations and are covered in greater detail in later sections of management's discussion and analysis.

Summary Operating Results

	Year ended December 31,		
(In thousands, except per share amounts)	2023	2022	2021
Contribution to net income (loss)			
Natural gas distribution	$ 242,226	$ 154,380	$ 187,135
Utility infrastructure services	19,652	2,065	40,420
Pipeline and storage	(16,288)	(283,733)	—
Corporate and administrative	(94,701)	(76,002)	(26,776)
Net income (loss)	$ 150,889	$ (203,290)	$ 200,779
Weighted average common shares	70,787	65,558	59,145
Basic earnings (loss) per share			
Consolidated	$ 2.13	$ (3.10)	$ 3.39
Natural Gas Distribution			
Reconciliation of Gross Margin to Operating Margin (Non-GAAP measure)			
Utility Gross Margin	$ 640,955	$ 574,534	$ 570,325
Plus:			
Operations and maintenance (excluding Admin. & General) expense	316,246	308,276	267,160
Depreciation and amortization expense	295,462	263,043	253,398
Operating margin	$ 1,252,663	$ 1,145,853	$ 1,090,883

Overview

Southwest Gas Holdings:
- Issued 4.1 million shares of common stock for net proceeds of $238.4 million
- Completed the MountainWest sale and paid down the remaining balance of the term loan used to initially fund the MountainWest acquisition
- Confidentially submitted a draft Registration Statement on Form S-1 to the SEC relating to the Centuri Holdings IPO
- Corporate and administrative expenses include $42.8 million in interest expense related to borrowings and $11.1 million in Centuri separation costs, offset by certain tax benefits

Natural gas distribution:
- 40,000 first-time meters sets (1.8% growth rate) added over the past 12 months
- Operating margin increased $107 million, or 9%, between 2023 and 2022
- Arizona rate case finalized with annualized revenue increase of $54 million, effective February 1, 2023
- Received approval to implement an increase in the Gas Cost Balancing Account rate to facilitate timely recovery of ~$358 million in Arizona purchase gas costs effective August 1, 2023
- Filed $70 million general rate case in Nevada in September 2023, and $126 million general rate case in Arizona in February 2024
- $762 million capital investment in 2023
- COLI results increased $15.5 million compared to the prior year

Utility infrastructure services:
- Record revenues of $2.9 billion in 2023, an increase of $139 million, or 5%, compared to 2022
- $86 million storm restoration services revenues in 2023, an increase of $17 million over 2022
- $215 million of revenues from sustainable wind energy projects in 2023 including the first U.S. commercial-scale offshore project to deliver generated electricity to the grid
- Executed a multi-year contract extension of a master services agreement with an existing gas utility customer in Ontario, Canada with anticipated revenues of ~$1 billion over the contract term

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This section of Form 10-K provides comparison of 2023, 2022, and 2021 results and pertinent components. Also provided is a discussion of 2023 and 2022 and year-to-date comparisons between those years. Discussions of 2021 items and year-to-year comparisons between 2022 and 2021 that are not included in this Form 10-K can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, which incorporates by reference the Company's annual report to stockholders filed as Exhibit 13 to that Annual Report on Form 10-K.

Results of Natural Gas Distribution

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Regulated operations revenues	$ 2,499,564	$ 1,935,069	$ 1,521,790
Net cost of gas sold	1,246,901	789,216	430,907
Operating margin	1,252,663	1,145,853	1,090,883
Operations and maintenance expense	511,646	491,928	438,550
Depreciation and amortization	295,462	263,043	253,398
Taxes other than income taxes	87,261	83,197	80,343
Operating income	358,294	307,685	318,592
Other income (deductions)	70,661	(6,884)	(4,559)
Net interest deductions	149,830	115,880	97,560
Income before income taxes	279,125	184,921	216,473
Income tax expense	36,899	30,541	29,338
Contribution to consolidated results	$ 242,226	$ 154,380	$ 187,135

2023 vs. 2022

Contribution to consolidated net income from natural gas distribution operations increased $88 million between 2023 and 2022. The increase was primarily due to increases in Operating margin and Other income, offset by increases in Operations and maintenance expense, Net interest deductions, and Depreciation and amortization.

Operating margin increased $107 million between years. Customer growth provided approximately $14 million as 40,000 first-time meter sets were added in 2023, and combined rate relief (primarily in Arizona, as well as benefits of rate relief in Nevada through the first quarter of 2023 and the annual California attrition increase) provided approximately $56 million of incremental operating margin during the current year. Increases in recoveries associated with regulatory programs of $19 million also contributed to the increase; such amounts also increase amortization expense (discussed below). Additionally, an $8 million out-of-period adjusting entry was made in the first quarter of 2023, which reduced Net cost of gas sold (See *Basis of Presentation* in **Note 1 - Background, Organization, and Summary of Significant Accounting Policies)**. Other increases include margin associated with customers outside the decoupling mechanisms.

Operations and maintenance ("O&M") expense increased $20 million, or 4%, between 2023 and 2022. Increases occurred throughout the business, including in direct labor ($8 million), external contractor and professional services expenses ($10 million), notably related to a consulting arrangement for the identification, benchmarking, and assessment of utility business optimization opportunities, and for leak survey and line locating activities ($4 million), along with higher incentive compensation expense ($4 million), costs for fuel used in operations ($3 million), and others. Employee benefit costs decreased between periods (approximately $5 million reflected in O&M expense), primarily due to the lower service-related component of postretirement benefit costs offset by increases in employee medical and other costs; these employee benefit costs are part of an overhead/labor loading process for which approximately 80% is included in O&M expense, with the remainder primarily becoming part of capital projects. Legal/claim-related costs were also lower between periods ($7 million).

Depreciation and amortization expense increased $32 million, or 12%, between years including due to a $583 million, or 6%, increase in average gas plant in service in the current year. The increase in gas plant was attributable to pipeline capacity reinforcement work, franchise requirements, scheduled pipe replacement activities, and new infrastructure. An increase in amortization of regulatory account balances of $19 million, as discussed in regard to Operating margin above, also contributed to the increase.

Taxes other than income taxes increased $4.1 million, or 5%, between 2023 and 2022 primarily due to an increase in property taxes in Arizona, and to a lesser extent, in California.

Other income increased $78 million between 2023 and 2022. Interest income increased $35 million compared to the prior year, related to carrying charges associated with the elevated deferred purchased gas cost balance and interest on other regulatory

account balances, with another nearly $2 million associated with the equity portion of the allowance for funds used during construction. Additionally, non-service-related components of employee pension and other postretirement benefit costs decreased $21 million between years, thereby positively impacting results between periods. Southwest also recognized a $16 million increase in COLI results between years.

Net interest deductions increased $34 million between 2023 and 2022 primarily due to $300 million of Senior Notes issued in December 2022, $300 million of Senior Notes issued in March 2023, and in part to $600 million of Senior Notes issued in March 2022; as well as due to a term loan, entered into in January 2023 to support higher natural gas supply costs, which was repaid in April 2023. These increases were offset by the March 2023 repayment of the remaining $225 million balance associated with the March 2021 Term Loan.

Results of Utility Infrastructure Services

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Utility infrastructure services revenues	$ 2,899,276	$ 2,760,327	$ 2,158,661
Operating expenses:			
Utility infrastructure services expenses	2,617,402	2,529,318	1,955,467
Depreciation and amortization	145,446	155,353	117,643
Operating income	136,428	75,656	85,551
Other income (deductions)	64	(887)	1,067
Net interest deductions	97,476	61,371	20,999
Income before income taxes	39,016	13,398	65,619
Income tax expense	14,736	5,727	18,776
Net income	24,280	7,671	46,843
Net income attributable to noncontrolling interests	4,628	5,606	6,423
Contribution to consolidated results	$ 19,652	$ 2,065	$ 40,420

2023 vs. 2022

Contribution to consolidated net income from utility infrastructure services increased $17.6 million in 2023 compared to 2022. While net interest deductions increased $36.1 million due to higher interest rates, operating income increased $60.8 million due to an increase in revenue of $138.9 million and improvements in operating income overall due primarily to decreases in fuel prices and changes in mix of work.

The Utility infrastructure services revenue increase of $138.9 million, or 5%, was driven primarily by a $211.7 million increase in electric infrastructure services revenue, which included a $120.4 million increase in offshore wind revenue. Offshore wind revenue stems from several multi-year contracts, whereby Centuri provides materials, subcontracts manufacturing, and self performs fabrication and assembly of secondary steel components onshore, with delivery at a port facility. Also included in electric infrastructure revenue was $86.4 million from emergency restoration services following tornado and other storm damage to customers' above-ground utility infrastructure in and around the Gulf Coast and eastern regions of the U.S., compared to $69.7 million in storm restoration work in the prior year. Centuri's revenues derived from storm-related services vary from period to period due to the unpredictable nature of weather-related events, and when this type of work is performed, it typically generates a higher profit margin than core infrastructure services, due to improved operating efficiencies related to equipment utilization and absorption of fixed costs. The remaining increase in electric infrastructure services revenues was due to higher volumes under certain existing customer master service agreements. Gas infrastructure services revenue decreased $81.8 million overall from the prior year, driven primarily by a net reduction in volume under master services agreements with certain existing customers, primarily in Canada. That amount reflects the mitigated impact of increased revenue from bid work of $87.3 million with a U.S. customer. Other revenues increased $9 million, primarily due to completion of a large industrial bid project during the year. Centuri revenues from contracts with Southwest totaled $116.4 million in 2023 and $134.7 million in 2022. Centuri accounts for services provided to Southwest at contractual prices.

Utility infrastructure services expenses increased $88.1 million, or 3.5%, in 2023 when compared to 2022, primarily as a result of increased costs to complete a higher volume of work. Subcontractor costs increased during 2023 compared to the prior year notably due to increased revenue related to offshore wind projects. Despite continued inflationary pressures, margin on work completed in 2023 improved from the prior year due to changes in the mix of work and lower fuel prices. Also included in total Utility infrastructure services expenses were general and administrative costs, which increased approximately $1.3 million between years due to continued growth in the business. Gains on sale of equipment (reflected as an offset to Utility infrastructure services expenses) were approximately $4.5 million and $6.4 million in 2023 and 2022, respectively.

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Depreciation and amortization expense remained largely consistent as a percentage of revenue between years. Amortization of intangible assets decreased in 2023 compared to 2022 due to Riggs Distler's backlog intangible asset becoming fully amortized in 2022.

The increase in net interest deductions of $36.1 million was primarily due to higher interest rates on outstanding variable-rate borrowings, notably, the Centuri term loan and revolving credit facility, as amended.

Income tax expense increased $9 million between 2023 and 2022, primarily due to increased pre-tax income in 2023.

Results of Pipeline and Storage

	Year Ended December 31,
(Thousands of dollars)	2023
Regulated operations revenues	$ 35,132
Operating expenses:	
Net cost of gas sold	6,368
Operations and maintenance expense	11,378
Depreciation and amortization	—
Taxes other than income taxes	1,490
Goodwill impairment	21,215
Operating loss	(5,319)
Other income	486
Net interest deductions	2,200
Loss before income taxes	(7,033)
Income tax expense	9,255
Contribution to consolidated results	$ (16,288)

Operating results for the pipeline and storage segment for 2023 reflects activity from January 1, 2023 through February 13, 2023 (the last full day of ownership by the Company), including residual goodwill impairment recognized during 2023. Operating expenses include $2.6 million during the first quarter related to integration/stand-up costs leading up to the sale date. Depreciation and amortization was not recorded in 2023 as MountainWest was classified as held for sale during the holding period. Income tax expense includes the impact of book versus tax basis differences related to the sale. For further impacts from the sale of MountainWest, refer to **Note 15 - Acquisitions and Dispositions.**

Rates and Regulatory Proceedings

Southwest is subject to the regulation of the Arizona Corporation Commission (the "ACC"), the Public Utilities Commission of Nevada (the "PUCN"), the California Public Utilities Commission (the "CPUC"), and two of Southwest's subsidiaries are subject to regulation by the Federal Energy Regulatory Commission (the "FERC").

General Rate Relief and Rate Design

Rates charged to customers vary according to customer class and rate jurisdiction and are set by the individual state and federal regulatory commissions that govern Southwest's service territories. Southwest makes periodic filings for rate adjustments as the cost of providing service (including the cost of natural gas purchased) changes, and as additional investments in new or replacement pipeline and related facilities are made. Rates are intended to provide for recovery of all commission-approved costs and a reasonable return on investment. The mix of fixed and variable components in rates assigned to various customer classes (rate design) can significantly impact the operating margin actually realized by Southwest. Management has worked with its regulatory commissions in designing rate structures that support the timely recovery of our costs, including returns to investors, in providing safe, affordable, and reliable service to its customers while mitigating volatility in prices to customers and stabilizing returns to investors. Such rate structures were in place in all of Southwest's operating areas during all periods for which results of natural gas distribution operations are disclosed above.

Arizona Jurisdiction

Arizona General Rate Case. Southwest filed a general rate case application in December 2021, primarily to reflect in rates the substantial capital investments that were made since the end of the test year associated with an earlier case, including investments in a customer information system implemented in May 2021. At a hearing held in September 2022, Southwest, the

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Utilities Division Staff, and the Residential Utility Consumer Office jointly stipulated to several issues, including a target capital structure consisting of 50% equity and 50% debt; a 9.30% return on equity; and foregoing a premium related to the Graham County acquisition as well as the recovery of $12 million of waived late fees on customer account balances that would have otherwise applied to delinquent accounts in the absence of a COVID-19 moratorium on such fees. Approximately $12 million in costs related to the Liquefied Natural Gas facility deferred in an authorized regulatory asset was approved to be amortized over four years. The ACC's final order authorized a $54.3 million increase, with new rates effective February 1, 2023.

Southwest filed its 2024 Arizona rate case application in early February 2024, proposing an increase in revenue of approximately $125.6 million to reflect the continued significant capital investments in the state and update rates to more closely align with Southwest's current level of operations and maintenance expense. The request includes a return on common equity of 10.15% and a 0.81% fair value increment, relative to a 50% target equity ratio and a proposed 12-month post-test year plant adjustment for otherwise non-revenue producing plant. In addition to proposing the continuation of full revenue decoupling under the Delivery Charge Adjustment ("DCA") mechanism, Southwest proposed the establishment of the System Improvement Benefit ("SIB") mechanism, a capital tracker designed to support required code and regulatory-related infrastructure replacements in the state of Arizona. Southwest also proposed to set the carrying cost for the interest component of the DCA and Gas Cost Balancing Account ("GCBA") rate adjustment mechanisms to equal the Commission-authorized Weighted Average Cost of Capital, and to establish the Unrecovered Gas Cost Expense Provision ("UGCE"), which represents gas cost-related portion of net write-offs of uncollectible customer accounts. The UGCE would allow Southwest to more timely recover the portion of such accounts that is related to purchased gas cost. Rates, following the conclusion of the rate case, are anticipated to become effective in the second quarter 2025.

Delivery Charge Adjustment. The DCA, or Arizona decoupling mechanism, as described above, includes a filing each April, which along with other reporting requirements, contemplates a rate to return/recover the over- or under-collected margin tracker (decoupling mechanism) balance. The most recent filing was made in April 2023 to request a rate to address the over-collected balance of $53.5 million existing as of March 31, 2023. The requested rate to return the over-collected balance was approved and new rates became effective August 1, 2023. The next filing is anticipated to be made no later than April 30, 2024, and will address the balance at the end of the first quarter 2024.

Tax Reform. A Tax Expense Adjustor Mechanism ("TEAM") was approved in Southwest's 2019 general rate case to timely recognize tax rate changes resulting from federal or state tax legislation following the TEAM implementation. In addition, the TEAM tracks and returns/recovers the revenue requirement impact of changes in amortization of excess accumulated deferred income taxes ("EADIT"), including that which resulted from 2017 U.S. federal tax reform, compared to the amount authorized in the most recently concluded rate case. Following the inaugural surcredit rate establishment under the TEAM mechanism in December 2022, Southwest filed subsequent TEAM rate applications, including the most recent filing, which proposes to update the TEAM surcredit to refund $5.03 million of estimated net EADIT savings. The adjusted rate is anticipated to be implemented in the second quarter 2024.

Customer-Owned Yard Line ("COYL") Program. Southwest originally received approval, in connection with its 2010 Arizona general rate case, to implement a program to conduct leak surveys, and if leaks were present, to replace and relocate service lines and meters for Arizona customers whose meters were set off from the customer's home, representing a non-traditional configuration. The COYL program has been subject to proceedings to recover investments since that time. In February 2023, Southwest requested approval to recover the outstanding revenue requirement of approximately $4.3 million associated with 2022 COYL investments, which increased the COYL recovery rate. The new rate became effective July 1, 2023. A filing to request recovery of the outstanding revenue requirement is anticipated in early 2024.

PGA Modification. On March 1, 2023, Southwest filed a request to adjust the interest rate applicable to the outstanding Purchased Gas Adjustment ("PGA") balance to more closely match the interest expense incurred to finance the balance. In the alternative, the filing requested an expansion of the current GCBA adjustment to clear the then existing $351 million balance. In July, the ACC approved an increase to the GCBA rate (over a two-year period) effective August 1, 2023, to support the timely recovery of the approximately $358 million balance as of May 31, 2023. The increased GCBA rate will remain for up to two years or until the balance drops below $10 million, at which point the GCBA rate will be set to $0.00 per therm, where it will remain until the under- or over-collected balance exceeds $10 million. The ongoing deferred energy rates, separate from the GCBA rates, continue to be updated monthly.

Nevada Jurisdiction

Nevada General Rate Case. Southwest filed its most recent general rate case in September 2023 based on the test year ended May 2023. The initial request was updated with a certification filing primarily for plant placed in service and incremental annual leak survey costs through November 2023. Those updates resulted in an updated overall request of approximately $74 million, an increase over the initial request of $69.8 million. A stipulation was reached with Regulatory Operations Staff

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and the Bureau of Consumer Protection, settling certain issues and agreeing to a black box settlement with a statewide increase of $65.6 million, prior to any adjustments related to the cost of capital (assumed capital structure and return on equity), which along with class cost of service and rate design items, remains unsettled. Included in the settled issues are a continuation of full revenue decoupling; authority to continue tracking incremental annual leak survey costs; and depreciation rates that would increase modestly overall from current levels. The request includes a proposed return on common equity of 10.0% relative to a 50% target equity ratio and is expected to be resolved at the hearing scheduled for the end of February 2024. New rates are anticipated in April 2024. Southwest's previous general rate case concluded in February 2022, with rates effective April 1, 2022.

General Revenues Adjustment. The General Revenues Adjustment ("GRA"), or Nevada decoupling mechanism, was affirmed as part of Southwest's most recently concluded general rate case with an expansion to include a large customer class (with average monthly throughput requirements greater than 15,000 therms), effective April 2022. Southwest makes Annual Rate Adjustment ("ARA") filings to update rates to recover or return amounts associated with various regulatory mechanisms, including the GRA. Southwest made its most recent ARA filing in November 2023 related to the approximate $8.7 million over-collected balance as of September 30, 2022. Recovery of rates and adjustments thereto as part of the ARA primarily impact cash flows, but not net income overall. Updated rates for the GRA and other regulatory mechanisms included in the ARA will become effective July 1, 2024.

Nevada Leak Survey. In 2019, the PUCN opened an Investigation and Rulemaking action to consider certain amendments to the Nevada Administrative Code requiring annual leak surveys of distribution pipelines transporting natural gas or liquid petroleum. The increased survey activity was to focus on business districts and to be conducted generally on an annual basis (not exceeding 15-month survey intervals). The proposed regulations were permanently adopted with a January 1, 2023 effective date. Regulatory asset treatment was approved for the purpose of tracking incremental costs associated with implementing the increased leak surveys, recovery of which is requested in Southwest's pending general rate case.

California Jurisdiction

California General Rate Case. Southwest's most recent general rate case concluded following an agreement in principle with the Public Advocate's Office, unanimously approved by the CPUC on March 25, 2021, including a $6.4 million total combined revenue increase with a 10% return on common equity, relative to a 52% equity ratio. The rate case decision maintained Southwest's existing 2.75% annual attrition adjustments and the continuation of the pension balancing account. It also included cumulative expenditures totaling $119 million over the five-year rate cycle to implement risk-informed proposals, consisting of a school COYL replacement, meter protection, and pipe replacement programs. New rates resulting from the rate case were implemented in April 2021.

Attrition Filing. Following the 2021 implementation of rates approved as part of the recently concluded general rate case, the continuation of annual Post Test Year ("PTY") margin attrition increases of 2.75% began in January 2022. The most recent annual margin attrition increase was also inclusive of adjustments related to the amortization of EADIT and the authorized rate base to adjust the rate of return consistent with the Automatic Trigger Mechanism. The cumulative adjustments resulted in an increase of $6.9 million effective January 2024 for Southwest's southern California, northern California, and South Lake Tahoe rate jurisdictions.

FERC Jurisdiction

General Rate Case. Great Basin Gas Transmission Company ("Great Basin"), a wholly owned subsidiary of Southwest, reached an agreement in principle with the FERC Staff as part of its last rate case providing a 9.90% pre-tax rate of return. Rates were made effective February 2020. Great Basin plans to file its next general rate case no later than the first week of March 2024, proposing an increase of approximately $16 million and a return on equity of 13.05% relative to a 56% equity layer. A primary driver of the proposed increase is approximately $99 million of capital investments anticipated to be placed in service by the end of the August 31, 2024 test year. Motion rates, subject to refund, are anticipated to become effective in September 2024 with an initial decision during the second quarter of 2025.

MountainWest Overthrust Pipeline. On September 22, 2022, during the period of Southwest Gas Holdings' ownership of the MountainWest entities, the FERC issued an order initiating an investigation, pursuant to section 5 of the Natural Gas Act, to determine whether rates charged by MountainWest Overthrust Pipeline, LLC, a subsidiary of MountainWest, were just and reasonable and setting the matter for hearing. A settlement was reached and the Company, in association with its agreement for the sale of MountainWest to Williams, and terms related to the resolution of this rate case matter, recorded a charge of $28.4 million in the first quarter of 2023, included in Goodwill impairment and loss on sale on the Company's Consolidated Statements of Income. The rate case settlement was approved and the $28.4 million was paid in the third quarter of 2023.

PGA Filings

The rate schedules in all of Southwest's service territories contain provisions that permit adjustments to rates as the cost of purchased gas changes. These deferred energy provisions and purchased gas adjustment clauses are collectively referred to as "PGA" clauses. Differences between gas costs recovered from customers and amounts paid for gas by Southwest result in over- or under-collections. Balances are recovered from or refunded to customers on an ongoing basis with interest. As of December 31, 2023, under-collections in each of Southwest's service territories resulted in an asset of approximately $552.9 million on the Company's and Southwest's Consolidated Balance Sheets. In the latter part of 2022 and continuing into January 2023, the market price of natural gas spiked due to numerous market forces including historically low storage levels, unexpected upstream pipeline maintenance events, and cold weather conditions across the western region, increasing the balance further during that time as a result. See also *Deferred Purchased Gas Costs* in **Note 1 - Background, Organization, and Summary of Significant Accounting Policies** in Item 8.

Filings to change rates in accordance with PGA clauses are subject to audit by state regulatory commission staffs. PGA changes impact cash flows, but have no direct impact on operating margin. However, gas cost deferrals and recoveries can impact comparisons between periods of individual consolidated income statement components. These include Regulated operations revenues, Net cost of gas sold, Net interest deductions, and Other income (deductions).

The following table presents Southwest's outstanding PGA balances receivable at the end of its two most recent fiscal years:

	December 31,	
(Thousands of dollars)	2023	2022
Arizona	$ 251,416	$ 292,472
Northern Nevada	45,757	27,384
Southern Nevada	218,761	122,959
California	36,951	7,305
	$ 552,885	$ 450,120

Arizona PGA Filings. In Arizona, Southwest calculates the change in the gas cost component of customer rates monthly (to allow for timely refunds to/recoveries from customers), utilizing a rolling twelve-month average. During 2023, the GCBA continued with a surcharge in order to recover the under-collected balance, including an increased rate mechanism that could continue for up to two years, as described above.

California Gas Cost Filings. In California, a monthly gas cost adjustment based on forecasted monthly prices is utilized. Monthly adjustments modeled in this fashion provide the timeliest recovery of gas costs in any Southwest jurisdiction.

Nevada Gas Cost Filings. In November 2023, Southwest filed to adjust its quarterly Deferred Energy Account Adjustment rate, which is based upon a twelve-month rolling average, in addition to requesting adjusted Base Tariff Energy rates, both of which were most recently approved effective October 2023. New rates associated with the November 2023 filing became effective January 2024. These new rates are intended to address the outstanding balances over a twelve-month period.

Gas Price Volatility and Mitigation

To mitigate price volatility to its customers, Southwest periodically enters into fixed-price term contracts under its volatility mitigation programs for up to 25% of the California jurisdictions' annual normal weather supply needs and to a limited extent, in the Arizona jurisdiction. For the 2023/2024 heating season, contracts contained in the fixed-price portion of the supply portfolio ranged from approximately $5.60 to approximately $7.50 per dekatherm. In consultation with its regulators, Southwest does not currently plan to make any fixed-price term purchases in other than California, nor to enter into swap agreements. Southwest's natural gas purchases, not covered by fixed-price contracts, are under variable-price contracts with firm quantities, or on the spot market. The contract price for these contracts is either determined at the beginning of each month to reflect the published first-of-month index price, or at market prices based on a published daily price index. In each case, the index price is not published or known until the purchase period begins. Plans with regard to fixed-price portfolios or other hedging programs could change as Southwest monitors conditions and collaborates with regulatory commissions over time.

Pipeline Safety Regulation

Effective January 1, 2023, the PUCN issued an order revising its regulations to require annual leak surveys (previously every three years) of all distribution pipelines transporting natural gas and/or liquefied petroleum. In conjunction with this change, the PUCN authorized the establishment of a regulatory asset account to track the incremental cost of compliance related to the new regulation, for consideration in a future general rate case filing.

Effective October 2022, the Pipeline and Hazardous Materials Safety Administration ("PHMSA") issued final rules that amended the federal pipeline safety regulations applicable to the valve installation and minimum rupture detection standards for gas transmission pipelines. Southwest has integrated the requirements of this new rule into its operating procedures. In addition, in August 2022, PHMSA issued final rules that amended the federal pipeline safety regulations applicable to the integrity management of gas transmission pipelines, effective May 2023. Southwest also integrated the requirements of this new rule into its operating procedures related to repair criteria, integrity management improvements, cathodic protection, management of change, and other related gas transmission integrity related amendments.

PHMSA published two significant notices of proposed rulemaking ("NPRMs") in 2023. The first is the Pipeline Leak Detection and Repair NPRM, which aims to mandate methane emissions reductions through the revision of natural gas operator operations and maintenance procedures, the promulgation of Advanced Leak Detection equipment, and accelerated leak repair criteria. The proposed rulemaking is expected to be published in mid-2024. Southwest is evaluating potential impacts from this NPRM.

The second item, the Safety of Gas Distribution NPRM, resulted from congressional mandates and National Transportation Safety Board safety recommendations from a 2018 incident in the Merrimack Valley, in Massachusetts. This NPRM is expected to be finalized in late 2024 and includes provisions that are primarily aimed at mitigating overpressurization incidents, particularly on utilization pressure systems. Southwest does not own or operate any utilization pressure systems and is monitoring the progress and potential impacts, if any, of this NPRM.

Southwest continues to monitor changing pipeline safety legislation and participates, to the extent possible, in providing public comments and works with industry associations, such as the American Gas Association, in shaping regulatory language associated with these new mandates and reporting requirements. Additionally, management works with state and federal commissions to which Southwest, including its subsidiaries, are subject, to develop customer rates that are responsive to incremental costs of compliance. However, due to the timing of when rates are implemented in response to new requirements, and as additional rules are developed, compliance requirements could impact expenses and the timing and amount of capital expenditures for Southwest.

Capital Resources and Liquidity

Historically, cash on hand and cash flows from operations have provided a substantial portion of cash used in investing activities (primarily construction expenditures and property additions). In recent years, Southwest has undertaken substantial pipe replacement activities to fortify system integrity and reliability, including on an accelerated basis in association with certain gas infrastructure replacement programs. This activity has necessitated the issuance of both debt and equity securities to supplement cash flows from operations. Southwest Gas Holdings, Inc. and Southwest's capitalization strategy is to maintain an appropriate balance of equity and debt to preserve investment-grade credit ratings, which helps minimize interest costs. Investment-grade credit ratings have been maintained by Southwest Gas Holdings, Inc. and Southwest.

Cash Flows

Southwest Gas Holdings, Inc.:

Operating Cash Flows. Cash flows provided by consolidated operating activities increased $102 million between 2023 and 2022. Customarily, fluctuations in purchased gas cost, including amounts incurred and accrued or deferred, as well as impacts related to when amounts are incorporated into customer bills to recover or return deferred balances, have a significant influence on operating cash flows. Other changes in components of working capital also influenced operating cash flows, including the timing and amount of accounts payable and other current asset and liability balances, such as regulatory balances. While earnings were substantially higher in 2023, that change was notably influenced by noncash changes from a recognized goodwill impairment and loss on sale associated with MountainWest, primarily recognized in 2022, prior to the sale closing that took place in early 2023.

The corporate and administrative expenses/outflows for Southwest Gas Holdings, Inc. in 2023 include costs associated with the Centuri separation, and in 2022 include shareholder activism and strategic review costs, with the most significant individual amount being the interest/financing costs associated with the earlier MountainWest acquisition, collectively net of tax impacts.

Investing Cash Flows. Cash provided by consolidated investing activities increased $990 million in 2023 as compared to 2022. The overall increase was driven by $1.02 billion in proceeds received in connection with the MountainWest sale (which is net of cash sold), partially offset by an increase in capital expenditures in the natural gas distribution segment.

Financing Cash Flows. Net cash used in consolidated financing activities increased $1.1 billion in 2023 as compared to 2022. The overall increase was primarily due to the first quarter 2023 repayment ($1.1 billion) of the term loan originally entered into by Southwest Gas Holdings, Inc. in November 2021 in connection with the acquisition of MountainWest. Other impacts included proceeds from the issuance of common stock in underwritten public offerings in each period ($200 million lower in

the 2023 period than in the 2022 period), and a $550 million Term Loan Credit Agreement entered into by the Company in April 2023. A substantial portion of the term loan proceeds ($530 million) was contributed to Southwest as equity, which in turn was primarily used by Southwest to repay term loan indebtedness entered into to finance an escalation in purchased gas costs. Southwest also repaid the remaining balance ($225 million) associated with the March 2021 Term Loan. Other financing cash flows include borrowings and repayment under the companies' credit facilities.

The capital requirements and resources of the Company generally are determined independently for the individual business segments. Each business segment is generally responsible for securing its own financing sources. However, the holding company may raise funds through stock issuances or other external financing sources in support of each business segment.

Southwest Gas Corporation:

Operating Cash Flows. Cash flows provided by operating activities increased $107 million between 2023 and 2022 primarily attributable to an increase in net income and changes in working capital, including the impacts related to purchased gas costs (amounts incurred and accrued or deferred, as well as recovered from customers through the billing process).

Investing Cash Flows. Cash used in investing activities increased $116 million in 2023 as compared to 2022, primarily due to an increase in capital expenditures, as well as a decrease in customer advances. See also *2023 Construction Expenditures* below.

Financing Cash Flows. Net cash provided by financing activities increased $15 million in 2023 as compared to 2022. The modest increase included a number of mostly offsetting impacts, including $530 million in parent capital contributions during the second quarter of 2023, offset by the repayment of the $450 million term loan that was executed in January 2023 to finance the escalation in purchased gas costs. The $225 million March 2021 Term Loan was also repaid. Issuance of long-term debt during 2022 was approximately $900 million (including 4.05% notes due 2032 and 5.8% notes due 2027), while there was one new issuance in 2023 of $300 million in 5.45% notes due 2028. The prior year included the paydown/redemption of $275 million in maturing notes. Dividends paid and borrowing and repayment activity under the credit facility comprise the remaining activity between periods.

2023 Construction Expenditures

During the three-year period ended December 31, 2023, total gas plant in service increased from $8.4 billion to $10.1 billion, or at an average annual rate of 7%. Replacement, new business, and reinforcement work was a substantial portion of the plant increase during the three-year period. Customer growth also impacted expenditures as Southwest set approximately 119,000 meters during this time, which is reflected in new business.

During 2023, construction expenditures (through cash outlays) for Southwest were $762 million. The majority of these expenditures represented costs associated with replacement of existing transmission and distribution plant to fortify system integrity and reliability, as well as general plant additions. Cash flows from operating activities of Southwest were $392 million, providing approximately 43% of construction expenditures and dividend requirements of the natural gas operations segment. Other funding was provided by cash on hand, external financing activities, and funds from the existing credit facility.

2023 Financing Activity

In March 2023, the Company sold, through a prospectus supplement under its Prior Shelf Registration (as defined in **Note 7 - Common Stock)**, an aggregate of 4.1 million shares of common stock, at an underwritten public offering price of $60.12 per share, resulting in proceeds to the Company of $238.4 million, net of the underwriters' discount of $8.3 million. These net proceeds were used to repay a portion of the outstanding borrowings under the 364-day term loan credit agreement to earlier fund the MountainWest acquisition.

Net proceeds received under the Dividend Reinvestment and Stock Purchase Plan during 2023 were approximately $15.2 million, from the issuance of approximately 264,000 shares of Southwest Gas Holdings, Inc. common stock.

Natural Gas Distribution Segment Construction Expenditures, Debt Maturities, and Financing

Management estimates natural gas distribution segment construction expenditures during the three-year period ending December 31, 2026 will be approximately $2.4 billion. Of this amount, approximately $830 million is expected to be incurred in 2024. Southwest plans to continue to request regulatory support to undertake projects, or to accelerate projects as necessary, for the improvement of system flexibility and reliability, or to expand, where relevant, to unserved or underserved areas. Southwest may expand existing, or initiate new, programs. Significant replacement activities are expected to continue well beyond the next few years. During the three-year period ending December 31, 2026, cash flows from operating activities of Southwest are expected to provide approximately 78% of the funding for gas operations of Southwest and total construction expenditures and dividend requirements. Any additional cash requirements, including construction-related, and any paydown or

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refinancing of debt, are expected to be provided by credit facilities, equity contributions from the Company, and/or other external financing sources. During the three-year period, Southwest will be required to renew or otherwise address its credit facility, but will otherwise only have $75 million of long-term debt maturing. The timing, types, and amounts of any additional external financings will be dependent on a number of factors, including the cost of gas purchases, conditions in the capital markets, timing and amounts of rate relief, timing and amounts of surcharge collections from or amounts returned to customers related to other regulatory mechanisms, as well as growth levels in Southwest's service areas and earnings. External financings could include the issuance of debt securities, bank and other short-term borrowings, and other forms of financing.

Liquidity

Several factors (some of which are out of the control of the Company) that could significantly affect liquidity in future years include: activities from the planned separation of Centuri, variability of natural gas prices, changes in ratemaking policies of regulatory commissions, regulatory lag, customer growth in the natural gas distribution segment, the ability to access and obtain capital from external sources, the level of interest rates, changes in income tax laws, pension funding requirements, inflation, and the level of earnings. Natural gas prices and related gas cost recovery rates, as well as plant investment, have historically had the most significant impact on liquidity, aside from the Company's recent strategic undertakings, including acquisition and disposition activity.

On an interim basis, Southwest defers over- or under-collections of gas costs to PGA balancing accounts. In addition, Southwest uses this mechanism to either refund amounts over-collected or recoup amounts under-collected as compared to the price paid for natural gas during the period since the last PGA rate change went into effect. At December 31, 2023, the combined balance in the PGA accounts totaled an under-collection of $552.9 million. The market price of natural gas spiked most recently as a result of numerous market forces including historically low storage levels, unexpected upstream pipeline maintenance events, and cold weather conditions across the western region in the latter part of 2022 and continuing into January 2023. We may be required to incur additional indebtedness in connection with future spikes in natural gas prices as a result of extreme weather events or otherwise. See **PGA Filings** for more information.

In March 2023, Southwest issued $300 million aggregate principal amount of 5.45% Senior Notes. The notes will mature in March 2028. Southwest used the net proceeds to repay amounts outstanding under Southwest's credit facility and the remainder for general corporate purposes.

In April 2023, Southwest Gas Holdings, Inc. entered into a $550 million Term Loan Credit Agreement that matures in October 2024. Southwest Gas Holdings, Inc. utilized a majority of the proceeds to make an equity contribution to Southwest. On April 17, 2023, Southwest utilized the equity contribution to repay, in full, amounts outstanding under its $450 million 364-day term loan entered into in January 2023, with the remainder of the equity contribution used for working capital and general corporate purposes. The Company intends to refinance the Term Loan Credit Agreement at or prior to its maturity.

Southwest Gas Holdings, Inc. has a credit facility with a borrowing capacity of $300 million that expires in December 2026. This facility is intended for short-term financing needs. At December 31, 2023, $78.5 million was outstanding under this facility. The maximum amount outstanding during 2023 occurred during the first quarter and was $181 million.

Southwest has a credit facility with a borrowing capacity of $400 million, which expires in April 2025. Southwest designates $150 million of the facility for long-term borrowing needs and the remaining $250 million for working capital purposes. The maximum amount outstanding during 2023 occurred during the first quarter and was $225 million ($150 million outstanding on the long-term portion of the credit facility, none under the commercial paper program, and $75 million outstanding on the short-term portion). As of December 31, 2023, no borrowings were outstanding on the long-term portion of the credit facility (no borrowings were outstanding under the commercial paper program), and no borrowings were outstanding on the short-term portion. The credit facility has been used as necessary to meet liquidity requirements, including temporarily financing under-collected PGA balances, meeting the refund needs of over-collected balances, or temporarily funding capital expenditures. The credit facility has generally been adequate for Southwest's working capital needs outside of funds raised through operations and other types of external financing.

Southwest has a $50 million commercial paper program. Any issuance under the commercial paper program is supported by the revolving credit facility and, therefore, does not represent additional borrowing capacity. Any borrowing under the commercial paper program is designated as long-term debt. Interest rates for the commercial paper program are calculated at the then current commercial paper rate. At December 31, 2023, there were no borrowings outstanding under this program.

Centuri has a $1.545 billion secured revolving credit and term loan multi-currency facility. The capacity of the line of credit is $400 million with related amounts borrowed and repaid available to be re-borrowed; the term loan portion of the facility has a limit of $1.145 billion. The term loan facility expires on August 27, 2028 and the revolving credit facility expires on August 27, 2026. This multi-currency facility allows the borrower to request loan advances in either Canadian dollars or U.S. dollars. The obligations under the credit agreement are secured by present and future ownership interests in substantially all direct and

indirect subsidiaries of Centuri, substantially all of the tangible and intangible personal property of each borrower, certain of their direct and indirect subsidiaries, and all products, profits, and proceeds of the foregoing. Centuri assets securing the facility at December 31, 2023 totaled $2.5 billion. The maximum amount outstanding on the combined facility during 2023 was $1.184 billion, which occurred in the second quarter, at which point $1 billion was outstanding on the term loan facility. As of December 31, 2023, $77 million was outstanding on the revolving credit facility, in addition to $994.2 million outstanding on the term loan portion of the facility. Also at December 31, 2023, there was approximately $246 million, net of letters of credit, available for borrowing under the line of credit.

In November 2023, Centuri amended the financial covenants of the revolving credit facility (the "Centuri Credit Facility Amendment") to decrease the minimum interest coverage ratio during the fiscal quarters ending March 31, 2024 through December 31, 2024 to a ratio of 2.00 to 1.00. The Credit Facility Amendment also increases the maximum net leverage ratio financial covenant for the fiscal quarters ending March 31, 2024 through September 30, 2024 to a ratio of 5.50 to 1.00 and for the fiscal quarter ending December 31, 2024 to a ratio of 5.00 to 1.00. In addition, in the event that a "Qualified IPO" is consummated prior to March 31, 2025, the maximum net leverage ratio financial covenant will be reduced based on the amount of net proceeds received from such Qualified IPO. The Centuri Credit Facility Amendment did not modify any terms of the term loan facility. Under these restrictions and the financial covenants of the amended revolving credit facility, Centuri's ability to pay dividends to Southwest Gas Holdings, Inc. is limited. However, such dividends are not customarily relied upon in order for Southwest Gas Holdings, Inc. to satisfy dividends declared for its stockholders.

In the first quarter of 2023, the Company paid off (primarily with proceeds from the MountainWest sale) the remaining balance on the $1.6 billion term loan entered into in November 2021 in connection with the acquisition of MountainWest.

Credit Ratings

Credit ratings apply to debt securities such as bonds, notes, and other debt instruments and do not apply to equity securities such as common stock. Borrowing costs and the ability to raise funds are directly impacted by the credit ratings of the Company. Credit ratings issued by nationally recognized ratings agencies (Moody's Investors Service, Inc. ("Moody's"), Standard & Poor's Ratings Services ("Standard & Poor's"), and Fitch Ratings ("Fitch")) provide a method for determining the creditworthiness of an issuer. Credit ratings are important because long-term debt constitutes a significant portion of total capitalization. These credit ratings are a factor considered by lenders when determining the cost of current and future debt for each debt obligor (i.e., generally the better the rating, the lower the cost to borrow funds). The current unsecured long-term debt ratings of the Company and Southwest are considered investment grade, and Centuri's ratings are considered non-investment grade.

	Moody's (1)	Standard & Poor's (2)	Fitch (3)
Southwest Gas Holdings, Inc.:			
Issuer rating	Baa2	BBB-	BBB
Outlook	Stable	Positive Outlook	Rating Watch Negative
Last reaffirmed	December 2023	December 2023	September 2023
Southwest Gas Corporation:			
Senior unsecured long-term debt	Baa1	BBB	A-
Outlook	Stable	Positive Outlook	Stable
Last reaffirmed	December 2023	October 2023	September 2023
Centuri Group, Inc.:			
Issuer rating	Ba3	B+	N/A
Outlook	Negative	CreditWatch Developing	N/A
Last reaffirmed	December 2023	October 2023	N/A

(1) Moody's debt ratings range from Aaa (highest rating possible) to C (lowest quality, usually in default). A numerical modifier of 1 (high end of the category) through 3 (low end of the category) is included with the rating to indicate the approximate rank of a company within the range.
(2) Standard & Poor's ("S&P") debt ratings range from AAA (highest rating possible) to D (obligation is in default). The ratings from 'AA' to 'CCC' may be modified by the addition of a plus "+" or minus "-" sign to show relative standing within the major rating categories.
(3) Fitch debt ratings range from AAA (highest credit quality) to D (defaulted debt obligation). The modifiers "+" or "-" may be appended to a rating to denote relative status within major rating categories.

A credit rating, including the foregoing, is not a recommendation to buy, sell, or hold a debt security, but is intended to provide an estimation of the relative level of credit risk of debt securities, and is subject to change or withdrawal at any time by the rating agency. Numerous factors, including many that are not within management's control, are considered by the ratings agencies in connection with the assigning of credit ratings.

None of Southwest's debt instruments have credit triggers or other clauses that result in default if these bond ratings are lowered by rating agencies. Interest and fees on certain debt instruments are subject to adjustment depending on Southwest's bond ratings. Certain debt instruments are subject to a leverage ratio cap, and the 6.1% Notes due 2041 are also subject to a minimum net worth requirement. At December 31, 2023, Southwest was in compliance with all of its covenants. Under the most restrictive of the financial covenants, approximately $3.9 billion in additional debt could be issued and the leverage ratio requirement would still be met. At least $2.6 billion of cushion in equity relating to the minimum net worth requirement exists at December 31, 2023. No specific limitations as to dividends exist under the collective covenants. None of the debt instruments contain material adverse change clauses.

At December 31, 2023, Southwest Gas Holdings, Inc. was also in compliance with all of the covenants of its credit facility and Term Loan Credit Agreement. Interest and fees on its credit facility and 364-day Term Loan are subject to adjustment depending on its senior debt ratings. The credit facility and 364-day Term Loan are subject to a leverage ratio cap. Under the most restrictive of the financial covenants, approximately $2.7 billion in additional debt could be issued while still meeting the leverage ratio requirement. No specific limitations as to dividends exist under the collective covenants. The credit facility and 364-day Term Loan do not contain material adverse change clauses.

Certain Centuri debt instruments have leverage ratio caps and interest coverage ratio requirements. At December 31, 2023, Centuri was in compliance with all of its covenants. Under the most restrictive of the covenants, Centuri could issue approximately $108 million in additional debt and meet the leverage ratio requirement. Centuri has approximately $15 million of cushion relating to the minimum interest coverage ratio requirement. Centuri's revolving credit and term loan facility is secured by underlying assets of the utility infrastructure services segment. Centuri also has restrictions on how much it could give to the Company in cash dividends, which is limited to a calculated available amount, generally defined as 50% of its rolling twelve-month consolidated net income adjusted for certain items, such as parent contributions inflows, Linetec redeemable noncontrolling interest payments, or dividend payments, among other adjustments, as applicable. Under these restrictions and the financial covenants of the amended revolving credit facility, Centuri's ability to pay dividends to Southwest Gas Holdings, Inc. is limited. However, such dividends are not customarily relied upon in order for Southwest Gas Holdings, Inc. to satisfy dividends declared for its stockholders.

Inflation

Inflation can impact results of operations for each of the Company's business segments, and while the level of increase has waned over the past year, the level of improvement is only in relation to the multi-decade high inflation in 2022. Labor, employee benefits, fuel, natural gas, professional services, and construction costs are the categories most significantly impacted by inflation. Changes to the cost of gas are generally recovered through PGA mechanisms and do not directly impact earnings overall, and indirectly, primarily from interest carrying charges on accumulated balances. Labor, employee benefits, and professional services are components of the cost of service, and gas infrastructure costs are the primary component of utility rate base. In order to recover increased costs, and earn a fair return on rate base, general rate cases or other procedural filings are made by our regulated operations, when deemed necessary, for review and approval by regulatory authorities. Regulatory lag, that is, the time between the date increased costs are incurred and the time such increases are recovered through the ratemaking process, can negatively impact earnings. See **Rates and Regulatory Proceedings** for a discussion of recent rate case proceedings.

Contractual Obligations

Our largest contractual obligations as of December 31, 2023 consisted of:

- Debt-related obligations for scheduled principal payments, other borrowings, and interest payments over the life of the debt. Debt obligations are included in our consolidated balance sheets. See **Note 8 - Debt** for additional information.
- Centuri operating and finance leases are included in our consolidated balance sheets and represent multi-year obligations for buildings, land, equipment, and vehicles. See **Note 2 - Regulated Operations Plant and Leases** for additional information.
- Southwest has gas purchase obligations that include fixed-price and variable-rate gas purchase contracts. Variable-rate contracts reflect minimum contractual obligations with estimation in pricing based on market information. Actual future variable-rate purchase commitments may vary depending on market prices at the time of delivery and values may change significantly from their estimated amounts. Certain other variable-rate contracts allow for variability in quantities for which associated demand charges are included in the gas purchase obligations based on the maximum daily quantities available under the contracts. Renewable natural gas purchase obligations, in which the

commencement dates are not specifically determinable and the volumes and contract prices are inestimable until certain contract provisions are met, are excluded from gas purchase obligations. As of December 31, 2023, gas purchase obligations of $137 million are payable within the next 12 months.

- Southwest has pipeline capacity and storage contracts for firm transportation service, both on a short- and long-term basis with several companies in all of its service territories, some with terms extending to 2044. Southwest also has interruptible contracts in place that allow additional capacity to be acquired should an unforeseen need arise. Costs associated with these pipeline capacity contracts, similar to gas purchase/supply arrangements, are a component of the cost of gas sold and are recovered from customers primarily through the PGA mechanisms. As of December 31, 2023 pipeline capacity and storage obligations of $72.8 million are payable within 12 months.
- Other commitments associated with noncancellable obligations consist primarily of software licensing, equipment, outsourced processing subscriptions, and operating and/or maintenance agreements, as applicable.
- Estimated funding for pension and other postretirement benefits during calendar year 2024 is $23 million. Funding amounts for years beyond 2024 are not currently known.

Recently Issued Accounting Standards Updates

The Financial Accounting Standards Board routinely issues Accounting Standards Updates. See **Note 1 - Background, Organization, and Summary of Significant Accounting Policies** for more information regarding these Accounting Standards Updates and their potential impact on the Company's and Southwest's financial position, results of operations, and disclosures.

Application of Critical Accounting Policies and Estimates

A critical accounting policy is one that is very important to the portrayal of the financial condition and results of a company, and requires the most difficult, subjective, or complex judgments of management. The need to make estimates about the effect of items that are uncertain is what makes these judgments difficult, subjective, and/or complex. Management makes subjective judgments about the accounting and regulatory treatment of many items and bases its estimates on historical experience and on various other assumptions that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments. These estimates may change as new events occur, as more experience is acquired, as additional information is obtained, and as the operating environment changes. While management may make many estimates and judgments, many would not be materially altered, or provide a material impact to the financial statements taken as a whole, if different estimates, or means of estimation were employed. The following are accounting policies that are deemed critical to the financial statements. For more information regarding significant accounting policies, see notes to the consolidated financial statements.

Regulatory Accounting

Natural gas distribution operations are subject to the specific regulation of the ACC, PUCN, CPUC, or the FERC, as applicable. The accounting policies of the Company and Southwest conform to U.S. GAAP applicable to rate-regulated entities and reflect the effects of the ratemaking process. As such, the Company and Southwest are allowed to defer, as regulatory assets, costs that otherwise would be expensed, if it is probable that future recovery from customers (subject to our rate-regulated operations) will occur. Companies are also permitted to recognize, as regulatory assets, amounts associated with various revenue decoupling mechanisms, as long as the requirements of alternative revenue programs permitted under U.S. GAAP continue to be met. Management reviews the regulatory assets to assess their ultimate recoverability within the approved regulatory guidelines. If rate recovery is no longer probable, due to competition or the actions of regulators, write-off of the related regulatory asset (which would be recognized as current-period expense) is required. Regulatory liabilities are recorded if it is probable that revenues will be reduced for amounts that will be refunded to customers through the ratemaking process. The timing and inclusion of costs in rates is often delayed (regulatory lag) and results in a reduction of current-period earnings. Discontinuing the application of this method of accounting for regulatory assets and liabilities or changes in the accounting for our various regulatory mechanisms could significantly increase our operating expenses as fewer costs would likely be capitalized or deferred on the balance sheet, which could reduce our net income. Factors influencing application of this policy include decisions of regulatory authorities, implementation of new regulations or regulatory mechanisms, assessing the probability of the recoverability of deferred costs, and continuing to meet the criteria of a rate regulated entity for accounting purposes. Refer also to **Note 5 - Regulatory Assets and Liabilities**.

Revenue Recognition - Utility Infrastructure Services

Centuri generally has two types of agreements with its customers: MSAs and bid contracts. Our MSAs and bid contracts are characterized as either fixed-price, unit-price, or time-and-materials ("T&M") based for revenue recognition purposes. Most of our contracts are considered to have a single performance obligation. Performance obligations related to fixed-price contracts are satisfied over time because our performance typically creates or enhances an asset that the customer controls. For fixed-price contracts, we recognize revenue as performance obligations are satisfied and control of the promised good and/or service is transferred to the customer by measuring the progress toward complete satisfaction of the performance obligation(s) using an input method. Input methods result in the recognition of revenue based on the entity's effort to satisfy the performance

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obligation relative to the total expected effort to satisfy the performance obligation. Under the cost-to-cost method, costs incurred to-date are generally the best depiction of the transfer of control. For unit-price and T&M contracts, an output method is used to measure progress towards satisfaction of a performance obligation.

Actual revenue and project costs can vary, sometimes substantially, from previous estimates due to changes in a variety of factors, including unforeseen circumstances not originally contemplated. These factors, along with other risks inherent in performing fixed-price contracts, may cause actual revenue and gross profit for a project to differ from previous estimates and could result in reduced profitability or losses on projects. Changes in these factors may result in revisions to estimates of costs and earnings. Revisions to estimates of costs and earnings during the course of work are reflected in the accounting period in which the facts requiring revision become known. At the time a loss on a contract becomes known or is anticipated, the entire amount of the estimated ultimate loss is recognized in the financial statements. Once identified, these types of conditions continue to be evaluated for each project throughout the project term and ongoing revisions in management's estimates of contract value, contract cost and contract profit are recognized as necessary in the period determined.

Accrued Utility Revenues

Revenues related to the sale and/or delivery of natural gas are generally recorded when natural gas is delivered to customers. However, the determination of natural gas sales to individual customers is based on the reading of their meters, which is performed on a systematic basis throughout the month. At the end of each month, operating margin associated with natural gas service that has been provided but not yet billed is accrued. This accrued utility revenue is estimated each month based primarily on applicable rates, number of customers, rate structure, analyses reflecting significant historical trends, seasonality, and experience. The interplay of these assumptions can impact the variability of the accrued utility revenue estimates. Additionally, all Southwest rate jurisdictions have decoupled rate structures, limiting variability due to extreme weather conditions.

Accounting for Income Taxes

The Company is subject to income taxes in the U.S. and Canada. Income tax calculations require estimates due to known future tax rate changes, book to tax differences, and uncertainty with respect to regulatory treatment of certain property items. The asset and liability method of accounting is utilized for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Regulatory tax assets and liabilities are recorded to the extent management believes they will be recoverable from, or refunded to, customers in future rates. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Management regularly assesses financial statement tax provisions to identify any change in the regulatory treatment or tax-related estimates, assumptions, or enacted tax rates that could have a material impact on cash flows, financial position, and/or results of operations.

Accounting for Pensions and Other Postretirement Benefits

Southwest has a noncontributory qualified retirement plan with defined benefits covering substantially all employees hired on or before December 31, 2021. In addition, there is a separate unfunded supplemental retirement plan which is limited to officers hired on or before December 31, 2021. Pension obligations and costs for these plans are affected by the amount and timing of cash contributions to the plans, the return on plan assets, discount rates, and by employee demographics, including age, compensation, and length of service. Changes made to the provisions of the plans may also impact current and future pension costs. Actuarial formulas are used in the determination of pension obligations and costs and are affected by actual plan experience and assumptions about future experience. Key actuarial assumptions include the expected return on plan assets, the discount rate used in determining the projected benefit obligation and pension costs, and the assumed rate of increase in employee compensation. Relatively small changes in these assumptions (particularly the discount rate) may significantly affect pension obligations and costs for these plans. For example, a change of 0.25% in the discount rate assumption would change the pension plan projected benefit obligation by approximately $34 million, with no impact on future pension expense. A change of 0.25% in the employee compensation assumption would change the pension obligation by approximately $10 million and expense by $2 million. A 0.25% change in the expected asset return assumption would change pension expense by approximately $3 million (but would have no impact on the pension obligation). Beginning in 2024, a treasury futures overlay associated with interest rates is being implemented, intended to be responsive to changing discount rates over time and to retain at least a 90% funded ratio; however, there is no guarantee that the mechanism implemented will achieve these intentions.

Given the recent interest rate environment, and despite escalations that took place earlier in the year, the discount rate applicable to the pension plan decreased from 5.25% (at the end of 2022) to 5.00% as of December 31, 2023. The methodology utilized to determine the discount rate was consistent with prior years. A decrease in the discount rate increases the pension obligation in the current year and expense in the year ahead. During the fourth quarter of 2023, the asset mix was adapted to a balanced portfolio between debt and equity securities. Southwest maintained the return on assets of 6.75% expected over the

long term supported by available data. The salary escalation assumption was modestly increased from 3.25% to 3.50% given recent and expected salary changes and market conditions over a longer-term horizon. Southwest plans to substantially decrease its funding in 2024 compared to historical funding levels, which were intended to fund along the trajectory of benefits paid out of the plan. However, Southwest monitors conditions overall, and no less frequently than annually, assesses funding to ensure a funded ratio overall exists for retirees currently receiving benefits and for eligible employees hired before 2022. The pension is approximately 94% funded as of December 31, 2023, and due to the foregoing updated conditions, pension expense is expected to be higher in 2024 (approximately $7 million in total). That amount is higher than in 2023, but substantially lower than in recent earlier years when the discount rate reflected a very low-rate environment. Future years' expense level movements (up or down) will continue to be greatly influenced by long-term interest rates (and starting in 2024, the related functioning of the treasury interest futures overlay), asset returns, and funding levels.

Goodwill

Goodwill is assessed for impairment annually each October, or more frequently, if events or changes in circumstances indicate an impairment may have occurred before that time. As permitted under accounting guidance on testing goodwill for impairment, we perform either a qualitative assessment or a quantitative assessment of each of our reporting units based on management's judgment. Adjustment of values would only occur if conditions of impairment were deemed to be permanent. With respect to our qualitative assessments, we consider events and circumstances specific to us, such as macroeconomic conditions, industry and market considerations, cost factors, and overall financial performance, when evaluating whether it is more likely than not that the fair values of our reporting units are less than their respective carrying amounts.

For any required quantitative assessments of goodwill, we generally determine the fair value of our reporting units using a weighted combination of the income approach (discounted cash flow model) and market multiple valuation techniques (market guideline transaction and market guideline public company method). Under the discounted cash flow method, we determine fair value based on the estimated future cash flows for each reporting unit, discounted to present value using a risk-adjusted industry weighted average cost of capital, which reflects the overall level of inherent risk for each reporting unit and the rate of return an outside investor would expect to earn. Under the market guideline transaction and market guideline public company methods, we determine the estimated fair value for each reporting unit by applying transaction multiples and public company multiples, respectively, to each reporting unit's historical and projected results. The transaction multiples are based on observed purchase transactions for similar businesses adjusted for size, volatility, and risk. The public company multiples are based on peer group multiples adjusted for size, volatility, and risk.

The assumptions we use in our quantitative assessments of goodwill (if required), including discount rates, market multiples, and estimates of terminal value, among others, are subject to uncertainty, and declines in the future performance of our reporting units and changing business conditions could result in the recognition of impairment charges, which could be significant. In our quantitative assessments, we generally perform a sensitivity analysis for discount rates and other factors, as applicable.

The Company's reporting units are the same as its segments for purposes of impairment evaluation. In December 2022, the Company announced the planned sale of MountainWest. The Board determined to sell MountainWest in order to simplify the business. As the consideration to be received for the sale was below the equity interests in MountainWest, the Company recorded held for sale losses, including a pre-tax goodwill impairment loss of $449.6 million in the fourth quarter of 2022. During the first quarter of 2023, the Company identified an approximately $21 million misstatement related to its initial estimation of the loss recorded upon reclassifying MountainWest as an asset held for sale during the year ended December 31, 2022. Consequently, the impairment loss for the year ended December 31, 2022 was understated by that amount, which was corrected in the first quarter of 2023. See **Note 15 - Acquisitions and Dispositions** for additional information.

In connection with the annual goodwill assessment for 2023, we performed a qualitative impairment assessment of our reporting units, which indicated that the fair value of each reporting unit was greater than its carrying value, including goodwill. Accordingly, a quantitative goodwill impairment test was not required, and no goodwill impairment was recognized in 2023, other than the $21 million for the MountainWest sale, as noted above.

Held for Sale

The Company and Southwest recognize the assets and liabilities of a disposal group as held for sale in the period (i) they have approved and committed to a plan to sell the disposal group, (ii) the disposal group is available for immediate sale in its present condition, (iii) an active program to locate a buyer and other actions to sell the disposal group have been initiated, (iv) it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. The disposal group that is classified as held for sale is initially measured at the lower of its carrying value or fair value less any costs to sell. Any loss resulting from this measurement is recognized in the period in which the held for sale criteria are met. Upon designation as held for sale, the Company stops recording depreciation expense and assesses the fair value of the disposal group less any costs to sell at each reporting period and until it is no longer classified as held for sale.

In December 2022, the Company entered into a definitive agreement to sell 100% of MountainWest in an all-cash transaction to Williams for $1.5 billion in total enterprise value, subject to certain adjustments, which closed on February 14, 2023. The Company determined that MountainWest met the criteria to be characterized as held for sale as of December 31, 2022. See **Note 15 - Acquisitions and Dispositions** for additional information.

In the first quarter of 2023, the Company and Southwest concluded that certain assets associated with its previous corporate headquarters met the criteria to be classified as held for sale. As a result, the Company and Southwest reclassified approximately $27 million from Other property and investments to Current assets held for sale on their respective Consolidated Balance Sheets at that time. During 2023, the Company and Southwest recorded total estimated losses of $5.2 million related to the former headquarters based upon an updated fair value less costs to sell, which is recorded in Other income (deductions). The sale was completed in January 2024.

Business Combinations

In accordance with U.S. GAAP, the assets acquired and liabilities assumed in an acquired business are recorded at their estimated fair values on the date of acquisition. The amount of goodwill initially recognized in a business combination is based on the excess of the purchase price of the acquired company over the fair value of the other assets acquired and liabilities assumed. The determination of these fair values requires management to make significant estimates and assumptions. For example, assumptions with respect to the timing and amount of future revenues and expenses associated with an asset are used to determine its fair value, but the actual timing and amount may differ materially, resulting in impairment of the asset's recorded value. In some cases, the Company engages independent third-party valuation firms to assist in determining the fair values of acquired assets and liabilities assumed. Critical assumptions used to value the trade name and customer relationship intangibles include, but are not limited to, future expected cash flows of the acquired business, trademarks, trade names, customer relationships, technology obsolescence, attrition rates, royalty rates, and discount rates. In addition, uncertain tax positions and tax-related valuation allowances assumed in connection with a business combination are initially estimated at the acquisition date. These items are reevaluated quarterly, based upon facts and circumstances that existed at the acquisition date with any adjustments to the preliminary estimates being recorded to goodwill, provided that the Company is within the twelve-month measurement period allowed by authoritative guidance. Subsequent to the measurement period or the final determination of the estimated value of the tax allowance or contingency, changes to these uncertain tax positions and tax-related valuation allowances will affect the provision for income taxes in the Consolidated Statements of Income, and could have a material impact on the Company's results of operations and financial position. Refer also to **Note 15 - Acquisitions and Dispositions**.

Certifications

The SEC requires the filing of certifications of the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") of registrants regarding reporting accuracy, disclosure controls and procedures, and internal control over financial reporting as exhibits to periodic filings. The CEO and CFO certifications for the period ended December 31, 2023 are included as exhibits to this Annual Report on Form 10-K filed with the SEC.

Forward-Looking Statements

This annual report contains statements which constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 ("Reform Act"). All statements other than statements of historical fact included or incorporated by reference in this annual report are forward-looking statements, including, without limitation, statements regarding the Company's plans, objectives, goals, intentions, projections, strategies, future events or performance, negotiations, and underlying assumptions. The words "may," "if," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," "project," "continue," "forecast," "intend," "endeavor," "promote," "seek," "pursue," and similar words and expressions are generally used and intended to identify forward-looking statements. For example, statements regarding plans to refinance near-term maturities or renew credit facilities, to separate from Centuri by means of an IPO or a spin-off from the Company, by sell-down or other means or at all, those regarding operating margin patterns, customer growth, the composition of our customer base, price volatility, seasonal patterns, the ability to pay debt, the Company's COLI strategy, the magnitude of future acquisition or divestiture purchase price true-ups or post-closing payments and related impairments or losses related thereto, replacement market and new construction market, including opportunities believed to be available to Centuri in the utility infrastructure replacement market, the purpose and intentions regarding investment in replacement gas plant infrastructure by Southwest, expectation that customers will continue service once established, the frequency of filing rate cases, impacts from pandemics, including on our employees, customers, business, financial position, earnings, bad debt expense, work deployment and related uncertainties, expected impacts of valuation adjustments associated with any redeemable noncontrolling interests, the profitability of storm work, mix of work, or absorption of fixed costs by larger infrastructure services customers including Southwest, the impacts of U.S. tax reform including disposition in any regulatory proceeding and bonus depreciation tax deductions, expectations of a tax-free nature of a separation of Centuri to the Company or its stockholders, the impact of recent Pipeline and Hazardous Materials Safety Administration rulemaking or proposed rulemaking,

the amounts and timing for completion of estimated future construction expenditures, plans to pursue infrastructure programs and tracking mechanisms or programs under SB 151 legislation, forecasted operating cash flows and results of operations, net earnings impacts or recovery of costs from gas infrastructure replacements, mechanisms, or other mechanisms and surcharges, funding sources of cash requirements, amounts generally expected to be reflected in future period revenues from regulatory rate proceedings including amounts requested, stipulated or settled from recent and ongoing general rate cases or other regulatory proceedings, rates and surcharges, PGA administration, recovery and timing, and other rate adjustments, sufficiency of working capital and current credit facilities or the ability to cure negative working capital balances, bank lending practices, the Company's views regarding its liquidity position, ability to raise funds and receive external financing capacity and the intent and ability to issue various financing instruments and stock under an at-the-market equity program or otherwise, future dividends or increases and the Board's current payout strategy, pension and postretirement benefits, assumptions used and the expectations regarding the treasury futures overlay, certain impacts of tax acts, the effect of any other rate changes or regulatory proceedings, contract or construction change order negotiations, impacts of accounting standard updates, statements regarding future gas prices, gas purchase contracts and pipeline imbalance charges or claims related thereto, recoverability of regulatory assets, the impact of certain legal proceedings or claims, and the timing and results of future rate hearings, including any ongoing or future general rate cases and other proceedings, and statements regarding pending approvals are forward-looking statements. All forward-looking statements are intended to be subject to the safe harbor protection provided by the Reform Act.

A number of important factors affecting the business and financial results of the Company could cause actual results to differ materially from those stated in the forward-looking statements. These factors include, but are not limited to, customer growth rates, conditions in the housing market, inflation, interest rates and related government actions, sufficiency of labor markets and ability to timely hire qualified employees or similar resources, acquisition and divestiture decisions including prices paid or received, adjustments, indemnifications, or commitments related thereto, and their impacts to impairments, write-downs, or losses or expenses generally, the impacts of pandemics including that which may result from a restriction by government officials or otherwise, including impacts on employment in our territories, the health impacts to our customers and employees, the ability to collect on customer accounts due to the suspension or lifted moratorium on late fees or service disconnection or escalation in customer rates or otherwise in any or all jurisdictions, the ability to obtain regulatory recovery of related costs, the ability of the infrastructure services business to conduct work and the impact of a delay or termination of work, and decisions of Centuri customers (including Southwest) as to whether to pursue capital projects due to economic impacts resulting from a pandemic or otherwise, or to engage Centuri or its competitors for new or replacement work, the ability to recover and timing thereof related to costs associated with the PGA mechanisms or other regulatory assets or programs, the effects of regulation/deregulation, governmental or regulatory policy regarding pipeline safety, greenhouse gas emissions, natural gas, including potential prohibitions on the use of natural gas by customers or potential customers, including related to electric generation or natural gas appliances, or regarding alternative energy, the regulatory support for ongoing infrastructure programs or expansions, the timing and amount of rate relief, the impact of other regulatory proceedings, the timing and methods determined by regulators to refund amounts to customers resulting from U.S. tax reform, changes in rate design, impacts of other tax regulations, including impacts to rate base or otherwise from IRS gas industry guidelines and the safe harbor method related to tax repairs, variability in volume of gas or transportation service sold to customers, changes in gas procurement practices, changes in capital requirements and funding, the impact of credit rating actions and conditions in the capital markets on financing costs, changes in construction expenditures and financing, levels of or changes in operations and maintenance expenses, or other costs, including fuel costs and other costs impacted by inflation or otherwise, geopolitical influences on the business or its costs, effects of pension or other postretirement benefit expense forecasts, including related to the treasury futures overlay mechanism, plan modifications, or other conditions, accounting changes and regulatory treatment related thereto, currently unresolved and future liability claims and disputes, changes in pipeline capacity for the transportation of gas and related costs, results of Centuri bid work, the impact of weather on Centuri's operations, projections about acquired business' earnings, or those that may be planned, future acquisition-related costs, differences between the actual experience and projections in costs to integrate or stand-up portions of newly acquired business operations, impacts of changes in the value of any redeemable noncontrolling interests if at other than fair value, Centuri utility infrastructure expenses, differences between actual and originally expected outcomes of Centuri bid or other fixed-price construction agreements, outcomes from contract and change order negotiations, ability to successfully procure new work and impacts from work awarded or failing to be awarded from significant customers (collectively, including from Southwest) or related to significant projects, the mix of work awarded, the result of productivity inefficiencies from regulatory requirements, customer supply chain challenges, or otherwise, delays or challenges in commissioning individual projects, acquisitions and management's plans related thereto, the ability of management to successfully finance, close, and assimilate any acquired businesses, the timing, form, and ability of management to successfully consummate the Centuri separation, the impact on our stock price or our credit ratings due to undertaking or failing to undertake acquisition or divestiture activities or other strategic endeavors, the impact on our stock price, costs, actions or disruptions or continuation thereof related to significant stockholders and their activism, competition, our ability to raise capital in external financings, our ability to continue to remain within the ratios and other limits subject to our debt covenants, and ongoing evaluations in regard to goodwill, including any impacts from separation deployment or partial separation or any

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other change impacting aggregation of reporting units in assessing goodwill for impairment, evaluations of other intangible assets, and of optimization initiatives or deployments or uncompleted deployments thereof. In addition, the Company can provide no assurance that its discussions regarding certain trends or plans relating to its financing and operating expenses will continue, proceed as planned, or cease to continue, or fail to be alleviated, in future periods. For additional information on the risks associated with the Company's business, see **Item 1A. Risk Factors** and **Item 7A. Quantitative and Qualitative Disclosures About Market Risk** in this Annual Report on Form 10-K for the year ended December 31, 2023.

All forward-looking statements in this annual report are made as of the date hereof, based on information available to the Company and Southwest as of the date hereof, and the Company and Southwest assume no obligation to update or revise any of their forward-looking statements even if experience or future changes show that the indicated results or events will not be realized. **We caution you to not rely unduly on any forward-looking statement(s).**

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to various forms of market risk, including commodity price risk, rate design risk, interest rate risk, and foreign currency exchange rate risk. The following describes our exposure to these risks.

Commodity Price Risk

In managing its natural gas supply portfolios, Southwest has historically entered short duration (generally one year or less) fixed-price contracts for its California rate jurisdictions, as well as variable-price contracts (firm and spot) for all its rate jurisdictions. Southwest has experienced price volatility over the past several years and such volatility could continue into 2024 and beyond.

Southwest is protected financially from commodity price risk by deferred energy or purchased gas adjustment (collectively "PGA") mechanisms in each of its jurisdictions. These mechanisms generally allow Southwest to defer over- or under-collections of gas costs to PGA balancing accounts. With regulatory approval, Southwest can either refund amounts over-collected, or recoup amounts under-collected in future periods. In addition to the PGA mechanism, Southwest has historically utilized a Volatility Mitigation Program attempting to further reduce price volatility for its California rate jurisdiction customers. During 2023, Southwest continued to fix the price on a portion of its California natural gas portfolios using fixed-price contracts. Southwest does not currently plan to make fixed-price term or swap purchases broadly for the Arizona or Nevada jurisdictions; however, it will continue to make fixed-price purchases for the California jurisdictions, and will monitor conditions and otherwise work collaboratively with regulators to address any changes to these plans.

Southwest's natural gas purchasing practices are subject to prudence reviews by the various regulatory bodies in each jurisdiction. PGA changes affect cash flows and potentially short-term borrowing requirements, but do not directly impact profit margin.

Rate Design Risk

Rate design is the primary mechanism available to Southwest to mitigate weather risk. All of Southwest's service territories have decoupled rate structures which mitigate weather risk. In California, CPUC regulations allow Southwest to decouple operating margin from usage and offset weather risk based on monthly margin levels. In Nevada and Arizona, a decoupled rate structure applies to most customer classes based on monthly margin per customer benchmarks. All such mechanisms provide stability in annual operating margin by insulating us from variations in customer usage associated with abnormal weather conditions (including margin protection during warm weather and limits on margin during cold weather). Southwest is not assured that decoupled rate structures will continue to be supported in future rate cases.

Similarly, Southwest has in place ongoing infrastructure replacement protocol for certain pipe replacement activity. These programs are designed to mitigate the financial attrition associated with pipe replacement activity between rate cases by providing for the recovery of and return on expenditures. The programs have included the replacement of Early Vintage Plastic Pipe, Vintage Steel Pipe, and Customer-Owned Yard Lines, in addition to the conversion of master-metered mobile home parks to individually metered mobile homes. More recently, Southwest has proposed the SIB mechanism in the pending Arizona general rate case. It is not assured that currently approved programs will continue to be supported in future regulatory proceedings, nor that requested programs will be approved.

Interest Rate Risk

Changes in interest rates could adversely affect earnings or cash flows. The primary interest rate risks for the Company are the risk of increasing interest rates on variable-rate obligations and the risk of increasing interest rates between the time of an anticipated debt offering and the time of actual issuance. Interest rate risk sensitivity analysis is used to measure this risk by computing estimated changes in cash flows as a result of assumed changes in market interest rates. In Nevada, fluctuations in interest rates on $150 million of variable-rate tax-exempt Industrial Development Revenue Bonds ("IDRBs") are tracked and recovered from customers through a variable interest expense recovery mechanism, which mitigates risk to earnings and cash flows from interest rate fluctuations on these IDRBs. The following table represents the variable rate debt as of December 31, 2023 and 2022 and interest rate sensitivity analysis for a hypothetical 1% change in interest rates, assuming a constant outstanding balance in such debt over the next twelve months:

(Millions of dollars)	2023 (1)	Increase/Decrease in Interest Expense from 1% Rate Change	2022 (1)	Increase/Decrease in Interest Expense from 1% Rate Change
Variable Rate Debt:				
Southwest	$ 50.0	$ 0.50	$ 325.0	$ 3.25
Centuri	1,071.4	10.71	1,090.5	10.91
Corporate	628.5	6.29	1,320.2	13.20
Total Southwest Gas Holdings, Inc.	$ 1,749.9	$ 17.50	$ 2,735.7	$ 27.36

(1) Excludes the IDRBs noted above.

Foreign Currency Exchange Rate Risk

Centuri owns infrastructure services businesses that operate in Canada. Due to these operations, the Company is exposed to market risk associated with currency exchange rate fluctuations between the Canadian dollar and the U.S. dollar. Foreign currency translation risk is the risk that exchange rate gains or losses arise from translating foreign entities' statements of income and balance sheets from their functional currency (the Canadian Dollar) to our reporting currency (the U.S. Dollar) for consolidation purposes. During 2023, translation adjustments due to fluctuations in exchange rates were not significant. We do not have significant exposure to other foreign currency exchange rate fluctuations.

Other risk information is included in **Item 1A. Risk Factors** of this report.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following financial statements and reports are included in Item 8.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Southwest Gas Holdings, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Southwest Gas Holdings, Inc. and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Reports on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Assets and Liabilities

As described in Note 5 to the consolidated financial statements, the Company's net regulatory liabilities were $18 million as of December 31, 2023. The Company is subject to the regulation of the Arizona Corporation Commission, the Public Utilities Commission of Nevada, the California Public Utilities Commission, and the Federal Energy Regulatory Commission. Accounting treatment for rate-regulated entities allows for deferral as regulatory assets, costs that otherwise would be expensed, if it is probable that future recovery from customers will occur. If rate recovery is no longer probable, due to competition or the actions of regulators, the related regulatory asset is required to be written-off. Regulatory liabilities are recorded if it is probable that revenues will be reduced for amounts that will be refunded to customers through the ratemaking process.

The principal considerations for our determination that performing procedures relating to regulatory assets and liabilities is a critical audit matter are a high degree of auditor effort in performing procedures and evaluating audit evidence related to the probability of recovery of regulatory assets and refund of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment of regulatory proceedings, including controls over the probability of recovery of regulatory assets, refund of regulatory liabilities, and the related accounting and disclosure impacts. These procedures also included, among others (i) obtaining the Company's correspondence with regulators; (ii) evaluating the reasonableness of management's assessment regarding the probability of recovery of regulatory assets and refund of regulatory liabilities; and (iii) testing regulatory assets and liabilities on a sample basis, based on the provisions and formulas outlined in rate orders and other regulatory correspondence.

/s/PricewaterhouseCoopers LLP
Las Vegas, Nevada
February 28, 2024

We have served as the Company's or its predecessor's auditor since 2002.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholder of Southwest Gas Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Southwest Gas Corporation and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Assets and Liabilities

As described in Note 5 to the consolidated financial statements, the Company's net regulatory liabilities were $18 million as of December 31, 2023. The Company is subject to the regulation of the Arizona Corporation Commission, the Public Utilities Commission of Nevada, the California Public Utilities Commission, and the Federal Energy Regulatory Commission. Accounting treatment for rate-regulated entities allows for deferral as regulatory assets, costs that otherwise would be expensed, if it is probable that future recovery from customers will occur. If rate recovery is no longer probable, due to competition or the actions of regulators, the related regulatory asset is required to be written-off. Regulatory liabilities are recorded if it is probable that revenues will be reduced for amounts that will be refunded to customers through the ratemaking process.

The principal considerations for our determination that performing procedures relating to regulatory assets and liabilities is a critical audit matter are a high degree of auditor effort in performing procedures and evaluating audit evidence related to the probability of recovery of regulatory assets and refund of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment of regulatory proceedings, including controls over the probability of recovery of regulatory assets, refund of regulatory liabilities, and the related accounting and disclosure impacts. These procedures also included, among others (i) obtaining the Company's correspondence with regulators; (ii) evaluating the reasonableness of management's assessment regarding the probability of recovery of regulatory assets and refund of regulatory liabilities; and (iii) testing

regulatory assets and liabilities on a sample basis, based on the provisions and formulas outlined in rate orders and other regulatory correspondence.

/s/PricewaterhouseCoopers LLP
Las Vegas, Nevada
February 28, 2024

We have served as the Company's auditor since 2002.

SOUTHWEST GAS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Thousands of dollars, except par value)

	December 31, 2023	2022
ASSETS		
Regulated operations plant:		
Gas plant	$ 10,140,362	$ 9,453,907
Less: accumulated depreciation	(2,822,669)	(2,674,157)
Construction work in progress	200,549	244,750
Net regulated operations plant	7,518,242	7,024,500
Other property and investments, net	1,266,340	1,281,172
Current assets:		
Cash and cash equivalents	106,536	123,078
Accounts receivable, net of allowances	886,549	866,246
Accrued utility revenue	93,000	88,100
Income taxes receivable, net	1,935	8,738
Deferred purchased gas costs	552,885	450,120
Prepaid and other current assets	218,832	433,850
Current assets held for sale	21,377	1,737,530
Total current assets	1,881,114	3,707,662
Noncurrent assets:		
Goodwill	789,729	787,250
Deferred income taxes	463	82
Deferred charges and other assets	414,008	395,948
Total noncurrent assets	1,204,200	1,183,280
Total assets	$ 11,869,896	$ 13,196,614
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock, $1 par (authorized – 120,000,000 shares; issued and outstanding – 71,563,750 and 67,119,143 shares)	$ 73,194	$ 68,749
Additional paid-in capital	2,541,790	2,287,183
Accumulated other comprehensive loss, net	(43,787)	(44,242)
Retained earnings	738,839	747,069
Total Southwest Gas Holdings, Inc. equity	3,310,036	3,058,759
Redeemable noncontrolling interests	104,667	159,349
Long-term debt, less current maturities	4,609,838	4,403,299
Total capitalization	8,024,541	7,621,407
Commitments and contingencies (Note 10)		
Current liabilities:		
Current maturities of long-term debt	42,552	44,557
Short-term debt	628,500	1,542,806
Accounts payable	346,907	662,090
Customer deposits	48,460	51,182
Income taxes payable, net	817	2,690
Accrued general taxes	58,053	67,094
Accrued interest	36,605	38,556
Other current liabilities	522,953	369,743
Current liabilities held for sale	—	644,245
Total current liabilities	1,684,847	3,422,963
Deferred income taxes and other credits:		
Deferred income taxes and investment tax credits, net	752,997	682,067
Accumulated removal costs	458,000	445,000
Other deferred credits and other long-term liabilities	949,511	1,025,177
Total deferred income taxes and other credits	2,160,508	2,152,244
Total capitalization and liabilities	$ 11,869,896	$ 13,196,614

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)

	Year Ended December 31,		
	2023	2022	2021
Operating revenues:			
Regulated operations revenues	$ 2,534,696	$ 2,199,682	$ 1,521,790
Utility infrastructure services revenues	2,899,276	2,760,327	2,158,661
Total operating revenues	5,433,972	4,960,009	3,680,451
Operating expenses:			
Net cost of gas sold	1,253,269	799,060	430,907
Operations and maintenance	544,082	636,766	473,146
Depreciation and amortization	440,908	470,455	371,041
Taxes other than income taxes	88,751	93,383	80,343
Utility infrastructure services expenses	2,617,402	2,529,318	1,955,467
Goodwill impairment and loss on sale	71,230	455,425	—
Total operating expenses	5,015,642	4,984,407	3,310,904
Operating income (loss)	418,330	(24,398)	369,547
Other income and (expenses):			
Net interest deductions	(292,286)	(242,750)	(119,198)
Other income (deductions)	71,305	(6,189)	(3,499)
Total other income and (expenses)	(220,981)	(248,939)	(122,697)
Income (loss) before income taxes	197,349	(273,337)	246,850
Income tax expense (benefit)	41,832	(75,653)	39,648
Net income (loss)	155,517	(197,684)	207,202
Net income attributable to noncontrolling interests	4,628	5,606	6,423
Net income (loss) attributable to Southwest Gas Holdings, Inc.	$ 150,889	$ (203,290)	$ 200,779
Earnings (loss) per share:			
Basic	$ 2.13	$ (3.10)	$ 3.39
Diluted	$ 2.13	$ (3.10)	$ 3.39
Weighted average shares:			
Basic	70,787	65,558	59,145
Diluted	70,990	65,558	59,259

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Thousands of dollars)

	Year Ended December 31,		
	2023	2022	2021
Net income (loss)	$ 155,517	$ (197,684)	$ 207,202
Other comprehensive income (loss), net of tax			
Defined benefit pension plans:			
Net actuarial gain (loss)	(2,423)	3,099	44,974
Amortization of prior service cost	133	133	729
Amortization of net actuarial loss	1,014	26,461	33,894
Regulatory adjustment	(1,011)	(21,457)	(67,027)
Net defined benefit pension plans	(2,287)	8,236	12,570
Forward-starting interest rate swaps ("FSIRS"):			
Amounts reclassified into net income	—	416	1,652
Net forward-starting interest rate swaps	—	416	1,652
Foreign currency translation adjustments	2,742	(6,133)	20
Total other comprehensive income (loss), net of tax	455	2,519	14,242
Comprehensive income (loss)	155,972	(195,165)	221,444
Comprehensive income attributable to noncontrolling interests	4,628	5,606	6,423
Comprehensive income (loss) attributable to Southwest Gas Holdings, Inc.	$ 151,344	$ (200,771)	$ 215,021

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Thousands of dollars)

	Year Ended December 31,		
	2023	2022	2021
CASH FLOW FROM OPERATING ACTIVITIES:			
Net income (loss)	$ 155,517	$ (197,684)	$ 207,202
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	440,908	470,455	371,041
Impairment of assets and other charges	71,230	455,425	—
Deferred income taxes	56,771	(72,048)	61,212
Gains on sale of property and equipment	(4,683)	(7,865)	(6,906)
Changes in undistributed stock compensation	8,079	9,446	9,294
Equity AFUDC	(1,951)	(465)	—
Changes in current assets and liabilities:			
Accounts receivable, net of allowances	(22,583)	(193,775)	(51,554)
Accrued utility revenue	(4,900)	(3,200)	(2,500)
Deferred purchased gas costs	(117,770)	(147,215)	(343,728)
Accounts payable	(286,161)	293,909	50,426
Accrued taxes	(2,302)	17,929	(6,725)
Other current assets and liabilities	304,110	(207,853)	(89,209)
Changes in deferred charges and other assets	(10,444)	16,886	(13,541)
Changes in other liabilities and deferred credits	(76,610)	(26,485)	(73,629)
Net cash provided by operating activities	509,211	407,460	111,383
CASH FLOW FROM INVESTING ACTIVITIES:			
Construction expenditures and property additions	(872,521)	(859,421)	(715,626)
Acquisition of businesses, net of cash acquired	—	(18,809)	(2,354,260)
Proceeds from the sale of business, net of cash sold	1,022,483	—	—
Changes in customer advances	(8,905)	21,506	15,974
Other	9,909	17,822	18,256
Net cash provided by (used in) investing activities	150,966	(838,902)	(3,035,656)
CASH FLOW FROM FINANCING ACTIVITIES:			
Issuance of common stock, net	251,759	461,828	213,641
Centuri distribution to redeemable noncontrolling interest	(39,894)	(39,649)	—
Dividends paid	(174,574)	(160,563)	(138,222)
Issuance of long-term debt, net	1,044,861	1,067,805	1,660,696
Retirement of long-term debt	(248,328)	(499,914)	(452,664)
Change in long-term credit facility and commercial paper	(50,000)	(80,000)	(20,000)
Issuance of short-term debt	450,000	—	1,850,000
Other changes in short-term debt	(1,916,748)	(366,193)	(48,000)
Withholding remittance – share-based compensation	(1,990)	(2,662)	(1,264)
Other, including principal payments on finance leases	(15,881)	(24,172)	(729)
Net cash provided by (used in) financing activities	(700,795)	356,480	3,063,458
Effects of currency translation on cash and cash equivalents	273	(854)	160
Change in cash and cash equivalents	(40,345)	(75,816)	139,345
Change in cash and cash equivalents included in current assets held for sale	23,803	(23,803)	—
Cash and cash equivalents at beginning of period	123,078	222,697	83,352
Cash and cash equivalents at end of period	$ 106,536	$ 123,078	$ 222,697
SUPPLEMENTAL INFORMATION:			
Interest paid, net of amounts capitalized	$ 282,626	$ 219,825	$ 104,352
Income taxes paid, net	$ 9,365	$ 12,001	$ 4,208

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands, except per share amounts)

	Year Ended December 31,		
	2023	2022	2021
Common stock shares			
Beginning balances	67,119	60,422	57,193
Common stock issuances	4,445	6,697	3,229
Ending balances	71,564	67,119	60,422
Common stock amount			
Beginning balances	$ 68,749	$ 62,052	$ 58,823
Common stock issuances	4,445	6,697	3,229
Ending balances	73,194	68,749	62,052
Additional paid-in capital			
Beginning balances	2,287,183	1,824,216	1,609,155
Common stock issuances	254,557	462,967	219,298
Promissory notes in association with redeemable noncontrolling interest	50	—	(4,237)
Ending balances	2,541,790	2,287,183	1,824,216
Accumulated other comprehensive loss			
Beginning balances	(44,242)	(46,761)	(61,003)
Foreign currency exchange translation adjustment	2,742	(6,133)	20
Net actuarial gain (loss) arising during period, less amortization of unamortized benefit plan cost, net of tax	(2,287)	8,236	12,570
FSIRS amounts reclassified to net income, net of tax	—	416	1,652
Ending balances	(43,787)	(44,242)	(46,761)
Retained earnings			
Beginning balances	747,069	1,114,313	1,067,978
Net income (loss)	150,889	(203,290)	200,779
Redemption value adjustments	19,366	3,325	(12,016)
Dividends declared	(178,485)	(167,279)	(142,428)
Ending balances	738,839	747,069	1,114,313
Total equity ending balances	$ 3,310,036	$ 3,058,759	$ 2,953,820
Dividends declared per common share	$ 2.48	$ 2.48	$ 2.38

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Thousands of dollars)

	December 31, 2023	December 31, 2022
ASSETS		
Regulated operations plant:		
Gas plant	$ 10,140,362	$ 9,453,907
Less: accumulated depreciation	(2,822,669)	(2,674,157)
Construction work in progress	200,549	244,750
Net regulated operations plant	7,518,242	7,024,500
Other property and investments, net	152,658	169,397
Current assets:		
Cash and cash equivalents	71,154	51,823
Accounts receivable, net of allowance	269,195	234,081
Accrued utility revenue	93,000	88,100
Income taxes receivable, net	26	103
Deferred purchased gas costs	552,885	450,120
Receivable from parent	—	2,130
Prepaid and other current assets	188,138	401,789
Current assets held for sale	21,376	—
Total current assets	1,195,774	1,228,146
Noncurrent assets:		
Goodwill	11,155	11,155
Deferred charges and other assets	390,742	370,483
Total noncurrent assets	401,897	381,638
Total assets	$ 9,268,571	$ 8,803,681
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock	$ 49,112	$ 49,112
Additional paid-in capital	2,156,577	1,622,969
Accumulated other comprehensive loss, net	(40,548)	(38,261)
Retained earnings	1,018,474	935,355
Total equity	3,183,615	2,569,175
Long-term debt, less current maturities	3,501,543	3,251,296
Total capitalization	6,685,158	5,820,471
Commitments and contingencies (Note 10)		
Current liabilities:		
Short-term debt	—	225,000
Accounts payable	215,744	497,046
Customer deposits	48,460	51,182
Accrued general taxes	58,053	67,094
Accrued interest	34,955	29,569
Payable to parent	1,711	—
Other current liabilities	271,899	150,817
Total current liabilities	630,822	1,020,708
Deferred income taxes and other credits:		
Deferred income taxes and investment tax credits, net	749,836	683,948
Accumulated removal costs	458,000	445,000
Other deferred credits and other long-term liabilities	744,755	833,554
Total deferred income taxes and other credits	1,952,591	1,962,502
Total capitalization and liabilities	$ 9,268,571	$ 8,803,681

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(Thousands of dollars)

	Year Ended December 31,		
	2023	2022	2021
Regulated operations revenues	$ 2,499,564	$ 1,935,069	$ 1,521,790
Operating expenses:			
Net cost of gas sold	1,246,901	789,216	430,907
Operations and maintenance	511,646	491,928	438,550
Depreciation and amortization	295,462	263,043	253,398
Taxes other than income taxes	87,261	83,197	80,343
Total operating expenses	2,141,270	1,627,384	1,203,198
Operating income	358,294	307,685	318,592
Other income and (expenses):			
Net interest deductions	(149,830)	(115,880)	(97,560)
Other income (deductions)	70,661	(6,884)	(4,559)
Total other income and (expenses)	(79,169)	(122,764)	(102,119)
Income before income taxes	279,125	184,921	216,473
Income tax expense	36,899	30,541	29,338
Net income	$ 242,226	$ 154,380	$ 187,135

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Thousands of dollars)

	Year Ended December 31,		
	2023	2022	2021
Net income	$ 242,226	$ 154,380	$ 187,135
Other comprehensive income (loss), net of tax			
Defined benefit pension plans:			
Net actuarial gain (loss)	(2,423)	3,099	44,974
Amortization of prior service cost	133	133	729
Amortization of net actuarial loss	1,014	26,461	33,894
Regulatory adjustment	(1,011)	(21,457)	(67,027)
Net defined benefit pension plans	(2,287)	8,236	12,570
Forward-starting interest rate swaps ("FSIRS"):			
Amounts reclassified into net income	—	416	1,652
Net forward-starting interest rate swaps	—	416	1,652
Total other comprehensive income (loss), net of tax	(2,287)	8,652	14,222
Comprehensive income	$ 239,939	$ 163,032	$ 201,357

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Thousands of dollars)

	Year Ended December 31,		
	2023	2022	2021
CASH FLOW FROM OPERATING ACTIVITIES:			
Net income	$ 242,226	$ 154,380	$ 187,135
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	295,462	263,043	253,398
Deferred income taxes	66,611	42,387	53,237
Gain on sale of property	(136)	(1,503)	—
Changes in undistributed stock compensation	4,877	5,776	6,392
Equity AFUDC	(1,869)	—	—
Changes in current assets and liabilities:			
Accounts receivable, net of allowances	(35,114)	(64,414)	(22,806)
Accrued utility revenue	(4,900)	(3,200)	(2,500)
Deferred purchased gas costs	(102,765)	(158,975)	(343,728)
Accounts payable	(260,403)	243,276	57,764
Accrued taxes	(8,964)	21,754	7,753
Other current assets and liabilities	311,593	(188,737)	(70,271)
Changes in deferred charges and other assets	(38,975)	(1,694)	(28,743)
Changes in other liabilities and deferred credits	(76,098)	(27,690)	(72,386)
Net cash provided by operating activities	391,545	284,403	25,245
CASH FLOW FROM INVESTING ACTIVITIES:			
Construction expenditures and property additions	(762,081)	(683,131)	(601,983)
Changes in customer advances	(8,905)	21,506	15,973
Other	414	6,917	(32)
Net cash used in investing activities	(770,572)	(654,708)	(586,042)
CASH FLOW FROM FINANCING ACTIVITIES:			
Contributions from parent	530,000	—	202,583
Dividends paid	(150,900)	(122,200)	(111,400)
Issuance of long-term debt, net	297,759	891,663	297,318
Retirement of long-term debt	—	(275,000)	—
Change in long-term credit facility and commercial paper	(50,000)	(80,000)	(20,000)
Issuance of short-term debt	450,000	—	250,000
Other changes in short-term debt	(675,000)	(25,000)	(57,000)
Withholding remittance – share-based compensation	(1,776)	(2,569)	(1,263)
Other	(1,725)	(3,457)	(1,820)
Net cash provided by financing activities	398,358	383,437	558,418
Change in cash and cash equivalents	19,331	13,132	(2,379)
Cash and cash equivalents at beginning of period	51,823	38,691	41,070
Cash and cash equivalents at end of period	$ 71,154	$ 51,823	$ 38,691
SUPPLEMENTAL INFORMATION:			
Interest paid, net of amounts capitalized	$ 139,747	$ 107,980	$ 90,240
Income taxes paid (received), net	$ —	$ 5	$ (13,529)

The accompanying notes are an integral part of these statements.

SOUTHWEST GAS CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands)

	Year Ended December 31,		
	2023	2022	2021
Common stock shares			
Beginning and ending balances	47,482	47,482	47,482
Common stock amount			
Beginning and ending balances	$ 49,112	$ 49,112	$ 49,112
Additional paid-in capital			
Beginning balances	1,622,969	1,618,911	1,410,345
Share-based compensation	3,608	4,058	5,983
Contributions from Southwest Gas Holdings, Inc.	530,000	—	202,583
Ending balances	2,156,577	1,622,969	1,618,911
Accumulated other comprehensive loss			
Beginning balances	(38,261)	(46,913)	(61,135)
Net actuarial gain (loss) arising during period, less amortization of unamortized benefit plan cost, net of tax	(2,287)	8,236	12,570
FSIRS amounts reclassified to net income, net of tax	—	416	1,652
Ending balances	(40,548)	(38,261)	(46,913)
Retained earnings			
Beginning balances	935,355	906,827	835,146
Net income	242,226	154,380	187,135
Share-based compensation	(507)	(852)	(854)
Dividends declared to Southwest Gas Holdings, Inc.	(158,600)	(125,000)	(114,600)
Ending balances	1,018,474	935,355	906,827
Total Southwest Gas Corporation equity ending balances	$ 3,183,615	$ 2,569,175	$ 2,527,937

The accompanying notes are an integral part of these statements.

Note 1 - Background, Organization, and Summary of Significant Accounting Policies

Nature of Operations. This is a combined annual report of Southwest Gas Holdings, Inc. and its subsidiaries (the "Company") and Southwest Gas Corporation and its subsidiaries ("Southwest" or the "natural gas distribution" segment). The notes to the consolidated financial statements apply to both entities. Southwest Gas Holdings, Inc., a Delaware corporation, is a holding company, owning all of the shares of common stock of Southwest, all of the shares of common stock of Centuri Group, Inc. ("Centuri" or the "utility infrastructure services" segment), and until February 14, 2023, all of the shares of common stock of MountainWest Pipelines Holding Company ("MountainWest" or the "pipeline and storage" segment).

In December 2022, the Company announced that its Board of Directors (the "Board") unanimously determined to take strategic actions to simplify the Company's portfolio of businesses. These actions included entering into a definitive agreement to sell 100% of MountainWest in an all-cash transaction to Williams Partners Operating LLC ("Williams") for $1.5 billion in total enterprise value, subject to certain adjustments. The MountainWest transaction closed on February 14, 2023.

As part of this simplification strategy, the Company previously communicated that it would pursue a separation of Centuri and has continued to undertake significant efforts toward a near-term separation, including submitting a confidential draft registration statement on Form S-1 to the U.S. Securities and and Exchange Commission (the "SEC"). See **Note 15 - Acquisitions and Dispositions** for additional information.

On November 21, 2023, the Company and the Icahn Group entered into an Amended and Restated Cooperation Agreement (the "Agreement"), which amended, restated, superseded, and replaced in its entirety the Amended and Restated Cooperation Agreement entered into as of October 24, 2022. Among other things, the Agreement provides for the nomination of the Icahn Designees for election at the Company's 2024 annual meeting of stockholders, the extension of the standstill restrictions on the Icahn Group through the Company's 2024 annual meeting of stockholders, subject to certain restrictions and exceptions, and subject to certain ownership thresholds by the Icahn Group and the approval by the Board's Strategic Transactions Committee, certain aspects of the corporate structure and conduct of the first annual meeting of any independent, publicly traded company resulting from a separation of the Company's businesses.

On November 3, 2023, the Board authorized a dividend of one preferred stock purchase right (a "Right") for each outstanding share of common stock, $1 par value per share, of the Company to stockholders on record at the close of business on November 17, 2023. The description and terms of the Rights are set forth in a Tax-Free Spin Protection Plan, dated as of November 5, 2023 (as may be amended from time to time, the "Plan"), between the Company and Equiniti Trust Company, LLC, as rights agent. Each Right entitles the registered holder to purchase from the Company one ten-thousandth of a share of Series A Junior Participating Preferred Stock, no par value per share, of the Company (the "Series A Preferred"), at a purchase price of $300.00 per one ten-thousandth of a share of Series A Preferred, subject to adjustment. The Rights have a de minimis fair value and will expire in accordance with the provisions of the Plan.

By adopting the Plan, the Board is seeking to preserve the Company's ability to effectuate a separation of Centuri Holdings, Inc., a wholly owned subsidiary of the Company formed for purposes of completing the separation ("Centuri Holdings") (the "Spin-Off Transaction") that would be tax-free to the Company (the "Tax-Free Status"). While the Company intends that any Spin-Off Transaction, if effected, would qualify as a tax-free transaction to the Company's stockholders, the ability to effect a spin-off that is tax-free to the Company (as opposed to its stockholders) could be lost if certain stock purchases (including by existing or new holders in the open market) are treated as part of a plan pursuant to which one or more persons directly or indirectly acquire a 50% or greater interest in the Company (a "355 Ownership Change") within applicable time periods for purposes of Section 355(e) of the Internal Revenue Code. The Company believes that there is minimal capacity for changes in the ownership of its stock before a 355 Ownership Change could occur. The Plan is intended to restrict acquisitions of Company stock that could cause a 355 Ownership Change and could impair the Company's ability to effectuate a Spin-Off Transaction that has Tax-Free Status. The Board believes it is in the best interest of the Company and its stockholders to preserve the Company's ability to effectuate a Spin-Off Transaction with Tax-Free Status. The Plan has not been triggered as of December 31, 2023.

Southwest is engaged in the business of purchasing, distributing, and transporting natural gas for customers in portions of Arizona, Nevada, and California. Public utility rates, practices, facilities, and service territories of Southwest are subject to regulatory oversight. The timing and amount of rate relief can materially impact results of operations. Natural gas purchases and the timing of related recoveries can materially impact liquidity. Results for the natural gas distribution segment are higher during winter periods due to the seasonality incorporated in its regulatory rate structures.

Centuri is a strategic utility infrastructure services company dedicated to partnering with North America's gas and electric providers to build and maintain the energy network that powers millions of homes across the United States ("U.S.") and Canada. Centuri derives revenue primarily from installation, replacement, repair, and maintenance of energy networks. Centuri

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operates in the U.S. primarily as NPL Construction Co. (“NPL”), New England Utility Constructors, Inc. (“Neuco”), Linetec Services, LLC (“Linetec”), and Riggs Distler & Company, Inc. (“Riggs Distler”), and in Canada, primarily as NPL Canada Ltd. (“NPL Canada”). Utility infrastructure services activity is seasonal in many of Centuri’s operating areas. Peak periods are the summer and fall months in colder climate areas, such as the northeastern and midwestern U.S. and in Canada. In warmer climate areas, such as the southwestern and southeastern U.S., utility infrastructure services activity continues year round.

Basis of Presentation. The Company follows accounting principles generally accepted in the United States (“U.S. GAAP”) in accounting for all of its businesses. Unless specified otherwise, all amounts are in U.S. dollars. Accounting for regulated operations conforms with U.S. GAAP as applied to rate-regulated companies and as prescribed by federal agencies and commissions of the various states in which the rate-regulated companies operate. The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

In the first quarter of 2023, management identified a misstatement related to its accounting for the cost of gas sold at Southwest, thereby determining that Net cost of gas sold was overstated in 2021 and 2022 by $2.3 million and $5.7 million, respectively. Southwest made an adjustment in the first quarter of 2023 to reduce Net cost of gas sold and to increase its asset balance for Deferred purchased gas costs by $8 million.

Also in the first quarter of 2023, the Company identified an approximately $21 million misstatement related to its initial estimation of the loss recorded upon reclassifying MountainWest as an asset held for sale during the year ended December 31, 2022. Consequently, the impairment loss for the year ended December 31, 2022 was understated by approximately $21 million, which was corrected in the first quarter of 2023.

The Company (and Southwest, with respect to Net cost of gas sold) assessed, both quantitatively and qualitatively, the impact of these items on previously issued financial statements, concluding they were not material to any prior period or the current period financial statements.

Consolidation. The accompanying financial statements (as of and for the periods presented) are presented on a consolidated basis for Southwest Gas Holdings, Inc. and all subsidiaries and Southwest Gas Corporation and all subsidiaries (except those accounted for using the equity method as discussed below). All significant intercompany balances and transactions have been eliminated with the exception of transactions between Southwest and Centuri in accordance with accounting treatment for rate-regulated entities.

Centuri, through its subsidiaries, holds a 50% interest in W.S. Nicholls Western Construction Ltd. (“Western”), a Canadian infrastructure services company that is a variable interest entity. Centuri determined that it is not the primary beneficiary of the entity due to a shared-power structure; therefore, Centuri does not consolidate the entity and has recorded its investment, and results related thereto, using the equity method. The investment in Western, related earnings, and dividends received from Western in 2023 and 2022 were not significant. Centuri’s maximum exposure to loss as a result of its involvement with Western was estimated at $12.4 million as of December 31, 2023.

Fair Value Measurements. Certain assets and liabilities are reported at fair value, which is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

U.S. GAAP states that a fair value measurement should be based on the assumptions that market participants would use in pricing the asset or liability and establishes a fair value hierarchy that ranks the inputs used to measure fair value by their reliability. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to fair values derived from unobservable inputs (Level 3 measurements). Financial assets and liabilities are categorized in their entirety based on the lowest level of input that is significant to the fair value measurement. The three levels of the fair value hierarchy are as follows:

Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities that a company has the ability to access at the measurement date.

Level 2 – inputs other than quoted prices included within Level 1 that are observable for similar assets or liabilities, either directly or indirectly.

Level 3 – unobservable inputs for the asset or liability. Unobservable inputs are used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date.

The Company primarily used quoted market prices and other observable market pricing information (exclusive of any purchase accounting adjustments) in valuing cash and cash equivalents, long-term debt outstanding, and assets of the qualified pension

plan and the postretirement benefits other than pensions required to be recorded and/or disclosed at fair value. The Company uses prices and inputs that are current as of the measurement date, and recognizes transfers between levels at either the actual date of an event or a change in circumstance that caused the transfer.

Net Regulated Operations Plant. Net regulated operations plant includes gas plant at original cost, less the accumulated provision for depreciation and amortization, plus any unamortized balance of acquisition adjustments. Original cost generally includes contracted services, material, payroll, and related costs such as taxes and certain benefits, general and administrative expenses applicable to construction efforts, and an allowance for funds used during construction, less contributions in aid of construction. Aligned with regulatory treatment, when plant is retired, the cost of such plant, net of any salvage value, is charged to accumulated depreciation. See also *Depreciation and Amortization* below.

Other Property and Investments. Other property and investments on Southwest's and the Company's Consolidated Balance Sheets includes:

	December 31,	
(Thousands of dollars)	2023	2022
Net cash surrender value of COLI policies	$ 146,546	$ 136,245
Other property	6,112	33,152
Total Southwest Gas Corporation	152,658	169,397
Non-regulated property, equipment, and intangibles	1,752,094	1,677,218
Non-regulated accumulated provision for depreciation and amortization	(675,632)	(596,518)
Other property and investments	37,220	31,075
Total Southwest Gas Holdings, Inc.	$ 1,266,340	$ 1,281,172

Included in the table above are the net cash surrender values of company-owned life insurance ("COLI") policies. These life insurance policies on members of management and other key employees are used by Southwest to indemnify itself against the loss of talent, expertise, and knowledge, as well as to provide indirect funding for certain nonqualified benefit plans. The term non-regulated in regard to assets and related balances in the table above is in reference to the non-rate regulated operations of Centuri.

Intangible Assets. Intangible assets (other than goodwill) are amortized using the straight-line method to reflect the pattern of economic benefits consumed over the estimated periods benefited. The recoverability of intangible assets is evaluated when events or circumstances indicate that a revision of estimated useful lives is warranted or that an intangible asset may be impaired. These intangible assets are included in Other property and investments on the Company's Consolidated Balance Sheets. Centuri's intangible assets (other than goodwill) have finite lives and are associated with businesses previously acquired. The balances at December 31, 2023 and 2022, respectively, were as follows:

	December 31, 2023		
(Thousands of dollars)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	$ 392,512	$ (85,212)	$ 307,300
Trade names and trademarks	79,408	(17,660)	61,748
Total	$ 471,920	$ (102,872)	$ 369,048

	December 31, 2022		
Customer relationships	$ 391,758	$ (63,509)	$ 328,249
Trade names and trademarks	79,277	(12,278)	66,999
Total	$ 471,035	$ (75,787)	$ 395,248

Collective amortization expense for these acquired intangible assets for the years ended December 31, 2023, 2022, and 2021 was $26.7 million, $29.8 million, and $17.3 million, respectively. The weighted-average amortization periods for customer relationships and trade names and trademarks are 19 years and 15 years, respectively.

The estimated future amortization of the above intangible assets for the next five years and thereafter is as follows:

(Thousands of dollars)		
2024	$	26,736
2025		26,723
2026		26,499
2027		26,126
2028		25,809
Thereafter		237,155
Total	$	369,048

See **Note 2 - Regulated Operations Plant and Leases** for additional information regarding natural gas distribution intangible assets**.**

Cash and Cash Equivalents. For purposes of reporting consolidated cash flows, cash and cash equivalents include cash on hand, money market funds, and financial instruments with original maturities of three months or less. Such investments are carried at cost, which approximates fair value. Cash and cash equivalents of the Company include $48.9 million and $29.7 million of money market fund investments at December 31, 2023 and 2022, respectively. Of these amounts, $38.6 million and $17.6 million at December 31, 2023 and 2022, respectively, were held by Southwest. The money market fund investments were acquired and are generally redeemable at their net asset value.

Noncash investing activities for the Company and Southwest include capital expenditures that were not yet paid as of year end, thereby remaining in accounts payable, the amounts related to which decreased by approximately $17.1 million and $20.9 million, for the Company and Southwest, respectively during the year ended December 31, 2023; increased $23.4 million and $19.7 million, for the Company and Southwest, respectively, during the year ended December 31, 2022; and, increased $15.5 million and $13.9 million, for the Company and Southwest, respectively, during the year ended December 31, 2021. Additionally for Southwest, noncash investing activities include customer advances applied as contributions toward utility construction activity, and such amounts were not significant for the periods presented herein. Also, see **Note 2 - Regulated Operations Plant and Leases** for information related to right-of-use ("ROU") assets obtained in exchange for lease liabilities, which are noncash investing and financing activities. ROU assets and lease liabilities are also subject to noncash impacts as a result of other factors, such as lease terminations and modifications.

The Other change in short-term debt as presented on the Company's and Southwest's Consolidated Statements of Cash Flows is comprised of repayments of short-term debt and changes in the current portion of credit facilities.

Income Taxes. The asset and liability method of accounting is utilized for the recognition of income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are anticipated to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. For regulatory and financial reporting purposes, investment tax credits ("ITC") related to gas utility operations are deferred and amortized over the life of related fixed assets. As of December 31, 2023, the Company had cumulative book earnings of approximately $94 million in its foreign jurisdiction. Management previously asserted and continues to assert that all the earnings of Centuri's Canadian subsidiaries will be permanently reinvested in Canada. As a result, no U.S. deferred income taxes have been recorded related to cumulative foreign earnings.

The Financial Accounting Standards Board (the "FASB") issued guidance to allow an accounting policy election of either (i) treating taxes attributable to future taxable income related to Global Intangible Low-Taxed Income ("GILTI") as a current period expense when incurred or (ii) recognizing deferred taxes for temporary differences expected to reverse as GILTI in future years. The Company elected to treat GILTI as a current period cost when incurred and has considered the estimated 2023 GILTI impact to its 2023 tax expense, which was immaterial.

In April 2023, the Internal Revenue Service ("IRS") issued Revenue Procedure 2023-15, which provides a safe harbor method of accounting that taxpayers may use to determine whether expenditures to repair, maintain, replace, or improve natural gas transmission and distribution property must be capitalized for tax purposes. The Company and Southwest are currently reviewing this revenue procedure to determine the potential impact on their financial position, results of operations, and cash flows.

Deferred Purchased Gas Costs. The various regulatory commissions have established procedures to enable Southwest to adjust billing rates for changes in the cost of natural gas purchased. The difference between the current cost of gas purchased and the cost of gas recovered in billed rates is deferred. Generally, these deferred amounts are recovered or refunded within one year.

In July 2023, the Arizona Corporation Commission (the "ACC") approved an increase in the gas cost balancing account ("GCBA") rate, over a two-year period, as an enhancement to the existing gas cost recovery mechanism, given the $358 million Arizona account balance existing as of May 31, 2023. The increased GCBA rate of $0.20 per therm will support timely recovery of the existing balance. Based on the design of base tariff gas cost rates in Arizona and surcharges, the account balance existing as of that date is deemed generally recoverable over the next twelve months, and it is therefore classified as a current asset on the balance sheets of the Company and Southwest.

Prepaid and other current assets. Prepaid and other current assets for Southwest and the Company include, among other things, temporary accruals for unrecovered purchased gas costs of $207 million as of December 31, 2022, with no corresponding asset balance as of December 31, 2023. Final amounts are subject to calculations of *Deferred Purchased Gas Costs*, and characterized accordingly the following month, once amounts are finalized through the settlement process. Additionally, Southwest had gas pipe materials and operating supplies of $83.4 million and $77.3 million as of December 31, 2023 and 2022, respectively (carried at weighted average cost).

Held for sale. The Company and Southwest recognize, when applicable, the assets and liabilities of a disposal group as held for sale in the period (i) it has approved and committed to a plan to sell the disposal group, (ii) the disposal group is available for immediate sale in its present condition, (iii) an active program to locate a buyer and other actions to sell the disposal group have been initiated, (iv) it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. The Company and Southwest initially measure a disposal group that is classified as held for sale at the lower of its carrying value or fair value less any costs to sell. Any loss resulting from this measurement is recognized in the period in which the held for sale criteria are met. Conversely, gains are not recognized on the sale of a disposal group until closing. Upon designation as held for sale, the Company and Southwest stop recording depreciation expense and assess the fair value of the disposal group less any costs to sell at each reporting period, until it is no longer classified as held for sale. See **Note 15 - Acquisitions and Dispositions** for information related to the MountainWest assets and liabilities held for sale.

In the first quarter of 2023, the Company and Southwest concluded certain assets associated with its previous corporate headquarters met the criteria to be classified as held for sale. As a result, the Company and Southwest reclassified approximately $27 million from Other property and investments to Current assets held for sale on their respective Consolidated Balance Sheets in the first quarter of 2023. In 2023, the Company and Southwest recorded an estimated loss of $5.2 million on the assets based upon an updated fair value less costs to sell, which is recorded in Other income (deductions). The sale was completed in January 2024.

Goodwill. As required by U.S. GAAP, goodwill is assessed for impairment annually, or more frequently, if circumstances indicate impairment to the carrying value of goodwill may have occurred. The goodwill impairment analysis was conducted as of October 1st using a qualitative assessment, as permitted by U.S. GAAP. Management of the Company and Southwest considered its reporting units and segments, determining that they remained consistent between periods presented below, and that no change was necessary with regard to the level at which goodwill is assessed for impairment. The Company and Southwest determined that it is not more likely than not that the fair values of the Centuri and Southwest reporting units were less than their carrying amounts in either 2023 or 2022, and therefore, no impairment was recorded in either year in regard to these entities.

In regard to MountainWest, a loss was recognized, primarily as a goodwill impairment of $449.6 million in the fourth quarter of 2022. As noted above, an additional $21 million loss was recorded in the first quarter of 2023. See **Note 15 - Acquisitions and Dispositions** for additional information.

There can also be no assurances that future assessments of remaining goodwill on the Company's and Southwest's balance sheets will not result in an impairment; various factors, including the planned separation of Centuri (including any partial sell-down, or series of partial sell-downs, that may occur and result in reassessment of reporting units or other factors that impact the level at which goodwill is assessed), or changes in economic conditions, governmental monetary policies, interest rates, or others, on their own or in combination, could result in the fair value of the related reporting units being lower than their carrying value.

Goodwill in the Natural Gas Distribution and Utility Infrastructure Services segments is included in their respective Consolidated Balance Sheets as follows:

(Thousands of dollars)	Natural Gas Distribution	Utility Infrastructure Services	Total Company
Balance, December 31, 2021	$ 10,095	$ 785,058	$ 795,153
Additional goodwill from Graham County acquisition	1,060	—	1,060
Measurement-period adjustments from Riggs Distler acquisition	—	(1,924)	(1,924)
Foreign currency translation adjustment	—	(7,039)	(7,039)
Balance, December 31, 2022	11,155	776,095	$ 787,250
Foreign currency translation adjustment	—	2,479	2,479
Balance, December 31, 2023	$ 11,155	$ 778,574	$ 789,729

Other Current Liabilities. Management recognizes in its balance sheets various liabilities that are expected to be settled through future cash payments within the next twelve months, including certain regulatory mechanisms (refer to **Note 5 - Regulatory Assets and Liabilities**), customary accrued expenses for employee compensation and benefits, declared but unpaid dividends, and miscellaneous other accrued liabilities. Other current liabilities for the Company include $44.4 million and $41.6 million of dividends declared as of December 31, 2023 and 2022, respectively. Also included in the balance was $88 million in accrued purchased gas cost, with no corresponding liability balance as of December 31, 2022. See also *Deferred Purchased Gas Costs* and *Prepaid and other current assets* above.

Accumulated Removal Costs. Approved regulatory practices allow Southwest to include in depreciation expense a component intended to recover removal costs associated with regulated operations plant retirements. In accordance with the SEC position on presentation of these amounts, management reclassifies estimated removal costs from Accumulated depreciation to Accumulated removal costs within the liabilities section of the Consolidated Balance Sheets. Management regularly updates the estimated accumulated removal costs as amounts fluctuate between periods depending on the level of replacement work performed (and actual cost experience) compared to the estimated cost of removal in rates.

Revenue. See **Note 3 - Revenue** for information related to revenue recognition for Southwest and Centuri.

Intercompany Transactions. Centuri recognizes revenues generated from contracts with Southwest (see **Note 13 - Segment Information**). The accounts receivable balance, revenues, and associated profits are included in the consolidated financial statements of the Company and Southwest and are not eliminated during consolidation in accordance with accounting treatment for rate-regulated entities.

Utility Infrastructure Services Expenses. Centuri's utility infrastructure services expenses in the Consolidated Statements of Income includes payroll expenses, office and equipment rental costs, subcontractor expenses, training, job-related materials, gains and losses on equipment sales, and professional fees.

Net Cost of Gas Sold. Components of net cost of gas sold include natural gas commodity costs (fixed-price and variable-rate), pipeline capacity/transportation costs, and any actual settled costs of natural gas derivative instruments, where relevant. Also included are the net impacts of PGA deferrals and recoveries, which by their inclusion, result in net cost of gas sold overall that is comparable to amounts included in billed gas operating revenues. Differences between amounts incurred with suppliers, transmission pipelines, etc. and amounts already included in customer rates, are temporarily deferred in PGA accounts pending inclusion in customer rates.

Operations and Maintenance Expense. Operations and maintenance expense includes Southwest's operating and maintenance costs associated with serving utility customers and maintaining its distribution and transmission systems, uncollectible customer accounts expense, administrative and general salaries and expense, and employee benefits expense excluding relevant non-service cost components (that have been reclassified to Other income (deductions) due to requirements in U.S. GAAP), as well as legal expense (including injuries and damages), professional and other external contracted services, and other business expenses.

Depreciation and Amortization. Regulated operations plant depreciation is computed on the straight-line remaining life method at composite rates considered sufficient to amortize costs over estimated service lives, including components which compensate for removal costs (net of salvage value), and retirements, as approved by the appropriate regulatory agency. When plant is retired from service, the original cost of plant, including cost of removal, less salvage, is charged to the accumulated provision for depreciation. See also discussion regarding *Accumulated Removal Costs* above. Other regulatory assets, including acquisition adjustments, are amortized when appropriate, over time periods authorized by regulators. Non-regulated operations, including utility infrastructure services-related property and equipment, are depreciated on a straight-line method based on the

estimated useful lives of the related assets. Costs and gains related to refunding regulated operations debt and debt issuance expenses are deferred and amortized over the weighted-average lives of the new issues and become a component of interest expense.

Allowance for Funds Used During Construction ("AFUDC"). AFUDC represents the cost of both debt and equity funds used to finance regulated operations plant construction. AFUDC is capitalized as part of the cost of regulated operations plant. The debt portion of AFUDC is reported in the Company's and Southwest's Consolidated Statements of Income as an offset to Net interest deductions and the equity portion is reported as Other income. Regulated operations plant construction costs, including AFUDC, are recoverable as part of authorized rates through depreciation when completed projects are placed into operation, and general rate relief is requested and granted. AFUDC, disaggregated by type, included in the Company's and Southwest's Consolidated Statements of Income are presented in the table below:

(Thousands of dollars)	2023	2022	2021
AFUDC:			
Debt portion	$ 6,851	$ 3,535	$ 1,046
Equity portion	1,869	—	—
AFUDC capitalized as part of regulated operations plant	$ 8,720	$ 3,535	$ 1,046
AFUDC rate	6.30 %	2.64 %	0.96 %

AFUDC related to MountainWest includes $86,000 of debt and $465,000 of equity during the year ended December 31, 2022, which is not reflected in the table above. AFUDC related to MountainWest in 2023 was not significant. Debt and equity AFUDC at Southwest were impacted in 2023, 2022, and 2021 by the amount of short-term debt outstanding based on the regulatory formula for each component.

Other Income (Deductions). The following table provides the composition of significant items included in Other income (deductions) on the Consolidated Statements of Income:

(Thousands of dollars)	2023	2022	2021
Southwest Gas Corporation:			
Change in COLI policies	$ 10,100	$ (5,400)	$ 8,800
Interest income	50,757	16,183	5,113
Equity AFUDC	1,869	—	—
Non-service components of net periodic benefit cost	20,387	(751)	(14,021)
Miscellaneous expense	(12,452)	(16,916)	(4,451)
Southwest Gas Corporation – total other income (deductions)	70,661	(6,884)	(4,559)
Centuri, MountainWest, and Southwest Gas Holdings, Inc.:			
Foreign transaction gain (loss)	(517)	977	(22)
Equity AFUDC	82	465	—
Equity in earnings of unconsolidated investments	868	2,629	226
Miscellaneous income and (expense)	60	(3,113)	863
Corporate and administrative	151	(263)	(7)
Southwest Gas Holdings, Inc. - total other income (deductions)	$ 71,305	$ (6,189)	$ (3,499)

Included in the table above is the change in COLI policies (including net death benefits recognized, where relevant). Current tax regulations provide for tax-free treatment of life insurance (death benefit) proceeds. Therefore, changes in the cash surrender value components of COLI policies, as they progress towards the ultimate death benefits, are also recorded without tax consequences.

Interest income primarily relates to Southwest's regulatory asset balances, including its deferred purchased gas cost mechanisms, the combined balance of which increased from $450 million as of December 31, 2022 to $553 million as of December 31, 2023. In regard to net periodic benefit cost, refer to **Note 11 - Pension and Other Postretirement Benefits**. Miscellaneous income and (expense) for Southwest in 2023 and 2022 includes a variety of items, including reserves for uncompleted software projects and the reduction in value of Southwest's previous corporate campus property (discussed above).

Derivatives. In managing its natural gas supply portfolios, Southwest has historically entered into fixed- and variable-price contracts, which qualify as derivatives. The fixed-price contracts, firm commitments to purchase a fixed amount of gas in the future at a fixed price, qualify for the normal purchases and normal sales exception that is allowed for contracts that are

probable of delivery in the normal course of business, and are exempt from fair value reporting. The variable-price contracts qualify as derivative instruments; however, because the contract price is the prevailing price at the future transaction date, no fair value adjustment is required. Southwest does not utilize derivative financial instruments for speculative purposes, nor does it have trading operations.

Foreign Currency Translation and Transactions. Foreign currency-denominated assets and liabilities of consolidated subsidiaries are translated into U.S. dollars at exchange rates existing at the respective balance sheet dates. Translation adjustments resulting from fluctuations in exchange rates are recorded as a separate component of Other comprehensive income and accumulations thereof within stockholders' equity. Results of operations of foreign subsidiaries are translated using the monthly weighted-average exchange rates during the respective periods. Gains and losses resulting from foreign currency transactions are included in Other income and (expenses) of the Company. Gains and losses resulting from intercompany foreign currency transactions that are of a long-term investment nature are reported in Other comprehensive income, if applicable.

Earnings Per Share. Basic earnings per share ("EPS") in each period of this report were calculated by dividing net income (loss) attributable to Southwest Gas Holdings, Inc. by the weighted-average number of shares during those periods. Diluted EPS includes additional weighted-average common stock equivalents (performance share units and restricted stock units), if dilutive. Unless otherwise noted, the term "Earnings Per Share" refers to Basic EPS. A reconciliation of the denominator used in Basic and Diluted EPS calculations is shown in the following table:

(In thousands)	2023	2022	2021
Weighted average basic shares	70,787	65,558	59,145
Effect of dilutive securities:			
Restricted stock units (1)(2)	203	—	114
Weighted average diluted shares	70,990	65,558	59,259

(1) The number of anti-dilutive restricted stock units for 2022 excluded from the calculation of diluted shares is 157,000.
(2) The number of securities granted for 2023, 2022, and 2021 includes 173,000, 144,000, and 104,000 performance share units, respectively, the total of which was derived by assuming that target performance will be achieved during the relevant performance period.

Recent Accounting Standards Updates.

Recently issued accounting pronouncement that will be effective in 2024:

In November 2023, the FASB issued ASU 2023-07 "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures." The update, amongst other amendments, requires disclosure of significant segment expenses that are regularly provided to the chief operating decision maker ("CODM") and included within each reported measure of segment profit or loss, an amount and description of the composition of other segment items to reconcile to segment profit or loss, and the title and position of the entity's CODM. The update also extends certain annual disclosures to interim periods, and is effective for fiscal years beginning after December 15, 2023 and interim periods within the fiscal years beginning after December 15, 2024. Early adoption is permitted. Management is evaluating the impacts this update might have on the Company's and Southwest's consolidated financial statements and disclosures.

Recently issued accounting pronouncement that will be effective after 2024:

In December 2023, the FASB issued ASU 2023-09 "Income Taxes (Topic 740): Improvements to Income Tax Disclosures." The update, amongst other amendments, provides for enhanced income tax information primarily through changes in the rate reconciliation and income taxes paid information. The update is effective for annual periods beginning after December 15, 2024; early adoption is permitted. Management is evaluating the impacts this update might have on the Company's and Southwest's disclosures.

Subsequent Events. Management monitors events occurring after the balance sheet date and prior to the issuance of the financial statements to determine the impacts, if any, of events on the financial statements to be issued or disclosures to be made, and has reflected them where appropriate.

Note 2 - Regulated Operations Plant and Leases

Net Regulated Operations Plant

Major classes of regulated operations plant (plant previously associated with MountainWest is not included as the MountainWest disposal group was deemed held for sale as of December 31, 2022) and their respective balances as of December 31, 2023 and 2022 were as follows:

	December 31,	
(Thousands of dollars)	2023	2022
Gas plant:		
Storage	$ 104,527	$ 104,218
Transmission	402,591	399,357
Distribution	8,684,949	8,039,793
General	539,188	505,109
Software and software-related intangibles	393,444	389,496
Other	15,663	15,934
	10,140,362	9,453,907
Less: accumulated depreciation and amortization	(2,822,669)	(2,674,157)
Construction work in progress	200,549	244,750
Net regulated operations plant	$ 7,518,242	$ 7,024,500

Regulated operations plant depreciation is computed on the straight-line remaining life method at composite rates considered sufficient to amortize costs over estimated service lives, including components which are intended to compensate for removal costs (net of salvage value), and retirements, based on the processes of regulatory proceedings and related regulatory commission approvals and/or mandates. In 2023, annual regulated operations depreciation and amortization expense in regard to Southwest averaged 2.6% of the original cost of depreciable and amortizable property, and 2.7% in 2022 and 2021. Transmission and distribution plant are associated with the core natural gas delivery infrastructure, and combined, constitute the majority of gas plant. Annual regulated operations depreciation expense for Southwest averaged approximately 2.2% of the original cost of depreciable transmission and distribution plant during the period 2021 through 2023.

Depreciation and amortization expense on gas plant, including intangibles, was as follows:

(Thousands of dollars)	2023	2022	2021
Depreciation and amortization expense	$ 256,847	$ 243,857	$ 230,245

Included in the figures above is amortization of regulated operations intangibles of $20.5 million, $21 million, and $17.7 million for the years ended December 31, 2023, 2022, and 2021, respectively. The amounts above exclude regulatory asset and liability amortization.

Leases

Determinations are made as to whether an arrangement is a lease at inception. ROU assets represent the right to use an underlying asset for the lease term; lease liabilities represent obligations to make lease payments arising from the lease. Operating lease ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. When leases do not provide an implicit interest rate, an incremental borrowing rate based on information available at commencement is used in determining the present value of lease payments; an implicit rate, if readily determinable, is used. Lease terms utilized in the computations may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. When lease agreements include non-lease components, they are included with the lease component and accounted for as a single component, for all asset classes. Southwest has no significant operating, finance, or short-term leases.

Centuri has operating and finance leases for corporate and field offices, construction equipment, and transportation vehicles. Centuri is currently not a lessor in any significant lease arrangements. Centuri's leases have remaining lease terms of up to 15 years. Some of these include options to extend the leases, generally for optional terms of up to 5 years, and some include options to terminate the leases within 1 year. Centuri's equipment leases may include variable payment terms in addition to the fixed lease payments if machinery is used in excess of the standard work periods. These variable payments are not probable of occurring under the current operating environment and have not been included in consideration of lease payments. Short-term leases were not recorded on the balance sheet under the provisions of ASC 842, as permitted. Due to the seasonality of

Centuri's business, expense for short-term leases will fluctuate throughout the year with higher expense incurred during the warmer months. Executed lease agreements that had not yet commenced were insignificant as of December 31, 2023.

The components of lease expense for Centuri were as follows:

(Thousands of dollars)	2023	2022	2021
Operating lease cost	$ 22,162	$ 17,881	$ 15,279
Finance lease cost:			
Amortization of ROU assets	7,780	7,702	2,138
Interest on lease liabilities	1,680	1,520	278
Total finance lease cost	9,460	9,222	2,416
Short-term lease cost	122,333	120,339	103,800
Total lease cost	$ 153,955	$ 147,442	$ 121,495

Supplemental cash flow information related to Centuri leases for the years ended December 31, 2023, 2022, and 2021 was as follows:

(Thousands of dollars)	2023	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	$ 21,908	$ 16,725	$ 14,669
Operating cash flows from finance leases	1,680	1,520	278
Financing cash flows from finance leases	12,113	11,985	3,547
ROU assets obtained in exchange for lease obligations:			
Operating leases	$ 50,173	$ 22,653	$ 11,597
Finance leases	1,625	28,861	3,332

Supplemental information related to Centuri leases, including location in the Consolidated Balance Sheets, is as follows:

(Thousands of dollars)	December 31, 2023	December 31, 2022
Operating leases:		
Other property and investments	$ 118,448	$ 85,270
Other current liabilities	$ 19,363	$ 13,863
Other deferred credits and other long-term liabilities	105,215	77,119
Total operating lease liabilities	$ 124,578	$ 90,982
Finance leases:		
Other property and investments	$ 43,525	$ 51,313
Other current liabilities	$ 11,370	$ 12,028
Other deferred credits and other long-term liabilities	24,334	34,238
Total finance lease liabilities	$ 35,704	$ 46,266
Weighted average remaining lease term (in years)		
Operating leases	7.45	6.66
Finance leases	3.64	4.33
Weighted average discount rate		
Operating leases	4.88 %	4.06 %
Finance leases	4.02 %	3.95 %

The following is a schedule of maturities of Centuri lease liabilities as of December 31, 2023:

(Thousands of dollars)	Operating Leases	Finance Leases
2024	$ 24,930	$ 12,674
2025	21,634	10,242
2026	19,201	7,651
2027	18,192	5,763
2028	15,916	1,728
Thereafter	49,120	748
Total lease payments	148,993	38,806
Less imputed interest	24,415	3,102
Total	$ 124,578	$ 35,704

Note 3 - Revenue

The following information about the Company's revenues is presented by segment. Southwest encompasses the natural gas distribution segment and Centuri encompasses the utility infrastructure services segment.

Natural Gas Distribution Segment:

Southwest recognizes revenue when it satisfies its performance by transferring gas to the customer. Revenues also include the net impacts of margin tracker/decoupling accruals based on criteria in U.S. GAAP for rate-regulated entities associated with alternative revenue programs. Revenues from customer arrangements and from alternative revenue programs are described below.

Southwest acts as an agent for state and local taxing authorities in the collection and remittance of a variety of taxes, including sales and use taxes and surcharges. These taxes are not included in Regulated operations revenues. Management uses the net classification method to report taxes collected from customers to be remitted to governmental authorities.

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Southwest generally offers two types of services to its customers: tariff sales and transportation–only service. Tariff sales encompass sales to many types of customers (primarily residential) under various rate schedules, subject to cost-of-service ratemaking, which is based on the rate-regulation of state commissions and the Federal Energy Regulatory Commission (the "FERC"). Southwest provides both the commodity and the related distribution service to nearly all of its approximate 2.2 million customers, and only several hundred customers (who are eligible to secure their own gas) subscribe to transportation-only service. Natural gas is delivered and consumed by the customer simultaneously. The provision of service is represented by the turn of the meter dial and is the primary representation of the satisfaction of performance obligations of Southwest. The amount billable via regulated rates (both volumetric and fixed monthly rates as part of rate design) corresponds to the value to the customer, and management believes that the amount billable (amount Southwest has the right to invoice) is appropriate to utilize for purposes of recognizing revenue. Estimated amounts remaining unbilled since the last meter read date are restricted from being billed due only to the passage of time and therefore are also recognized for service provided through the balance sheet date. While natural gas service is typically recurring, there is generally not a contract term for utility service. Therefore, the contract term is not generally viewed to extend beyond the service provided to date, and customers can generally terminate service at will.

Transportation-only service is also governed by tariff rate provisions. Transportation-only service is generally only available to very large customers under requirements of Southwest's various tariffs. With this service, customers secure their own gas supply and Southwest provides transportation services to move the customer-supplied gas to the intended location. Southwest concluded that transportation/transmission service is suitable to an "over time" recognition model. Rate structures under Southwest's regulation for transportation customers include a combination of volumetric charges and monthly "fixed" charges (including charges commonly referred to as capacity charges, demand charges, or reservation charges) as part of the rate design of regulated jurisdictions. These types of fixed charges represent a separate performance obligation associated with standing ready over the period of the month to deliver quantities of gas, regardless of whether the customer takes delivery of any quantity of gas. The performance obligations under these circumstances are satisfied over the course of the month under an output measure of progress based on time, which correlates to the period for which the charges are eligible to be invoiced.

Under its regulation, Southwest enters into negotiated rate contracts for those customers located in proximity to another pipeline, which pose a threat of bypassing its distribution system. Southwest may also enter into similar contracts for customers otherwise able to satisfy their energy needs by means of alternative fuel to natural gas. Less than two dozen customers are party to contracts with rate components subject to negotiation. Many rate provisions and terms of service for these less common types of contracts are also subject to regulatory oversight and tariff provisions. The performance obligations for these customers are satisfied similarly to those for other customers by means of transporting/delivering natural gas to the customer. Many or most of the rate components, and structures, for these types of customers are the same as those for similar customers without negotiated rate components; and the negotiated rates are within the parameters of the tariff guidelines. Furthermore, while some of these contracts include contract periods extending over time, including multiple years, as amounts billable under the contract are based on rates in effect for the customer for service provided to date, no significant financing component is deemed to exist.

As indicated above, revenues also include the net impacts of margin tracker/decoupling accruals. All of Southwest's service territories have decoupled rate structures (also referred to as alternative revenue programs) that are designed to eliminate the direct link between volumetric sales and revenue, thereby mitigating the impacts of unusual weather variability and conservation on margin. The primary alternative revenue programs involve permissible adjustments for differences between stated tariff benchmarks and amounts billed through revenue from contracts with customers via existing rates. Such adjustments are recognized monthly in revenue and in the associated regulatory asset/liability accounts in advance of rate adjustments intended to collect or return amounts recognized. Revenues recognized for the adjustment to the benchmarks noted are required to be presented separately from revenues from contracts with customers, and as such, are provided below and identified as related to alternative revenue programs (which excludes recoveries from customers).

Southwest's operating revenues included on the Consolidated Statements of Income of both the Company and Southwest include revenue from contracts with customers, which is shown below disaggregated by customer type, in addition to other categories of revenue:

	December 31,		
(Thousands of dollars)	2023	2022	2021
Residential	$ 1,725,223	$ 1,324,794	$ 1,035,612
Small commercial	513,366	378,520	270,214
Large commercial	117,973	85,234	57,371
Industrial/other	75,219	50,894	42,313
Transportation	104,298	100,642	92,240
Revenue from contracts with customers	2,536,079	1,940,084	1,497,750
Alternative revenue program revenues (deferrals)	(52,365)	(18,478)	13,181
Other revenues (a)	15,850	13,463	10,859
Total Regulated operations revenues	$ 2,499,564	$ 1,935,069	$ 1,521,790

(a) Amounts include late fees and other miscellaneous revenues, and may also include the impact of certain regulatory mechanisms.

Utility Infrastructure Services Segment:

During 2023, Utility infrastructure services segment management, in connection with Centuri's planned separation, changed its service type revenue classification to align with changes in its organization structure, and as a result, prior year "other" revenue has been recast into gas infrastructure services or electric power infrastructure services to reflect these changes, with no impact to revenue overall. The majority of Centuri contracts are performed under unit-price contracts. Generally, these contracts state prices per unit of installation. Typical installations are accomplished in a few weeks or less. Revenues are recorded as installations are completed. Revenues are recorded for long-term fixed-price contracts in a pattern that reflects the transfer of control of promised goods and services to the customer over time. The amount of revenue recognized on fixed-price contracts is based on costs expended to date relative to anticipated final contract costs (a method of recognition based on inputs). Some unit-price contracts contain caps that if encroached, trigger revenue and loss recognition similar to a fixed-price contract model.

Centuri is required to collect taxes imposed by various governmental agencies on the work performed for its customers. These taxes are not included in Utility infrastructure services revenues. Management uses the net classification method to report taxes collected from customers to be remitted to governmental authorities.

Centuri derives revenue from the installation, replacement, repair, and maintenance of energy distribution systems. Centuri has operations in the U.S. and Canada. The primary focus of Centuri operations is replacement of natural gas distribution pipe and electric service lines, as well as new infrastructure installations. In addition, Centuri performs certain industrial construction activities for various customers and industries. Centuri has two types of agreements with its customers: master services agreements ("MSAs") and bid contracts. Most of Centuri's customers supply many of their own materials in order for Centuri to complete its work under the contracts.

An MSA identifies most of the terms describing each party's rights and obligations that will govern future work authorizations. An MSA is often effective for multiple years. A work authorization is issued by the customer to describe the location, timing, and any additional information necessary to complete the work for the customer. The combination of the MSA and the work authorization determines when a contract exists and revenue recognition may begin. Each work authorization is generally a single performance obligation as Centuri is performing a significant integration service.

A bid contract is typically a one-time agreement for a specific project that has all necessary terms defining each party's rights and obligations. Each bid contract is evaluated for revenue recognition individually. Control of assets created under bid contracts generally passes to the customer over time. Bid contracts often have a single performance obligation as Centuri is providing a significant integration service.

Centuri's MSA and bid contracts are characterized as either fixed-price contracts or unit-price contracts for revenue recognition purposes. The cost-to-cost input method is used to measure progress towards the satisfaction of a performance obligation for fixed-price contracts. Input methods result in the recognition of revenue based on the entity's expended effort toward satisfaction of the performance obligation relative to the total expected effort to satisfy it in full. For unit-price contracts, an output method is used to measure progress towards satisfaction of a performance obligation (based on the completion of each unit that is required under the contract).

Actual revenues and project costs can vary, sometimes substantially, from previous estimates due to changes in a variety of factors, including unforeseen circumstances. These factors, along with other risks inherent in performing fixed-price contracts

may cause actual revenues and gross profit for a project to differ from previous estimates, and could result in reduced profitability or losses on projects. Changes in these factors may result in revisions to costs and earnings, the impacts for which are recognized in the period in which the changes are identified. Once identified, these types of conditions continue to be evaluated for each project throughout the project term, and ongoing revisions in management's estimates of contract value, cost, and profit are recognized as necessary in the period determined.

Centuri categorizes work performed under MSAs and bid contracts into three primary service types: gas construction, electrical construction, and other construction. Gas construction includes work involving previously existing gas pipelines and the installation of new pipelines or service lines. Electrical construction includes work involving installation and maintenance of transmission and distribution lines, including storm restoration services. Other construction includes all other work and can include industrial and water utility services.

Contracts can have compensation/consideration that is variable. For MSAs, variable consideration is evaluated at the customer level as the terms creating variability in pricing are included within the MSA and are not specific to a work authorization. For multi-year MSAs, variable consideration items are typically determined for each year of the contract and not for the full contract term. For bid contracts, variable consideration is evaluated at the individual contract level. The expected value method or most likely amount method is used based on the nature of the variable consideration. Types of variable consideration include liquidated damages, delay penalties, performance incentives, safety bonuses, payment discounts, and volume rebates. Centuri will typically estimate variable consideration and adjust financial information, as necessary.

Change orders involve the modification in scope, price, or both to the current contract, requiring approval by both parties. The existing terms of the contract continue to be accounted for under the current contract until such time as a change order is approved. Once approved, the change order is either treated as a separate contract or as part of the existing contract, as appropriate under the circumstances. When the scope is agreed upon in the change order but not the price, Centuri estimates the change to the transaction price.

The following tables display Centuri's revenue from contracts with customers disaggregated by service type and contract type:

	December 31,		
(Thousands of dollars)	2023	2022	2021
Service Types:			
Gas infrastructure services	$ 1,549,152	$ 1,630,911	$ 1,511,326
Electric power infrastructure services	1,307,033	1,095,350	581,939
Other	43,091	34,066	65,396
Total Utility infrastructure services revenues	$ 2,899,276	$ 2,760,327	$ 2,158,661

	December 31,		
(Thousands of dollars)	2023	2022	2021
Contract Types:			
Master services agreement	$ 2,388,688	$ 2,342,220	$ 1,652,978
Bid contract	510,588	418,107	505,683
Total Utility infrastructure services revenues	$ 2,899,276	$ 2,760,327	$ 2,158,661
Unit-price contracts	$ 1,570,356	$ 1,608,131	$ 1,369,082
Fixed-price contracts	673,605	498,039	267,742
Time and materials contracts	655,315	654,157	521,837
Total Utility infrastructure services revenues	$ 2,899,276	$ 2,760,327	$ 2,158,661

The following table provides information about contracts receivable and revenue earned on contracts in progress in excess of billings (contract assets), both of which are included within Accounts receivable, net of allowances, as well as amounts billed in

excess of revenue earned on contracts (contract liabilities) at Centuri, which are included in Other current liabilities as of December 31, 2023 and 2022 on the Company's Consolidated Balance Sheets:

	December 31,	
(Thousands of dollars)	2023	2022
Contracts receivable, net	$ 347,454	$ 394,022
Revenue earned on contracts in progress in excess of billings	269,808	238,059
Amounts billed in excess of revenue earned on contracts	43,694	35,769

The revenue earned on contracts in progress in excess of billings primarily relates to Centuri's rights to consideration for work completed but not billed and/or approved at the reporting date. These contract assets are transferred to contracts receivable when the rights become unconditional, and increased $31.7 million during 2023 due primarily to continued revenue growth. These contract assets are recoverable from Centuri's customers based upon various measures of performance, including achievement of certain milestones, completion of specified units or completion of a contract. In addition, many of Centuri's time and materials arrangements are billed in arrears pursuant to contract terms that are standard within the industry, resulting in contract assets and/or unbilled receivables being recorded, as revenue is recognized in advance of billings. Due to the lag in invoicing associated with contractual provisions (or other economic or market conditions that may impact a customer's business), Centuri's ability to bill and subsequently collect amounts due may be impacted. These changes may result in the need to record an estimated valuation allowance to adjust contract asset balances to their net realizable value.

The amounts billed in excess of revenue earned primarily relate to the advance consideration received from customers for which work has not yet been completed. The change in this contract liability balance from December 31, 2022 to December 31, 2023 increased $7.9 million due to amounts received for services not yet performed, net of revenue recognized.

For contracts that have an original duration of one year or less, Centuri does not consider/compute an interest component based on the time value of money. Further, because of the short duration of these contracts, the Company has not disclosed the transaction price for the remaining performance obligations as of the end of each reporting period or when the Company expects to recognize the revenue.

As of December 31, 2023, Centuri has 56 contracts with an original duration of more than one year. The aggregate amount of the transaction price allocated to the unsatisfied performance obligations of these contracts as of December 31, 2023 was $292.9 million. Centuri expects to recognize the remaining performance obligations over approximately the next two years; however, the timing of that recognition is largely within the control of the customer, including when the necessary equipment and materials required to complete the work will be provided by the customer.

Utility infrastructure services contracts receivable consists of the following:

	December 31,	
(Thousands of dollars)	2023	2022
Billed on completed contracts and contracts in progress	$ 348,021	$ 395,771
Other receivables	1,945	2,569
Contracts receivable, gross	349,966	398,340
Allowance for doubtful accounts	(2,512)	(4,318)
Contracts receivable, net	$ 347,454	$ 394,022

Note 4 - Receivables and Related Allowances

Business activity with respect to natural gas utility operations is conducted with customers located within the three-state region of Arizona, Nevada, and California. Southwest's accounts receivable are short-term in nature, with billing due dates customarily not extending beyond one month, with customers' credit worthiness assessed upon account creation by evaluation of other utility service or their credit file, and related payment history. Although Southwest seeks generally to minimize its credit risk related to utility operations by requiring security deposits from new customers, imposing late fees, and actively pursuing collection on overdue accounts where possible, some accounts are ultimately not collected. Customer accounts are subject to collection procedures that vary by jurisdiction (late fee assessment, notice requirements for disconnection of service, and procedures for actual disconnection and/or reestablishment of service). After disconnection of service, accounts are customarily written off approximately two months after disconnection if the account remains inactive. Dependent upon the jurisdiction, reestablishment of service requires both payment of previously unpaid balances and additional deposit requirements. Provisions for uncollectible accounts are recorded monthly based on experience, consideration of current and expected future conditions, customer and rate composition, regulatory requirements, and write-off processes. They are included in the ratemaking process as a cost of service. The Nevada jurisdictions have a regulatory mechanism associated with the gas-

cost-related portion of uncollectible accounts ("UGCE"). Eligible amounts are deferred and collected through a surcharge in the ratemaking process. The California jurisdictions have a regulatory mechanism specific to residential customer uncollectible accounts ("RUBA"). This is a two-way balancing account that was permitted to be implemented to track amounts for future recovery; the mechanism is subject to a cap on annual disconnections/write-offs, above which uncollectible expense would nonetheless be incurred and recognized. Eligible amounts are deferred and collected through a surcharge in the ratemaking process. Southwest continues to actively work with customers experiencing financial hardship by means of flexible payment options and partnering with assistance agencies. Additionally, management continues to monitor expected credit losses in light of COVID-19-related moratoriums for disconnections (and earlier year lifting thereof), local/regional inflation, the magnitude and age of outstanding receivables, economic trends, and others. As referenced above, certain residential disconnection protections were recently established in Southwest's California jurisdictions, such as prohibiting credit deposits and fees for reconnection, and limiting disconnections/write-offs, among other things; management continues to monitor these conditions and any impacts. The allowance as of December 31, 2023 reflects the expected impacts on balances as of that date, including consideration of customers' current and future ability to pay amounts that are due.

Utility infrastructure services accounts receivable are recorded at face amounts less an allowance for doubtful accounts. Centuri's customers are generally investment-grade gas and electric utility companies for which Centuri has historically recognized an insignificant amount of write-offs. Centuri's accounts receivable balances carry standard payment terms of up to 60 days. Centuri maintains an allowance that is estimated based on historical collection experience, current and estimated future economic and market conditions, and a review of the current status of each customer's accounts receivable balance. Account balances are monitored at least monthly, and are charged off against the allowance when management determines it is probable the balance will not be recovered.

The table below contains information about Southwest's gas utility customer accounts receivable balance (net of allowance) at December 31, 2023 and 2022:

	December 31,	
(Thousands of dollars)	2023	2022
Gas utility customer accounts receivable balance	$ 263,337	$ 225,317

The following table represents the percentage of customers in each of Southwest's three states at December 31, 2023, which was consistent with the prior year:

Percent of customers by state:	
Arizona	54 %
Nevada	37 %
California	9 %

Southwest activity in the allowance account for uncollectibles is summarized as follows:

(Thousands of dollars)	Allowance for Uncollectibles
Balance, December 31, 2020	$ 4,334
Additions charged to expense	5,415
Accounts written off, less recoveries	(6,490)
Balance, December 31, 2021	3,259
Additions charged to expense	12,707
Accounts written off, less recoveries	(11,136)
Balance, December 31, 2022	4,830
Additions charged to expense	11,877
Accounts written off, less recoveries	(10,612)
Balance, December 31, 2023	$ 6,095

The table above does not give effect for amounts included in regulatory tracking mechanisms, including the UGCE in Nevada and the RUBA in California. At December 31, 2023, the utility infrastructure services segment (Centuri) had $617.3 million in combined customer accounts and contracts receivable. The allowance for doubtful accounts at Centuri was $2.5 million and $4.3 million as of December 31, 2023 and 2022, respectively. The allowance for uncollectibles and write-offs related to Centuri customers were insignificant for all periods prior to December 31, 2022.

Note 5 - Regulatory Assets and Liabilities

Southwest is subject to the regulation of the Arizona Corporation Commission, the Public Utilities Commission of Nevada, the California Public Utilities Commission, and the FERC. Accounting policies for Southwest conform to U.S. GAAP applicable to rate-regulated entities and reflect the effects of the ratemaking process. Accounting treatment for rate-regulated entities allows for deferral as regulatory assets, costs that otherwise would be expensed, if it is probable that future recovery from customers will occur. If rate recovery is no longer probable, due to competition or the actions of regulators, the related regulatory asset is required to be written off. Regulatory liabilities are recorded if it is probable that revenues will be reduced for amounts that will be refunded to customers through the ratemaking process. Management records regulatory assets and liabilities based on decisions of the commissions noted above, including the issuance of regulatory orders and precedents established by these commissions. Southwest has generally been successful in seeking recovery of regulatory assets, and regularly file rate cases or other administrative filings in the various jurisdictions, in some cases, to establish the basis for recovering regulatory assets reflected in accounting records.

The following table represents existing regulatory assets and liabilities:

	December 31,	
(Thousands of dollars)	2023	2022
Regulatory assets:		
Accrued pension and other postretirement benefit costs (1)	$ 309,794	$ 311,124
Deferred purchased gas costs (2)	552,885	450,120
Accrued purchased gas costs (3)	—	207,368
Unamortized premium on reacquired debt (4)	13,080	14,707
Accrued absence time (5)	18,937	17,854
Margin, interest- and tax-tracking (6)	14,717	21,024
Other (10)	78,138	65,981
	$ 987,551	$ 1,088,178
Regulatory liabilities:		
Accrued purchased gas costs (3)	(87,579)	—
Accumulated removal costs (7)	(458,000)	(445,000)
Unamortized gain on reacquired debt (8)	(6,036)	(6,572)
Regulatory excess deferred/other taxes and gross-up (9)	(394,411)	(424,921)
Margin, interest- and property tax-tracking (6)	(57,344)	(10,920)
Other (10)	(2,490)	(5,393)
Net regulatory assets (liabilities)	$ (18,309)	$ 195,372

(1) Included in Deferred charges and other assets on the Consolidated Balance Sheets. Recovery period is greater than five years. (See **Note 11 - Pension and Other Postretirement Benefits**).

(2) Balance recovered or refunded on an ongoing basis with interest.

(3) Balance recovered or refunded on an ongoing basis. Asset balance is included in Prepaid and other current assets and the liability balance is included in Other current liabilities on the Consolidated Balance Sheets.

(4) Included in Deferred charges and other assets on the Consolidated Balance Sheets. Recovered over life of debt instruments.

(5) Regulatory recovery occurs generally on a one-year lag basis through the labor loading process. Included in Prepaid and other current assets on the Consolidated Balance Sheets.

(6) Margin tracking/decoupling mechanisms are alternative revenue programs; revenue associated with under-collections (for the difference between authorized margin levels and amounts billed to customers through rates currently) is recognized as revenue so long as recovery is expected to take place within 24 months. Total category asset balances are included in Prepaid and other current assets on the Consolidated Balance Sheets. Total category liability balances are included in Other current liabilities and Other deferred credits and other long-term liabilities.

(7) Included in Accumulated removal costs on the Consolidated Balance Sheets; a component of ongoing depreciation rates as part of margin rates overall and of benchmarks under trackers as part of general rate cases.

(8) Included in Other deferred credits and other long-term liabilities on the Consolidated Balance Sheets. Amortized over life of debt instruments.

(9) Includes remeasurement/reduction of the net accumulated deferred income tax liability from U.S. tax reform. The reduction (excess accumulated deferred taxes, or "EADIT") became a regulatory liability with tax gross-up. EADIT reduces rate base, and is expected to be returned to utility customers in accordance with IRS and regulatory requirements. Included generally in Other deferred credits and other long-term liabilities on the Consolidated Balance Sheets, except for $28.5 million in 2023 which is in Other current liabilities. Amount also includes the difference in current taxes required to be returned to customers and a separate $3.7 million gross-up related to contributions in aid of construction.

(10) The following tables detail the components of Other regulatory assets and liabilities. Other regulatory assets are included in either Prepaid and other current assets or Deferred charges and other assets on the Consolidated Balance Sheets (as indicated). Recovery periods vary. Other regulatory liabilities are included in either Other current liabilities or Other deferred credits and other long-term liabilities on the Consolidated Balance Sheets (as indicated).

	December 31,	
(Thousands of dollars)	2023	2022
Other Regulatory Assets:		
State mandated public purpose programs (including low income and conservation programs) (a) (f)	$ 21,290	$ 18,69
Infrastructure replacement programs and similar (b) (f)	16,491	8,53
Environmental compliance programs (c) (f)	4,005	5,80
Pension tracking mechanism (d)	16,167	13,09
Other (e)	20,185	19,85
	$ 78,138	$ 65,98

a) Included in Prepaid and other current assets on the Consolidated Balance Sheets.
b) In 2023, approximately $171,000 of these balances included in Prepaid and other current assets and $16.3 million in Deferred charges and other assets on the Consolidated Balance Sheets. In 2022, approximately $930,000 included in Prepaid and other current assets and $7.6 million included in Deferred charges and other assets on the Consolidated Balance Sheets.
c) In 2023, approximately $3 million of these balances included in Prepaid and other current assets and $967,000 in Deferred charges and other assets on the Consolidated Balance Sheets. In 2022, approximately $5 million included in Prepaid and other current assets and $825,000 included in Deferred charges and other assets on the Consolidated Balance Sheets.
d) Included in Deferred charges and other assets on the Consolidated Balance Sheets.
e) In 2023, approximately $9 million included in Prepaid and other current assets and $11.2 million included in Deferred charges and other assets on the Consolidated Balance Sheets. In 2022, $6.4 million included in Prepaid and other current assets and $13.4 million included in Deferred charges and other assets on the Consolidated Balance Sheets.
f) Balance recovered or refunded on an ongoing basis, generally with interest.

	December 31,	
(Thousands of dollars)	2023	2022
Other Regulatory Liabilities:		
State mandated public purpose programs (including low income and conservation programs) (g) (i)	$ (254)	$ (1,567)
Other (h) (i)	(2,236)	(3,826)
	$ (2,490)	$ (5,393)

g) Included in Other current liabilities on the Consolidated Balance Sheets.
h) In 2023, included in Other current liabilities, except $146,000, which is included in Other deferred credits and other long-term liabilities on the Consolidated Balance Sheets. In 2022, included in Other current liabilities, except $823,000 which is included in Other deferred credits and other long-term liabilities on the Consolidated Balance Sheets.
i) Balance typically recovered or refunded on an ongoing basis, generally with interest.

Note 6 - Other Comprehensive Income and Accumulated Other Comprehensive Income ("AOCI")

The following information provides insight into amounts impacting the Company's and Southwest's Other comprehensive income (loss), both before and after-tax impacts, within the Consolidated Statements of Comprehensive Income, which also impact Accumulated other comprehensive income ("AOCI") in the Consolidated Balance Sheets and the Consolidated Statements of Equity.

Related Tax Effects Allocated to Each Component of Other Comprehensive Income (Loss):

	December 31,								
	2023			2022			2021		
(Thousands of dollars)	Before-Tax Amount	Tax (Expense) or Benefit (1)	Net-of-Tax Amount	Before-Tax Amount	Tax (Expense) or Benefit (1)	Net-of-Tax Amount	Before-Tax Amount	Tax (Expense) or Benefit (1)	Net-of-Tax Amount
Defined benefit pension plans:									
Net actuarial gain/(loss)	$ (3,188)	$ 765	$ (2,423)	$ 4,079	$ (980)	$ 3,099	$ 59,176	$ (14,202)	$ 44,974
Amortization of prior service cost	175	(42)	133	175	(42)	133	959	(230)	729
Amortization of net actuarial (gain)/loss	1,333	(319)	1,014	34,818	(8,357)	26,461	44,597	(10,703)	33,894
Regulatory adjustment	(1,330)	319	(1,011)	(28,232)	6,775	(21,457)	(88,194)	21,167	(67,027)
Pension plans other comprehensive income (loss)	(3,010)	723	(2,287)	10,840	(2,604)	8,236	16,538	(3,968)	12,570
FSIRS (designated hedging activities):									
Amounts reclassified into net income	—	—	—	545	(129)	416	2,174	(522)	1,652
FSIRS other comprehensive income (loss)	—	—	—	545	(129)	416	2,174	(522)	1,652
Total other comprehensive income (loss) –Southwest Gas Corporation	(3,010)	723	(2,287)	11,385	(2,733)	8,652	18,712	(4,490)	14,222
Foreign currency translation adjustments:									
Translation adjustments	2,742	—	2,742	(6,133)	—	(6,133)	20	—	20
Foreign currency other comprehensive income (loss)	2,742	—	2,742	(6,133)	—	(6,133)	20	—	20
Total other comprehensive income (loss) – Southwest Gas Holdings, Inc.	$ (268)	$ 723	$ 455	$ 5,252	$ (2,733)	$ 2,519	$ 18,732	$ (4,490)	$ 14,242

(1) Tax amounts are calculated using a 24% rate. With regard to foreign currency translation adjustments, the Company has elected to indefinitely reinvest the earnings of Centuri's Canadian subsidiaries in Canada, thus preventing deferred taxes on such earnings. As a result of this assertion, and no repatriation of earnings anticipated, the Company is not recognizing a tax effect or presenting a tax expense or benefit for currency translation adjustments in Other comprehensive income (loss).

The following table represents a rollforward of AOCI, presented on the Company's Consolidated Balance Sheets and its Consolidated Statements of Equity:

	Defined Benefit Plans			Foreign Currency Items			
(Thousands of dollars)	Before-Tax	Tax (Expense) Benefit (3)	After-Tax	Before-Tax	Tax (Expense) Benefit	After-Tax	AOCI
Beginning Balance AOCI December 31, 2022	$ (50,342)	$ 12,081	$ (38,261)	$ (5,981)	$ —	$ (5,981)	$ (44,242)
Net actuarial gain/(loss)	(3,188)	765	(2,423)	—	—	—	(2,423)
Translation adjustments	—	—	—	2,742	—	2,742	2,742
Amortization of prior service cost (1)	175	(42)	133	—	—	—	133
Amortization of net actuarial loss (1)	1,333	(319)	1,014	—	—	—	1,014
Regulatory adjustment (2)	(1,330)	319	(1,011)		—	—	(1,011)
Net current period other comprehensive income (loss) attributable to Southwest Gas Holdings, Inc.	(3,010)	723	(2,287)	2,742	—	2,742	455
Ending Balance AOCI December 31, 2023	$ (53,352)	$ 12,804	$ (40,548)	$ (3,239)	$ —	$ (3,239)	$ (43,787)

(1) These AOCI components are included in the computation of net periodic benefit cost (see **Note 11 - Pension and Other Postretirement Benefits** for additional details).

(2) The regulatory adjustment represents the portion of the activity above that is expected to be recovered through rates in the future (the related regulatory asset is included in Deferred charges and other assets on the Company's Consolidated Balance Sheets).

(3) Tax amounts are calculated using a 24% rate.

The following table represents a rollforward of AOCI, presented on Southwest's Consolidated Balance Sheets:

	Defined Benefit Plans		
(Thousands of dollars)	Before-Tax	Tax (Expense) Benefit (6)	After-Tax
Beginning Balance AOCI December 31, 2022	$ (50,342)	$ 12,081	$ (38,261)
Net actuarial gain/(loss)	(3,188)	765	(2,423)
Amortization of prior service cost (4)	175	(42)	133
Amortization of net actuarial loss (4)	1,333	(319)	1,014
Regulatory adjustment (5)	(1,330)	319	(1,011)
Net current period other comprehensive income (loss) attributable to Southwest Gas Corporation	(3,010)	723	(2,287)
Ending Balance AOCI December 31, 2023	$ (53,352)	$ 12,804	$ (40,548)

(4) These AOCI components are included in the computation of net periodic benefit cost (see **Note 11 - Pension and Other Postretirement Benefits** for additional details).

(5) The regulatory adjustment represents the portion of the activity above that is expected to be recovered through rates in the future (the related regulatory asset is included in Deferred charges and other assets on Southwest's Consolidated Balance Sheets).

(6) Tax amounts are calculated using a 24% rate.

The following table represents amounts (before income tax impacts) included in AOCI (in the tables above), that have not yet been recognized in net periodic benefit cost:

	December 31,	
(Thousands of dollars)	2023	2022
Net actuarial loss	$ (361,968)	$ (360,113)
Prior service cost	(1,178)	(1,353)
Less: amount recognized in regulatory assets	309,794	311,124
Recognized in AOCI	$ (53,352)	$ (50,342)

See **Note 11 - Pension and Other Postretirement Benefits** for more information on the defined benefit pension plans.

Note 7 - Common Stock

Shares of the Company's common stock are publicly traded on the New York Stock Exchange, under the ticker symbol "SWX." Share-based compensation related to Southwest and Centuri is based on awards to be issued in shares of Southwest Gas Holdings, Inc.

In December 2020, the Company and Southwest jointly filed with the SEC an automatic shelf registration statement (File No. 333-251074), or the "Prior Shelf Registration," which became effective upon filing. The Prior Shelf Registration expired in December 2023. In contemplation of this, in November 2023, the Company and Southwest jointly filed an automatic shelf registration statement (File No. 333-275774), or the "2023 Shelf Registration," which became effective upon filing and includes a prospectus detailing the Company's ability to offer and sell, from time to time in amounts at prices and on terms that will be determined at the time of such offering, any combination of common stock, preferred stock, debt securities (which may or may not be guaranteed by one or more of its directly or indirectly wholly owned subsidiaries if indicated in the relevant prospectus supplement), guarantees of debt securities issued by Southwest, depository shares, warrants to purchase common stock, preferred stock or depository shares issued by the Company or debt securities issued by the Company or Southwest, units and rights. Additionally as part of the 2023 Shelf Registration, Southwest may offer and sell, from time to time in amounts at prices and on terms that will be determined at the time of such offering, any combination of debt securities (which may or may not be guaranteed by one or more of its directly or indirectly wholly owned subsidiaries if indicated in the relevant prospectus supplement) and guarantees of debt securities issued by the Company or by one or more of its directly or indirectly wholly owned subsidiaries if indicated in the relevant prospectus supplement.

On April 8, 2021, the Company entered into a Sales Agency Agreement between the Company and BNY Mellon Capital Markets, LLC and J.P. Morgan Securities LLC (the "Equity Shelf Program") for the offer and sale of up to $500 million of common stock from time to time in an at-the-market offering program. There was no activity under the Equity Shelf Program during the year ended December 31, 2023. The following table provides the life-to-date activity under that program through December 31, 2023, and all shares reported were issued pursuant to the Prior Shelf Registration:

Gross proceeds	$	158,180,343
Less: agent commissions		(1,581,803)
Net proceeds	$	156,598,540
Number of shares sold		2,302,407
Weighted average price per share	$	68.70

Upon the expiration of the Prior Shelf Registration, the Equity Shelf Program was terminated. The Company intends to enter into a similar program during 2024.

In March 2023, the Company issued, through a separate prospectus supplement under the Prior Shelf Registration, an aggregate of 4.1 million shares of common stock, at an underwritten public offering price of $60.12 per share, resulting in net proceeds to the Company of $238.4 million, net of an underwriter's discount of $8.3 million and estimated expenses of the offering. Approximately $140 million (2.3 million shares) of the offering was purchased by certain funds affiliated with Carl C. Icahn, a significant stockholder beneficially owning more that 15% of the outstanding stock of the Company as of December 31, 2023. The Company used the net proceeds to repay outstanding amounts under the Company's credit facility, with the remaining proceeds used to pay off residual amounts outstanding under the loan entered into in November 2021 in connection with the acquisition of MountainWest, and otherwise, for working capital and general corporate purposes.

During 2023, the Company issued approximately 68,000 shares of common stock through the Restricted Stock/Unit Plan and Omnibus Incentive Plan.

Additionally during 2023, the Company issued 264,000 shares of common stock through the Dividend Reinvestment and Stock Purchase Plan, raising proceeds of approximately $15.2 million.

As of December 31, 2023, there were 3.4 million shares of common stock registered and available for issuance under the provisions of the various stock issuance plans.

Note 8 - Debt

Long-Term Debt

Long-term debt is recognized in the Company's and Southwest's Consolidated Balance Sheets generally at the carrying value of the obligations outstanding. Details surrounding the fair value and individual carrying values of instruments are provided in the table that follows.

	December 31,			
	2023		2022	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
(Thousands of dollars)				
Southwest Gas Corporation:				
Debentures:				
8% Series, due 2026	$ 75,000	$ 79,502	$ 75,000	$ 80,027
Medium-term notes, 7.92% series, due 2027	25,000	26,883	25,000	26,840
Medium-term notes, 6.76% series, due 2027	7,500	7,800	7,500	7,662
Notes, 5.8%, due 2027	300,000	309,180	300,000	305,913
Notes, 3.7%, due 2028	300,000	285,300	300,000	275,043
Notes, 5.45%, due 2028	300,000	307,170	—	—
Notes, 2.2%, due 2030	450,000	382,635	450,000	353,763
Notes, 4.05%, due 2032	600,000	563,940	600,000	527,052
Notes, 6.1%, due 2041	125,000	126,238	125,000	113,184
Notes, 4.875%, due 2043	250,000	214,050	250,000	195,703

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Notes, 3.8%, due 2046	300,000	225,240	300,000	209,169
Notes, 4.15%, due 2049	300,000	236,370	300,000	218,712
Notes, 3.18%, due 2051	300,000	197,760	300,000	185,523
Unamortized discount and debt issuance costs	(29,594)		(29,471)	
	3,302,906		3,003,029	
Revolving credit facility and commercial paper	—	—	50,000	50,000
Industrial development revenue bonds:				
Tax-exempt Series A, due 2028	50,000	50,000	50,000	50,000
2003 Series A, due 2038	50,000	50,000	50,000	50,000
2008 Series A, due 2038	50,000	50,000	50,000	50,000
2009 Series A, due 2039	50,000	50,000	50,000	50,000
Unamortized discount and debt issuance costs	(1,363)		(1,733)	
	198,637		198,267	
Less: current maturities	—		—	
Southwest Gas Corporation total long-term debt, less current maturities	$ 3,501,543		$ 3,251,296	
Southwest Gas Holdings, Inc.:				
Centuri secured term loan facility	$ 994,238	$ 996,723	$ 1,008,550	$ 995,852
Centuri secured revolving credit facility	77,121	77,205	81,955	82,315
Other debt obligations	96,599	92,209	126,844	118,314
Unamortized discount and debt issuance costs	(17,111)		(20,789)	
Less: current maturities	(42,552)		(44,557)	
Southwest Gas Holdings, Inc. total long-term debt, less current maturities	$ 4,609,838		$ 4,403,299	

The fair values of Southwest's and the Company's revolving credit facilities and Southwest's Industrial Development Revenue Bonds ("IDRBs") are categorized as Level 1 as their interest rates reset frequently. The fair values of Southwest's debentures (which include senior and medium-term notes) and Centuri's term loan facility and unsecured senior notes were determined utilizing a market-based valuation approach, where fair values are determined based on evaluated pricing data, and as such are categorized as Level 2 in the hierarchy.

Southwest has a $400 million credit facility that is scheduled to expire in April 2025. Southwest designates $150 million of associated capacity as long-term debt and the remaining $250 million for working capital purposes. Interest rates for the credit facility are calculated at either the Secured Overnight Financing Rate ("SOFR") or an "alternate base rate," plus in each case an applicable margin that is determined based on Southwest's senior unsecured debt rating. At December 31, 2023, the applicable margin ranged from 0.750% to 1.500% for loans bearing interest with reference to SOFR and from 0.000% to 0.500% for loans bearing interest with reference to the alternative base rate. At December 31, 2023, the applicable margin was 1.125% for loans with reference to SOFR and 0.125% for loans bearing interest with reference to the alternative base rate. Southwest is also required to pay a commitment fee, ranging from 0.075% to 0.200% per annum, on the unfunded portion of the commitments, which was not significant for the year ended December 31, 2023. The credit facility contains a financial covenant requiring Southwest to maintain a ratio of funded debt to total capitalization not to exceed 0.70 to 1.00 as of the end of any quarter of any fiscal year. At December 31, 2023, no borrowings were outstanding on the long-term portion (including under the commercial paper program discussed below), nor under the short-term portion of the facility.

Southwest has a $50 million commercial paper program. Issuances under the commercial paper program are supported by Southwest's current revolving credit facility and, therefore, do not represent additional borrowing capacity. Borrowings under the commercial paper program, if any, are designated as long-term debt. Interest rates for the program are calculated at the then current commercial paper rate. At December 31, 2023, as noted above, no borrowings were outstanding under the commercial paper program.

In March 2023, Southwest issued $300 million aggregate principal amount of 5.45% Senior Notes. The notes will mature in March 2028. Southwest used the net proceeds to repay amounts outstanding under its credit facility and the remainder for general corporate purposes.

Centuri has a $1.545 billion secured revolving credit and term loan multi-currency facility. Amounts can be borrowed in either Canadian or U.S. dollars. The revolving credit facility matures on August 27, 2026 and the term loan facility matures on August 27, 2028. The capacity of the line of credit portion of the facility is $400 million; related amounts borrowed and repaid

are available to be re-borrowed. The term loan portion of the facility has a limit of $1.145 billion. The obligations under the credit agreement are secured by present and future ownership interests in substantially all direct and indirect subsidiaries of Centuri, substantially all of the tangible and intangible personal property of each borrower, certain of their direct and indirect subsidiaries, and all products, profits, and proceeds of the foregoing. Centuri's assets securing the facility at December 31, 2023 totaled $2.5 billion. At December 31, 2023, $1.071 billion in borrowings were outstanding under Centuri's combined secured revolving credit and term loan facility.

The applicable margin for the revolving credit facility ranges from 1.0% to 2.5% for SOFR loans and from 0.0% to 1.5% for Canadian Dealer Offered Rate and "base rate" loans, depending on Centuri's total net leverage ratio. The applicable margin for the term loan facility is 1.50% for base rate loans and 2.50% for SOFR loans. Centuri is also required to pay a commitment fee on the unused portion of the commitments. The commitment fee ranges from 0.15% to 0.35% per annum, which was not significant for the year ended December 31, 2023. The credit agreement contains certain customary representations and warranties, affirmative and negative covenants, and events of default. There are no financial covenants related to the term loan facility. On November 13, 2023, Centuri amended the financial covenants of its revolving credit facility to decrease the minimum interest coverage ratio during the fiscal quarters ending March 31, 2024 through December 31, 2024 to a ratio of 2.00 to 1.00; the minimum interest coverage ratio of 2.50 to 1.00 for fiscal quarters ending March 31, 2025 and thereafter remained unchanged. The amendment also increased the maximum net leverage ratio financial covenant for the fiscal quarters ending March 31, 2024 through September 30, 2024 to a ratio of 5.50 to 1.00, for the fiscal quarter ending December 31, 2024 to a ratio of 5.00 to 1.00, and to a ratio of 4.00 to 1.00 from March 31, 2025 and thereafter. Additionally, the amendment provided that, in the event that a "Qualified IPO" (as defined in the amendment) is consummated prior to March 31, 2025, the maximum net leverage ratio financial covenant will be reduced based on the amount of net proceeds received from such Qualified IPO. The terms of the Centuri credit facility otherwise remain unchanged.

All amounts outstanding under Centuri's secured revolving credit and term loan facility are considered long-term borrowings. The effective interest rate on this facility was 8.0% at December 31, 2023.

The effective interest rates on Southwest's variable-rate IDRBs are included in the table below:

	December 31,	
	2023	2022
2003 Series A	5.03 %	4.68 %
2008 Series A	4.89 %	4.84 %
2009 Series A	4.65 %	4.67 %
Tax-exempt Series A	4.73 %	4.30 %

In Nevada, interest fluctuations due to changing interest rates on Southwest's 2003 Series A, 2008 Series A, and 2009 Series A variable-rate IDRBs are tracked and recovered from customers through a variable interest expense recovery mechanism.

None of Southwest's debt instruments have credit triggers or other clauses that result in default if bond ratings are lowered by rating agencies. Interest and fees on certain debt instruments are subject to adjustment depending on Southwest's bond ratings. Certain debt instruments are subject to a leverage ratio cap and the 6.1% Notes due 2041 are also subject to a minimum net worth requirement. At December 31, 2023, Southwest was in compliance with all of its covenants. Under the most restrictive of the financial covenants, approximately $3.9 billion in additional debt could be issued while still meeting the leverage ratio requirement. Relating to the minimum net worth requirement, as of December 31, 2023, there is at least $2.6 billion of cushion in equity. No specific dividend restrictions exist under the collective covenants. None of the debt instruments contain material adverse change clauses.

Certain Centuri debt instruments have leverage ratio caps and fixed charge ratio coverage requirements. At December 31, 2023, Centuri was in compliance with all of its covenants. Under the most restrictive of the covenants, Centuri could issue over $108 million in additional debt and meet the leverage ratio requirement. Centuri has at least $15 million of cushion relating to the minimum fixed charge ratio coverage requirement. Centuri's covenants limit its ability to provide cash dividends to Southwest Gas Holdings, Inc., its parent. The dividend restriction is equal to a calculated available amount generally defined as 50% of its rolling twelve-month consolidated net income adjusted for certain items, such as parent contribution inflows, Linetec redeemable noncontrolling interest payments, or dividend payments, among other adjustments, as applicable. Under these restrictions and the financial covenants of the amended revolving credit facility, Centuri's ability to pay dividends to Southwest Gas Holdings, Inc. is limited. However, such dividends are not customarily relied upon in order for Southwest Gas Holdings, Inc. to satisfy dividends declared for its stockholders.

Estimated maturities of long-term debt for the next five years are:

(Thousands of dollars)	2024	2025	2026	2027	2028	Total
Southwest Gas Corporation:						
Debentures	$ —	$ —	$ 75,000	$ 332,500	$ 650,000	$ 1,057,500
Revolving credit facility and commercial paper	—	—	—	—	—	—
Total	—	—	75,000	332,500	650,000	1,057,500
Southwest Gas Holdings, Inc.:						
Centuri secured term loan facility	11,450	11,450	11,450	11,450	948,438	994,238
Centuri secured revolving credit facility	—	—	77,121	—	—	77,121
Other debt obligations	31,101	29,554	28,651	7,293	—	96,599
Total	$ 42,551	$ 41,004	$ 192,222	$ 351,243	$ 1,598,438	$ 2,225,458

Short-Term Debt

Southwest Gas Holdings, Inc. has a $300 million credit facility that is scheduled to expire in December 2026 and is primarily used for short-term financing needs. Interest rates for this facility are calculated at either SOFR or the "alternate base rate," plus in each case an applicable margin that is determined based on the Company's senior unsecured debt rating. At December 31, 2023, the applicable margin is 1.250% for loans bearing interest with reference to SOFR and 0.250% for loans bearing interest with reference to the alternative base rate. The commitment fee rates, terms, and covenants, noted above for Southwest, are also applicable to Southwest Gas Holdings, Inc. in its amended credit facility, including the noted ratio of funded debt to total capitalization as of the end of any quarter of any fiscal year. The commitment fee under this credit facility was not significant for the year ended December 31, 2023. There was $78.5 million and $173 million outstanding under this facility with a weighted average interest rate of 6.638% and 5.588% at December 31, 2023 and 2022, respectively.

In March 2022, Southwest amended its $250 million Term Loan (the "March 2021 Term Loan"), extending the maturity date to March 21, 2023 and replacing LIBOR interest rate benchmarks with SOFR interest rate benchmarks. The initial proceeds were used to fund the increased cost of natural gas supply during the month of February 2021, caused by extreme weather conditions in the central U.S. During the first quarter of 2023, the March 2021 Term Loan was repaid in full by use of Southwest's credit facility.

On September 26, 2022, Southwest Gas Holdings, Inc. entered into Amendment No. 1 to the 364-day Term Loan Credit Agreement, initially borrowed to fund the acquisition of the equity interests in MountainWest, of which $1.147 billion was outstanding as of December 31, 2022. The Credit Agreement initially provided for a $1.6 billion delayed-draw term loan (the "Term Loan Facility"). In connection with the close of the MountainWest sale on February 14, 2023, $1.075 billion of the proceeds were used to pay down the Term Loan Facility. During the first quarter of 2023, the Company paid down the remaining balance of the Term Loan Facility of approximately $72 million.

In January 2023, Southwest entered into a 364-day $450 million term loan agreement. Southwest initially used the proceeds to fund higher than expected natural gas costs for the November 2022 through March 2023 winter period, caused by numerous market forces, including historically low storage levels, unexpected upstream pipeline maintenance events, and cold weather conditions across the western region. As indicated below, the term loan was repaid in full in April 2023, following an equity contribution from Southwest Gas Holdings, Inc.

In April 2023, Southwest Gas Holdings, Inc. entered into a $550 million Term Loan Credit Agreement (the "Term Loan") that matures in October 2024. Interest rates for the Term Loan are calculated, at the Company's option, at either SOFR plus an adjustment of 0.100% or the "alternate base rate," plus in each case an applicable margin. Loans bearing interest with reference to SOFR have an applicable margin of 1.300% and loans bearing interest with reference to the alternate base rate have an applicable margin of 0.300%. SOFR is calculated with a floor of 0.000% and the alternative base rate is calculated with a floor of 1.000%. Southwest Gas Holdings, Inc. utilized a majority of the proceeds to make an equity contribution to Southwest. On April 17, 2023, Southwest utilized the equity contribution to repay, in full, amounts outstanding under its then existing $450 million 364-day term loan, with the remainder of the equity contribution used for working capital and general corporate purposes.

As indicated above, under Southwest's $400 million credit facility, $250 million has been designated by management for working capital purposes. However, Southwest had no short-term borrowings outstanding at December 31, 2023 and 2022.

Note 9 - Share-Based Compensation

At December 31, 2023, the following share-based compensation plans existed at the Company: an omnibus incentive plan and a restricted stock/unit plan. The fair value of share grants is primarily based on the closing price of the Company's stock on the date of grant. All share grants in 2023, including time-lapse restricted stock units and performance share units, occurred under the omnibus incentive plan. The table below shows total share-based plan compensation expense which was recognized in the Consolidated Statements of Income:

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Share-based compensation plan expense, net of related tax benefits	$ 5,147	$ 6,225	$ 5,747
Share-based compensation plan related tax benefits	1,625	1,966	1,815

Omnibus Incentive Plan

The omnibus incentive plan is used to promote the long-term growth and profitability of the Company, including its subsidiaries, by providing directors, employees, and certain other individuals with incentives to increase stockholder value and otherwise contribute to the success of the Company. In addition, the plan enables the Company to attract, retain, and reward the best available persons for positions of responsibility. The omnibus incentive plan provides for the grant of stock options, stock appreciation rights, restricted stock, restricted stock units, performance share units, and other equity-based, as well as cash, awards. Employees, directors, and consultants who provide services to the Company or any subsidiary may be eligible under this plan. For grants under the omnibus incentive plan, directors continue to immediately vest in the shares upon grant but are provided the option to defer receipt of equity compensation until they leave the Board.

Performance-based incentive opportunities under the omnibus plan were granted to all officers of Southwest in the form of performance shares and are based, depending on the officer, on consolidated earnings per share, utility net income, and utility return on equity, with an adjustment, where relevant, based on total shareholder return ("TSR") compared to peer companies, and for all participants, measured over a three-year forward performance period. Like other restricted stock/unit programs, shares are restricted based on vesting, and in this case, further subject to future performance determinations against relevant benchmarks. Southwest recorded $1.1 million, $2.1 million, and $3.4 million of estimated compensation expense associated with these shares during 2023, 2022, and 2021, respectively. There is no accelerated vesting under the performance share program, but vesting in the ultimate award, if any, is based on the period of employment within the three-year forward vesting period.

Restricted stock/units under the restricted stock/unit plan were previously granted to attract, motivate, retain, and reward key employees of the Company with an incentive to attain high levels of individual performance and improved financial performance. The legacy plan was also established to attract, motivate, and retain experienced and knowledgeable directors. Grants of restricted stock during 2023 and 2022 were granted under the omnibus incentive plan. All remaining shares under the legacy restricted stock/unit plan (in regard to employees) were issued during 2021; remaining unissued legacy program shares relate solely to directors, and such shares were immediately vested at the time of grant, with distribution to occur when service on the Board ends. No new grants are made under the legacy plan, as all future stock-based incentive compensation, including with regard to restricted stock, is granted under programs of the omnibus incentive plan, which for directors, with advance election, issuance may occur upon grant. Conversely, with regard to management, grants under the omnibus plan are of time-lapse character, with graded vesting (and issuance in the form of common stock) occurring (following grant), at the rate of 40% at the end of year one and 30% at the end of years two and three. Accelerated vesting occurs based on retirement eligibility.

The following table summarizes the activity of the restricted stock/units programs as of December 31, 2023:

(Thousands of shares)	Performance Share Units	Weighted-average grant date fair value	Restricted Stock Units/Director Deferred Stock Units	Weighted-average grant date fair value
Nonvested/unissued at December 31, 2022	283	$ 68.00	177	$ 58.50
Granted	167	62.78	80	62.83
Dividends	7	—	9	—
Forfeited or expired	(71)	71.65	—	—
Vested and issued (1)	(35)	73.41	(58)	63.45
Nonvested/unissued at December 31, 2023	351	$ 62.95	208	$ 56.29

(1) Includes shares for retiree payouts and those converted for taxes.

The weighted average grant date fair value of both performance share units and restricted stock/units granted in 2022 and 2021 was $66.11 and $65.38, respectively.

As of December 31, 2023, total compensation cost related to all unvested omnibus shares not yet recognized is $12.3 million, which is expected to be recognized over a weighted average period of 2.1 years.

Note 10 - Commitments and Contingencies

The Company and Southwest are defendants in miscellaneous legal proceedings. They are also parties to various regulatory proceedings. The ultimate dispositions of these proceedings are not presently determinable; however, it is the opinion of management that no litigation or regulatory proceedings to which the Company and Southwest are currently subject will have a material adverse impact on their financial position, results of operations, or cash flows.

The Company maintains excess liability insurance that covers Southwest for various risks associated with the operation of the natural gas pipelines and facilities. In connection with these liability insurance policies, Southwest is responsible for an initial deductible or self-insured retention amount per incident, after which the insurance carriers would be responsible for amounts up to the policy limits. For the policy period of August 2023 to July 2024, these liability insurance policies require Southwest, as applicable, to be responsible for the first $1 million (self-insured retention) of each incident plus a supplemental retention aggregate of $4 million in the policy year. When amounts are expected to be incurred above these amounts, subject to insurance carrier indemnity, a liability is recognized for the additional amount, in addition to a receivable, associated with amounts expected to be indemnified by the insurance carrier amounts, without impact to earnings.

Centuri maintains liability insurance for various risks associated with its operations. In connection with these liability insurance policies, Centuri is responsible for an initial deductible or self-insured retention amount per occurrence, after which the insurance carriers would be responsible for amounts up to the policy limits. For the policy year May 2023 to April 2024, Centuri is responsible for the first $750,000 (self-insured retention) per occurrence under these liability insurance policies.

Through an assessment process of commitments and contingencies of any kind, the Company and Southwest may determine that certain costs are likely to be incurred in the future related to specific legal matters. In these circumstances and in accordance with accounting policies, the Company and Southwest will make an accrual, as necessary.

Note 11 - Pension and Other Postretirement Benefits

Southwest Gas Corporation

Employees' Investment Plan

An Employees' Investment Plan ("EIP") is offered to eligible employees of Southwest through deduction of a percentage of base compensation, subject to Internal Revenue Service ("IRS") limitations. The EIP provides for purchases of various mutual fund investments and Company common stock. For employees hired on or before December 31, 2021, one-half of amounts deferred are matched, up to a maximum matching contribution of 3.5% of an employee's annual compensation. Employees hired on or after January 1, 2022 are eligible for non-elective employer contributions of 3% plus a matching contribution (dollar-for-dollar) up to 7% of eligible compensation. Officers hired after January 1, 2022 are eligible for non-elective and matching contributions. Contributions to the plan by Southwest were $8.3 million, $6.9 million, and $6.1 million for 2023, 2022, and 2021, respectively.

Deferred Compensation Plan

A deferred compensation plan is offered to all officers of Southwest and a separate deferred compensation plan is offered to members of the Company's Board of Directors. The plans provide the opportunity to defer up to 100% of annual cash compensation. One-half of amounts deferred by officers are matched, up to a maximum matching contribution of 3.5% of an officer's annual base salary. Upon retirement, payments of compensation deferred, plus interest, are made in equal monthly installments over 10, 15, or 20 years, as elected by the participant. Directors have an additional option to receive such payments over a five-year period. Deferred compensation earns interest at a rate determined each January. The interest rate equals 150% of Moody's Seasoned Corporate Bond Rate Index.

Pension and Postretirement Plans

A noncontributory qualified retirement plan with defined benefits covering substantially all Southwest employees hired on or before December 31, 2021 is available, in addition to a separate unfunded supplemental executive retirement plan ("SERP"), which is limited to Southwest's officers. Postretirement benefits other than pensions ("PBOP") are provided to qualified retirees for limited benefits related to health care, dental, vision and life insurance, some of which were subject to earlier "sunset" dates. The defined benefit qualified retirement plan, SERP, and PBOP are not available to Southwest employees hired on or after January 1, 2022. As noted above, employees hired on or after that date, are eligible for enhanced contributions to the EIP.

The overfunded or underfunded positions of defined benefit postretirement plans, including pension plans, are recognized in the Consolidated Balance Sheets. Any actuarial gains and losses, prior service costs, and transition assets or obligations are

recognized in Accumulated other comprehensive income (loss) under Stockholders' equity, net of tax, until they are amortized as a component of net periodic benefit cost.

A regulatory asset has been established for the portion of the total amounts otherwise chargeable to Accumulated other comprehensive income that are expected to be recovered through rates in future periods. Changes in actuarial gains and losses and prior service costs pertaining to the regulatory asset will be recognized as an adjustment to the regulatory asset account as these amounts are amortized and recognized as components of net periodic pension costs each year.

The qualified retirement plan invests the majority of its plan assets in common collective trusts, which include a well-diversified portfolio of domestic and international equity securities and fixed income securities, and are managed by a professional investment manager appointed by Southwest. The investment manager has full discretionary authority to direct the investment of plan assets held in trust within the specific guidelines prescribed by Southwest through the plan's investment policy statement. Southwest previously implemented a liability driven investment ("LDI") strategy for part of the portfolio, a form of investing designed to better match the movement in pension plan assets with the impact of interest rate changes and inflation assumption changes on the pension plan liability. The implementation of the LDI strategy was intended to be phased in over time by using a glide path. The glide path was designed to increase the allocation of the plan's assets to fixed income securities, as the funded status of the plan increases, in order to more closely match the duration of the plan assets to that of the plan liability. During the fourth quarter of 2023, the asset mix was adapted in accordance with an updated policy statement to be primarily balanced with approximately 50% equities and 50% fixed income investments. Beginning in 2024, a treasury futures overlay was added as part of the LDI strategy to manage interest rate fluctuations with the goal of maintaining an approximate 90% hedge and funded ratio; as of the end of 2023, the pension plan was approximately 94% funded. While the overlay is intended for these purposes, there is no guarantee that these intentions will be achieved. Pension plan assets are held in a Master Trust. The pension plan funding policy is in compliance with the federal government's funding requirements.

Pension costs for these plans are affected by the amount and timing of cash contributions to the plans, the return on plan assets, discount rates, and by employee demographics, including age, compensation, and length of service. Changes made to the provisions of the plans may also impact current and future pension costs. Actuarial formulas are used in the determination of pension costs and are affected by actual plan experience and assumptions about future experience. Key actuarial assumptions include the expected return on plan assets, the discount rate used in determining the projected benefit obligation and pension costs, and the assumed rate of increase in employee compensation. Relatively small changes in these assumptions, particularly the discount rate, may significantly affect pension costs and plan obligations for the qualified retirement plan. In determining the discount rate, management matches the plan's projected cash flows to a spot-rate yield curve based on highly rated corporate bonds. Changes to the discount rate from year-to-year, if any, are generally made in increments of 25 basis points.

There was a 25 basis point decrease in the discount rate between years, as reflected below. The methodology utilized to determine the discount rate was consistent with prior years. The weighted-average rate of compensation increased from the prior year by 25 basis points. The asset return assumption (which impacts the following year's expense) remained consistent with the prior year. The rates are presented in the table below:

	December 31,	
	2023	2022
Discount rate	5.00 %	5.25 %
Weighted-average rate of compensation increase	3.50 %	3.25 %
Asset return assumption	6.75 %	6.75 %

Future years' expense level movements (up or down) may continue to be greatly influenced by long-term interest rates, asset returns, and funding levels; however, management implemented a treasury futures overlay to primarily be responsive to changing interest rates, and therefore, indirectly, discount rates that will apply to the pension, in attempting to preserve funded status.

The following table sets forth the retirement plan, SERP, and PBOP funded statuses and amounts recognized on the Consolidated Balance Sheets and Consolidated Statements of Income.

	Year Ended December 31,					
	2023			2022		
(Thousands of dollars)	Qualified Retirement Plan	SERP	PBOP	Qualified Retirement Plan	SERP	PBOP
Change in benefit obligations:						
Benefit obligation for service rendered to date at beginning of year (PBO/PBO/APBO)	$ 1,159,451	$ 42,097	$ 65,437	$ 1,531,197	$ 49,530	$ 84,226
Service cost	25,840	250	1,269	44,110	424	1,941
Interest cost	59,165	2,123	3,302	45,006	1,441	2,452
Actuarial loss (gain)	62,109	3,995	941	(399,066)	(6,134)	(18,260)
Benefits paid	(65,388)	(3,434)	(4,940)	(61,796)	(3,164)	(4,922)
Benefit obligation at end of year (PBO/PBO/APBO)	1,241,177	45,031	66,009	1,159,451	42,097	65,437
Change in plan assets:						
Market value of plan assets at beginning of year	1,030,044	—	38,459	1,366,043	—	52,168
Actual return on plan assets	145,716	—	4,626	(330,203)	—	(6,036)
Employer contributions	56,000	3,434	—	56,000	3,164	—
Benefits paid	(65,388)	(3,434)	(7,165)	(61,796)	(3,164)	(7,673)
Market value of plan assets at end of year	1,166,372	—	35,920	1,030,044	—	38,459
Funded status at year end	$ (74,805)	$ (45,031)	$ (30,089)	$ (129,407)	$ (42,097)	$ (26,978)
Weighted-average assumptions (benefit obligation):						
Discount rate	5.00 %	5.00 %	5.00 %	5.25 %	5.25 %	5.25 %
Weighted-average rate of compensation increase	3.50 %	3.50 %	N/A	3.25 %	3.25 %	N/A

Estimated funding for the plans above during calendar year 2024 is expected to be approximately $23 million, of which $20 million pertains to the retirement plan. Management monitors plan assets and liabilities and may, at its discretion, increase plan funding levels above the minimum in order to achieve a desired funded status and avoid or minimize potential benefit restrictions.

The accumulated benefit obligation for the retirement plan and the SERP is presented below:

	December 31,	
(Thousands of dollars)	2023	2022
Retirement plan	$ 1,143,204	$ 1,074,493
SERP	40,635	39,263

Benefits expected to be paid for pension, SERP, and PBOP over the next 10 years are as follows:

(Millions of dollars)	2024	2025	2026	2027	2028	2029-2033
Pension	$ 68.0	$ 69.0	$ 70.0	$ 72.0	$ 73.0	$ 389.0
SERP	3.4	3.3	3.3	3.2	3.2	15.4
PBOP	4.9	4.9	5.0	5.0	5.0	25.1

No assurance can be made that actual funding and benefits paid will match these estimates.

For PBOP measurement purposes, the per capita cost of the covered health care benefits medical rate trend assumption is 6.0%, declining to 4.5%. Specific contributions are made for health care benefits of employees who retire after 1988, but Southwest pays all covered health care costs for employees who retired prior to 1989. The medical trend rate assumption noted above applies to the benefit obligations of pre-1989 retirees only.

The service cost component of net periodic benefit costs included in the table below is part of an overhead loading process associated with the cost of labor. The overhead process ultimately results in allocation of that portion of overall net periodic benefit costs to the same accounts to which productive labor is charged. As a result, service costs become components of various accounts, primarily Operations and maintenance expense, Net regulated operations plant, and Deferred charges and other assets for both the Company and Southwest. The non-service cost components of net periodic benefit cost are reflected in Other income (deductions) on the Consolidated Statements of Income of each entity, based on accounting guidance for the presentation of such costs. Variability in total net periodic benefit cost between periods, especially with regard to the Qualified Retirement Plan, is subject to changes in underlying actuarial assumptions between periods, notably the discount rate.

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Components of net periodic benefit cost:

	Qualified Retirement Plan			SERP			PBOP		
(Thousands of dollars)	2023	2022	2021	2023	2022	2021	2023	2022	2021
Service cost	$25,840	$44,110	$41,159	$250	$424	$526	$1,269	$1,941	$1,691
Interest cost	59,165	45,006	40,432	2,123	1,441	1,431	3,302	2,452	2,193
Expected return on plan assets	(84,062)	(79,913)	(72,352)	—	—	—	(2,424)	(3,228)	(3,239)
Amortization of prior service cost	—	—	—	—	—	—	175	175	959
Amortization of net actuarial loss	336	32,468	41,955	998	2,350	2,642	—	—	—
Net periodic benefit cost	$1,279	$41,671	$51,194	$3,371	$4,215	$4,599	$2,322	$1,340	$1,604
Weighted-average assumptions (net benefit cost)									
Discount rate	5.25 %	3.00 %	2.75 %	5.25 %	3.00 %	2.75 %	5.25 %	3.00 %	2.75 %
Expected return on plan assets	6.75 %	6.50 %	6.50 %	N/A	N/A	N/A	6.75 %	6.50 %	6.50 %
Weighted-average rate of compensation increase	3.25 %	3.25 %	3.00 %	3.25 %	3.25 %	3.00 %	N/A	N/A	N/A

Other Changes in Plan Assets and Benefit Obligations Recognized in Net Periodic Benefit Cost and Other Comprehensive Income

	Year Ended December 31,											
	2023				2022				2021			
(Thousands of dollars)	Total	Qualified Retirement Plan	SERP	PBOP	Total	Qualified Retirement Plan	SERP	PBOP	Total	Qualified Retirement Plan	SERP	PBOP
Net actuarial loss (gain) (a)	$ 3,188	$ 455	$ 3,995	$(1,262)	$ (4,079)	$ 11,049	$(6,133)	$(8,995)	$(59,176)	$ (54,892)	$(3,245)	$(1,039)
Amortization of prior service cost (b)	(175)	—	—	(175)	(175)	—	—	(175)	(959)	—	—	(959)
Amortization of net actuarial loss (b)	(1,333)	(335)	(998)	—	(34,818)	(32,468)	(2,350)	—	(44,597)	(41,955)	(2,642)	—
Regulatory adjustment	1,330	(107)	—	1,437	28,232	19,062	—	9,170	88,194	86,196	—	1,998
Recognized in other comprehensive (income) loss	3,010	13	2,997	—	(10,840)	(2,357)	(8,483)	—	(16,538)	(10,651)	(5,887)	—
Net periodic benefit costs recognized in net income	6,972	1,279	3,371	2,322	47,226	41,671	4,215	1,340	57,397	51,194	4,599	1,604
Total of amount recognized in net periodic benefit cost and other comprehensive (income) loss	$ 9,982	$ 1,292	$ 6,368	$ 2,322	$ 36,386	$ 39,314	$(4,268)	$ 1,340	$ 40,859	$ 40,543	$(1,288)	$ 1,604

The table above discloses the net gain or loss and prior service cost recognized in Other comprehensive income, separated into (a) amounts initially recognized in Other comprehensive income, and (b) amounts subsequently recognized as adjustments to Other comprehensive income as those amounts are amortized as components of net periodic benefit cost. See also **Note 6 - Other Comprehensive Income and Accumulated Other Comprehensive Income ("AOCI")**.

The following table sets forth, by level within the three-level fair value hierarchy, the fair values of the assets of the qualified pension plan and the PBOP as of December 31, 2023 and 2022. The SERP has no assets.

	December 31,					
	2023			2022		
(Thousands of dollars)	Qualified Retirement Plan	PBOP	Total	Qualified Retirement Plan	PBOP	Total
Assets at fair value:						
Level 1 – Quoted prices in active markets for identical financial assets						
Mutual funds	$ —	$ 34,891	$ 34,891	$ —	$ 31,631	$ 31,631
Total Level 1 Assets (1)	—	34,891	34,891	—	31,631	31,631
Level 2 – Significant other observable inputs						
Commingled trust equity funds (2)						
Global	234,123	97	234,220	266,368	1,673	268,041
International	105,908	44	105,952	117,976	741	118,717
U.S. equity securities	164,966	68	165,034	184,300	1,159	185,459
Emerging markets	54,489	22	54,511	62,436	392	62,828
Commingled trust fixed income funds (3)	597,828	246	598,074	390,070	2,450	392,520
Pooled funds and mutual funds	6,593	552	7,145	6,359	412	6,771
Government fixed income and mortgage backed securities	165	—	165	159	1	160
Total Level 2 assets (4)	1,164,072	1,029	1,165,101	1,027,668	6,828	1,034,496
Total Plan assets at fair value	1,164,072	35,920	1,199,992	1,027,668	38,459	1,066,127
Insurance company general account contracts (5)	2,300	—	2,300	2,376	—	2,376
Total Plan assets	$ 1,166,372	$ 35,920	$ 1,202,292	$ 1,030,044	$ 38,459	$ 1,068,503

(1) The Mutual funds category above is a balanced fund that invests in a diversified portfolio of common stocks, preferred stocks, and fixed-income securities. Under normal circumstances the balanced fund will hold no more than 75%, and no less than 25%, of its total assets in equity securities. The fund seeks regular income, conservation of principal, and an opportunity for long-term growth of principal and income.

(2) The commingled trust equity funds include common collective trusts that invest in a diversified portfolio of securities regularly traded on securities exchanges. These funds are shown in the above table at net asset value ("NAV"), which is the value of securities in the fund less the amount of any liabilities outstanding. Strategies employed by the funds include investment in:

- Global equities, including domestic equities
- International developed countries equities
- Domestic equities
- Emerging markets equities

Shares in the commingled trust equity funds may be redeemed given one business day notice. While they are trust equity funds and reported at NAV, due to the short redemption notice period, the lack of redemption fees, the fact that the underlying investments are exchange-traded, and that substantial liabilities do not exist subject to the NAV calculation, these investments are viewed as indirectly observable (Level 2) in the fair value hierarchy and are therefore not excluded from the body of the fair value table as a reconciling item.

The global fund provides diversified exposure to global equity markets. The fund seeks to provide long-term capital growth by investing primarily in securities listed on the major developed equity markets of the U.S., Europe, and Asia, as well as within those listed on emerging country equity markets on a tactical basis.

The international fund invests in international financial markets, primarily those of developed economies in Europe and the Pacific Basin. The fund invests primarily in equity securities issued by foreign corporations, but may invest in other securities perceived as offering attractive investment return opportunities.

The domestic equities securities funds include a large and medium capitalization fund and a small capitalization fund. The large and medium capitalization fund is designed to track the performance of the large and medium capitalization companies contained in the index, which represents approximately 90% of the market capitalization of the U.S. stock market. The small capitalization fund is designed to provide maximum long-term appreciation through investments that are well diversified by industry.

The emerging markets fund invests in countries defined as an emerging market country. Fund investments are made directly in each country or, where direct investment is inefficient or prohibited, through appropriate financial instruments or participation in commingled funds. Major emerging markets include Brazil, India, China, and other developing countries around the world.

(3) The commingled trust fixed income funds consist primarily of fixed income debt securities issued by the U.S. Treasury, government agencies, and fixed income debt securities issued by corporations. The fixed income fund investments may include the use of high yield, international fixed income securities and other instruments, including derivatives, to ensure prudent diversification over a broad spectrum

of investments. The changes in the value of the fixed income funds are intended to offset the changes in the pension plan liabilities due to changes in the discount rate.

These funds are shown in the above table at NAV. Investments in the commingled trust fixed equity funds may be redeemed given one business day notice. While they are fixed income funds and reported at NAV, due to the short redemption notice period, the lack of redemption fees, the fact that the underlying investments are exchange-traded, and that substantial liabilities do not exist subject to the NAV calculation, these investments are viewed as indirectly observable (Level 2), and are also not excluded from the body of the fair value table as a reconciling item.

(4) With the exception of items (2) and (3), which are discussed above, the Level 2 assets consist mainly of pooled funds and mutual funds. These funds are collective short-term funds that invest in Treasury bills and money market funds and are used as a temporary cash repository.

(5) The insurance company general account contracts are annuity insurance contracts used to pay the pensions of employees who retired prior to 1989. The balance of the account disclosed in the above table is the contract value, which is the result of deposits, withdrawals, and interest credits.

Centuri

Defined Contribution Plans

Centuri offers defined contribution plans under Section 401(k) of the Internal Revenue Code to its eligible employees, regardless of whether they are covered under collective-bargaining agreements. Eligibility requirements vary, as does timing of participation, matching, vesting, and profit-sharing features of the plans. Contributions by Centuri to these plans for the years ended December 31, 2023, 2022, and 2021 were $15 million, $13 million, and $9 million, respectively.

Deferred Compensation Plan

Centuri sponsors a nonqualified deferred compensation plan that is offered to a select group of management and highly-compensated employees. The plan allows participants to defer up to 80% of base salary and provides a match of 100% of contributions up to 5% of a participant's salary. The plan also allows Centuri, at its election, to credit participant accounts with discretionary contributions. Participants are 100% vested in salary deferrals, contributions, and all earnings. Participant accounts include a return based on the performance of the underlying investment options selected. Payments from the plan are designated at each annual enrollment period based on specified triggering events and are payable by lump sum or on an annual installment basis.

Multiemployer Pension Plans

Centuri makes defined contributions to several multiemployer defined benefit pension plans under the terms of collective bargaining agreements ("CBAs") with various unions representing certain employees. Contribution rates are generally specified in the CBAs and are made to the plans on a "pay-as-you-go" basis. Such contributions correspond to the number of union employees and the particular plans in which they participate, and vary depending upon the location, number of ongoing projects, and the need for union resources in connection with those projects.

The risks of participating in multiemployer plans are different from single-employer plans, including: (i) assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers; (ii) if a participating employer stops contributing to the multiemployer plan, the unfunded obligations of the plan may become the obligation of the remaining participating employers; and (iii) if a participating employer chooses to stop participating in these multiemployer plans, the employer may be required to pay to those plans an amount based on the underfunded status of the plan.

The Pension Protection Act of 2006 requires special funding and operational rules for multiemployer plans in the U.S., including classification of the plans (based on multiple factors, including the funded status of the plan), the most severe of which is "critical." Depending upon the classification, plans may be required to adopt measures to improve their funded status through a funding improvement or rehabilitation plan, which may require additional contributions from employers (in the form of a surcharge on benefit contributions) and/or modification of retiree benefits. The amount of additional funds, if any, that Centuri may be obligated to contribute to these plans in the future cannot be estimated due to the uncertainty regarding future levels of work that may require the utilization of union employees covered by these plans, as well as uncertainty as to the future contribution levels and possible surcharges on contributions that may apply to these plans at that time.

Centuri contributed $75.7 million, $71 million, and $57.4 million collectively to the plans for the years ended December 31, 2023, 2022, and 2021, respectively. Substantially all of the contributions made by Centuri during these years were to U.S. plans that were not classified as critical, and for which no special surcharges were assessed. Nine plans were classified as critical and required special surcharges; the aggregate contributions to these plans were $3.8 million for each of the years ended December 31, 2023 and 2022, and were insignificant during the period ending December 31, 2021.

Note 12 - Income Taxes

Southwest Gas Holdings, Inc.:

The following is a summary of income (loss) before taxes and noncontrolling interests for domestic and foreign operations:

	Year ended December 31,		
(Thousands of dollars)	2023	2022	2021
U.S.	$ 176,820	$ (302,581)	$ 221,507
Foreign	20,529	29,244	25,343
Total income (loss) before income taxes	$ 197,349	$ (273,337)	$ 246,850

Income tax expense (benefit) consists of the following:

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Current:			
Federal	$ 392	$ (949)	$ (2,872)
State	7,960	7,123	(11,516)
Foreign	6,566	9,089	6,524
	14,918	15,263	(7,864)
Deferred:			
Federal	23,009	(76,984)	39,117
State	4,999	(12,828)	8,239
Foreign	(1,094)	(1,104)	156
	26,914	(90,916)	47,512
Total income tax expense (benefit)	$ 41,832	$ (75,653)	$ 39,648

Deferred income tax expense (benefit) consists of the following significant components:

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Deferred federal and state:			
Property-related items	$ 22,460	$ 41,191	$ 35,072
Purchased gas cost adjustments	(45,366)	76,306	73,613
Employee benefits	10,091	12,223	(1,484)
Regulatory adjustments	(28,083)	(15,482)	(10,101)
Deferred payroll taxes	—	(6,344)	(6,344)
Deferred revenue	3,347	5,751	6,021
Debt-related costs	4,079	164	(308)
Net operating loss	(25,915)	(120,704)	(64,981)
MountainWest sale/goodwill impairment	93,086	(105,507)	—
All other deferred	(6,785)	21,505	16,076
Total deferred federal and state	26,914	(90,897)	47,564
Deferred ITC, net	—	(19)	(52)
Total deferred income tax expense (benefit)	$ 26,914	$ (90,916)	$ 47,512

References above and below to Deferred payroll taxes relate to the employer portion of Social Security tax, for which deferment of remittance was permissible under the Coronavirus Aid, Relief, and Economic Security ("CARES") Act.

A reconciliation of the U.S. federal statutory rate to the consolidated effective tax rate (and the sources of these differences and the effect of each) are summarized as follows:

	Year Ended December 31,		
	2023	2022	2021
U.S. federal statutory income tax rate	21.0 %	21.0 %	21.0 %
Net state taxes	5.9	3.2	1.0
Tax credits	(0.2)	0.2	(0.5)
Company-owned life insurance	(1.5)	(0.8)	(1.1)
Amortization of excess deferred taxes	(11.7)	5.2	(4.3)
MountainWest sale	5.1	—	—
Meals and entertainment expenses	1.7	(0.2)	0.3
All other differences	0.9	(0.9)	(0.3)
Consolidated effective income tax rate	21.2 %	27.7 %	16.1 %

Deferred tax assets and liabilities consist of the following:

	December 31,	
(Thousands of dollars)	2023	2022
Deferred tax assets:		
Deferred income taxes for future amortization of ITC and excess deferred taxes	$ 87,566	$ 109,093
Employee benefits	19,938	29,307
Net operating losses	249,472	223,557
Lease-related item	27,611	19,745
Goodwill impairment	—	105,507
Other	7,299	13,197
Valuation allowance	(1,986)	(2,197)
	389,900	498,209
Deferred tax liabilities:		
Property-related items, including accelerated depreciation	896,167	873,328
Regulatory balancing accounts	108,758	154,124
Debt-related costs	1,714	(2,365)
Intangibles	93,081	105,668
Lease-related item	26,103	21,164
Other	16,611	28,275
	1,142,434	1,180,194
Net noncurrent deferred tax liabilities	$ 752,534	$ 681,985

Net noncurrent deferred tax liabilities above at December 31, 2023 and 2022 are reflected net of $463,000 and $82,000 of noncurrent deferred tax assets associated with the Company's Canadian operations, which are shown separately on the Company's Consolidated Balance Sheets.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	December 31,	
(Thousands of dollars)	2023	2022
Unrecognized tax benefits at beginning of year	$ 3,072	$ 2,629
Gross increases – tax positions in prior period	45	389
Gross decreases – tax positions in prior period	(22)	—
Gross increases – current period tax positions	—	54
Unrecognized tax benefits at end of year	$ 3,095	$ 3,072

Southwest Gas Corporation:

The following is a summary of income before taxes:

	Year ended December 31,		
(Thousands of dollars)	2023	2022	2021
Total income before income taxes	$ 279,125	$ 184,921	$ 216,473

Income tax expense (benefit) consists of the following:

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Current:			
Federal	$ (21)	$ (78)	$ (3,643)
State	97	7,805	(6,556)
	76	7,727	(10,199)
Deferred:			
Federal	32,776	23,710	36,842
State	4,047	(896)	2,695
	36,823	22,814	39,537
Total income tax expense	$ 36,899	$ 30,541	$ 29,338

Deferred income tax expense (benefit) consists of the following significant components:

	Year Ended December 31,		
(Thousands of dollars)	2023	2022	2021
Deferred federal and state:			
Property-related items	$ 38,862	$ 29,633	$ 23,077
Purchased gas cost adjustments	(45,366)	76,306	73,613
Employee benefits	8,937	5,332	5,508
Regulatory adjustments	(24,548)	(15,482)	(10,101)
Deferred payroll taxes	—	(892)	(892)
Net operating loss	58,739	(76,080)	(59,119)
All other deferred	199	4,016	7,503
Total deferred federal and state	36,823	22,833	39,589
Deferred ITC, net	—	(19)	(52)
Total deferred income tax expense	$ 36,823	$ 22,814	$ 39,537

A reconciliation of the U.S. federal statutory rate to the consolidated effective tax rate (and the sources of these differences and the effect of each) are summarized as follows:

	Year Ended December 31,		
	2023	2022	2021
U.S. federal statutory income tax rate	21.0 %	21.0 %	21.0 %
Net state taxes	1.6	1.6	0.3
Tax credits	(0.2)	(0.3)	(0.6)
Company-owned life insurance	(0.8)	0.6	(0.9)
Amortization of excess deferred taxes	(8.2)	(6.9)	(4.9)
All other differences	(0.2)	0.5	(1.3)
Effective income tax rate	13.2 %	16.5 %	13.6 %

Deferred tax assets and liabilities consist of the following:

	December 31,	
(Thousands of dollars)	2023	2022
Deferred tax assets:		
Deferred income taxes for future amortization of ITC and excess deferred taxes	$ 87,566	$ 94,273
Employee benefits	(20,818)	(12,604)
Net operating losses	76,461	135,200
Other	136	2,512
	143,345	219,381
Deferred tax liabilities:		
Property-related items, including accelerated depreciation	772,124	733,011
Regulatory balancing accounts	108,758	154,124
Debt-related costs	1,714	2,062
Other	10,585	14,132
	893,181	903,329
Net deferred tax liabilities	$ 749,836	$ 683,948

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	December 31,	
(Thousands of dollars)	2023	2022
Unrecognized tax benefits at beginning of year	$ 2,644	$ 2,362
Gross increases – tax positions in prior period	—	259
Gross decreases – tax positions in prior period	(22)	—
Gross increases – current period tax positions	—	23
Unrecognized tax benefits at end of year	$ 2,622	$ 2,644

In assessing whether uncertain tax positions should be recognized in its financial statements, management first determines whether it is more-likely-than-not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. In evaluations of whether a tax position has met the more-likely-than-not recognition threshold, management presumes that the position will be examined by the appropriate taxing authority that would have full knowledge of all relevant information. For tax positions that meet the more-likely-than-not recognition threshold, management measures the amount of benefit recognized in the financial statements at the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. Unrecognized tax benefits are recognized in the first financial reporting period in which information becomes available indicating that such benefits will more-likely-than-not be realized. For each reporting period, management applies a consistent methodology to measure unrecognized tax benefits, and all unrecognized tax benefits are reviewed periodically and adjusted as circumstances warrant. Measurement of unrecognized tax benefits is based on management's assessment of all relevant information, including prior audit experience, the status of audits, conclusions of tax audits, lapsing of applicable statutes of limitation, identification of new issues, and any administrative guidance or developments.

At December 31, 2023, the total amount of unrecognized tax benefits that, if recognized, would impact the effective tax rate was $3.1 million for the Company and $2.6 million for Southwest. Unrecognized tax benefits for the Company and Southwest may change within the next

twelve months due to a lapse in statute of limitations.

The Company and Southwest recognize interest expense and income and penalties related to income tax matters in income tax expense. There was $45,000, $0, and $21,000 of tax-related interest income for 2023, 2022, and 2021, respectively.

The Company and its subsidiaries file a consolidated federal income tax return in the U.S. and in various states, as well as separate returns in Canada. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or Canadian income tax examinations for years before 2019.

The Company and each of its subsidiaries, including Southwest, participate in a tax sharing agreement to establish the method for allocating tax benefits and losses among members of the consolidated group. The consolidated federal income tax is apportioned among the subsidiaries using a separate return method.

The sale of MountainWest by the Company, which occurred in February 2023, was a taxable transaction for U.S. federal and state income tax purposes. See also **Note 15 - Acquisitions and Dispositions**.

At December 31, 2023, the Company has a U.S. federal net operating loss carryforward of $1.03 billion. The Company also has general business credits of $4.4 million, which begin to expire in 2041. The Company has no capital loss carryforwards. At December 31, 2023, the Company has an income tax net operating loss carryforward related to Canadian operations of $28.4 million, which begins to expire in 2039. As of the same date, the Company has $541.9 million of state net operating loss carryforwards. Depending on the jurisdiction in which the state net operating loss was generated, the carryforwards will begin to expire in 2027.

Management intends to continue to permanently reinvest any future foreign earnings in Canada.

Note 13 - Segment Information

The Company's operating segments are determined based on the nature of their activities. The natural gas distribution segment is engaged in the business of purchasing, distributing, and transporting natural gas. The utility infrastructure services segment is primarily engaged in the business of providing gas and electric providers installation, replacement, repair, and maintenance of energy networks. Although the utility infrastructure services operations are geographically dispersed, they are aggregated and reported as a single segment as each reporting unit has similar economic characteristics. Approximately 99% of the total Company's long-lived assets are in the U.S. The pipeline and storage segment (sold in 2023) was primarily engaged in the business of providing interstate transportation and underground storage services, primarily composed of regulated operations under the jurisdiction of the FERC.

The accounting policies of the reported segments are the same as those described within **Note 1 - Background, Organization, and Summary of Significant Accounting Policies**. Centuri accounts for the services provided to Southwest at contractual prices at contract inception. Accounts receivable for these services, which are not eliminated during consolidation, are presented in the table below:

	December 31,	
(Thousands of dollars)	2023	2022
Accounts receivable for Centuri services	$ 13,017	$ 18,067

The following table presents the amount of revenues by geographic area:

	December 31,		
(Thousands of dollars)	2023	2022	2021
Revenues (a)			
United States	$ 5,199,178	$ 4,637,557	$ 3,411,018
Canada	234,794	322,452	269,433
Total	$ 5,433,972	$ 4,960,009	$ 3,680,451

(a) Revenues are attributed to countries based on the location of customers.

The Company has two reportable segments. Southwest comprises the natural gas distribution segment and Centuri comprises the utility infrastructure services segment. As a result of the MountainWest sale in February 2023 (previously comprising the Pipeline and Storage segment), the information for the year ended December 31, 2023 presented below for MountainWest reflects activity from January 1, 2023 through February 13, 2023 (the last full day of its ownership by the Company). In order to reconcile to net income as disclosed in the Consolidated Statements of Income, an Other column is included associated with impacts of corporate and administrative activities related to Southwest Gas Holdings, Inc. The financial information pertaining to each segment as of and for the three years ended December 31, 2023, 2022, and 2021 are as follows:

	Year Ended December 31, 2023				
(Thousands of dollars)	Natural Gas Distribution	Utility Infrastructure Services	Pipeline and Storage	Other	Total
Revenues from external customers	$ 2,499,564	$ 2,782,845	$ 35,132	$ —	$ 5,317,541
Intersegment sales	—	116,431	—	—	116,431
Total	$ 2,499,564	$ 2,899,276	$ 35,132	$ —	$ 5,433,972
Interest income	$ 50,757	$ —	$ —	$ —	$ 50,757
Interest expense	$ 149,830	$ 97,476	$ 2,200	$ 42,780	$ 292,286
Depreciation and amortization	$ 295,462	$ 145,446	$ —	$ —	$ 440,908
Income tax expense (benefit)	$ 36,899	$ 14,736	$ 9,255	$ (19,058)	$ 41,832
Segment net income (loss)	$ 242,226	$ 19,652	$ (16,288)	$ (94,701)	$ 150,889
Segment assets	$ 9,268,571	$ 2,592,590	$ —	$ 8,735	$ 11,869,896
Capital expenditures	$ 762,081	$ 106,650	$ 3,790	$ —	$ 872,521

	Year Ended December 31, 2022				
(Thousands of dollars)	Natural Gas Distribution	Utility Infrastructure Services	Pipeline and Storage	Other	Total
Revenues from external customers	$ 1,935,069	$ 2,625,669	$ 264,613	$ —	$ 4,825,351
Intersegment sales	—	134,658	—	—	134,658
Total	$ 1,935,069	$ 2,760,327	$ 264,613	$ —	$ 4,960,009
Interest income	$ 16,183	$ —	$ —	$ —	$ 16,183
Interest expense	$ 115,880	$ 61,371	$ 18,185	$ 47,314	$ 242,750
Depreciation and amortization	$ 263,043	$ 155,353	$ 52,059	$ —	$ 470,455
Income tax expense	$ 30,541	$ 5,727	$ (89,668)	$ (22,253)	$ (75,653)
Segment net income (loss)	$ 154,380	$ 2,065	$ (283,733)	$ (76,002)	$ (203,290)
Segment assets*	$ 8,803,681	$ 2,642,272	$ 1,743,349	$ 7,312	$ 13,196,614
Capital expenditures	$ 683,131	$ 130,166	$ 46,124	$ —	$ 859,421

*The segment assets of the Pipeline and Storage segment represented by MountainWest have been reclassified, as of December 31, 2022, as current assets held for sale on the Company's Consolidated Balance Sheet. See **Note 15 - Acquisitions and Dispositions** for additional information.

	Year Ended December 31, 2021				
(Thousands of dollars)	Natural Gas Distribution	Utility Infrastructure Services	Pipeline and Storage	Other	Total
Revenues from external customers	$ 1,521,790	$ 2,056,315	$ —	$ —	$ 3,578,105
Intersegment sales	—	102,346	—	—	102,346
Total	$ 1,521,790	$ 2,158,661	$ —	$ —	$ 3,680,451
Interest income	$ 5,113	$ —	$ —	$ —	$ 5,113
Interest expense	$ 97,560	$ 20,999	$ —	$ 639	$ 119,198
Depreciation and amortization	$ 253,398	$ 117,643	$ —	$ —	$ 371,041
Income tax expense	$ 29,338	$ 18,776	$ —	$ (8,466)	$ 39,648
Segment net income (loss)	$ 187,135	$ 40,420	$ —	$ (26,776)	$ 200,779
Segment assets	$ 7,950,263	$ 2,579,748	$ 2,187,582	$ 47,664	$ 12,765,257
Capital expenditures	$ 601,983	$ 113,643	$ —	$ —	$ 715,626

The corporate and administrative activities for Southwest Gas Holdings, Inc. in 2023 and 2022 include shareholder activism costs, costs related to the strategic review and Centuri separation planning, the settlement agreement with the Icahn Group, and a significant individual amount associated with the financing costs for the 2021 MountainWest acquisition, collectively net of tax impacts. The 2023 period also included incremental costs and other commitments under the agreement with Williams in regard to the sale of MountainWest, including indemnification for a rate case settlement agreement associated with MountainWest Overthrust Pipeline, and a post-closing true-up of $21 million, including a $7.4 million post-closing payment and working capital amounts above/below a contractual benchmark.

Note 14 - Redeemable Noncontrolling Interests

In connection with the acquisition of Linetec in November 2018, the previous owner initially retained a 20% equity interest in Linetec, with redemption being subject to certain rights based on the passage of time or upon the occurrence of certain triggering events. Effective in 2022, the Company, by means of Centuri, has the right, but not the obligation, to purchase at fair value (subject to a floor) a portion of the interest held by the noncontrolling party, and in incremental amounts each year thereafter. In March 2022, the parties agreed to a partial redemption, reducing the noncontrolling interest to 15%, and in March 2023, agreed to a partial 5% redemption (of the 15% then remaining). Then again, Centuri paid $39.9 million to the previous owner in April 2023, thereby reducing the balance continuing to be redeemable as of December 31, 2023 to 10% under the terms of the original agreement, with Centuri now owning a 90% stake in Linetec. The shares subject to the election accumulate (if earlier elections are not made) such that 100% of the interest retained by the noncontrolling party is subject to the election beginning in 2024. If the Company does not exercise its rights at each or any of the specified intervals, the noncontrolling party has the ability, but not the obligation, to exit their investment retained, by requiring Centuri to purchase a similar portion of their interest up to the maximum cumulative amounts specified at each interval discussed above. The outstanding noncontrolling interest is not subject to minimum purchase provisions and, following the remaining eligibility dates for election, such election does not expire. The redemption price represents the greater of fair value of the ownership interest to be redeemed on the redemption date or a floor amount under the terms of the agreement. The Company has determined that this noncontrolling interest is a redeemable noncontrolling interest and, in accordance with SEC guidance, is classified as mezzanine equity (temporary equity) in the Company's Consolidated Balance Sheets.

In November 2021, certain members of Riggs Distler management acquired a noncontrolling interest in Drum which was 1.41% as of December 31, 2023. The noncontrolling interest is subject to certain rights based on the passage of time or upon the occurrence of certain triggering events. Effective January 2027 and each calendar year thereafter or upon the occurrence of certain triggering events, Centuri, has the right, but not the obligation, to purchase all of the interest held by the noncontrolling party at fair value. If the rights are not exercised in accordance with the timeline noted, or upon the occurrence of certain other triggering events, the noncontrolling party has the ability, but not the obligation, to exit their investment retained by requiring Centuri to purchase all of their outstanding interest. The outstanding noncontrolling interest is not subject to minimum purchase provisions and, following the eligibility dates for the election, they do not expire. The redemption price represents the fair value of the ownership interest to be redeemed on the redemption date under the terms of the agreement. A portion of the redeemable noncontrolling interest acquired was funded through promissory notes made to noncontrolling interest holders bearing interest at the prime rate plus 2%. The promissory notes are payable by the noncontrolling interest holders upon certain triggering events including, but not limited to, termination of employment or the redemption of any interest under the agreement. The promissory notes are recognized as a reduction to the Company's stockholders' equity. Additionally, the Company has determined that this noncontrolling interest is a redeemable noncontrolling interest and, in accordance with SEC guidance, is classified as mezzanine equity (temporary equity) in the Company's Consolidated Balance Sheets.

Significant changes in the value of the redeemable noncontrolling interests, above a floor determined at the establishment date, are recognized as they occur, and the carrying value is adjusted as necessary at each reporting date. The fair value is estimated using a market approach that utilizes certain financial metrics from guideline public companies of similar industry and operating characteristics. Based on the fair value model employed, the estimated redemption value of the Linetec redeemable noncontrolling interest decreased by $19.4 million during the year ended December 31, 2023. Adjustment to the redemption value also impacted retained earnings, as reflected in the Company's Consolidated Statement of Equity, but did not impact net income.

The following depicts changes to the balances of the redeemable noncontrolling interests:

(Thousands of dollars)	Linetec	Drum	Total
Balance, December 31, 2021	$ 184,148	$ 12,569	$ 196,717
Net income attributable to redeemable noncontrolling interests	5,591	15	5,606
Redemption value adjustments	(3,325)	—	(3,325)
Redemption of equity interest from noncontrolling party	(39,649)	—	(39,649)
Balance, December 31, 2022	146,765	12,584	159,349
Net income attributable to redeemable noncontrolling interests	4,473	155	4,628
Redemption value adjustments	(19,366)	—	(19,366)
Redemption of equity interest from noncontrolling party	(39,894)	(50)	(39,944)
Balance, December 31, 2023	$ 91,978	$ 12,689	$ 104,667

Note 15 - Acquisitions and Dispositions

Acquisitions

In August 2021, the Company, through its subsidiaries, led principally by Centuri, completed the acquisition of Drum, including its primary subsidiary, Riggs Distler. Additionally, in December 2021, the Company completed the acquisition of the MountainWest entities. The purchase accounting for both acquisitions was finalized in 2022. The following unaudited pro forma financial information reflects the consolidated results of operations of the Company assuming the Riggs Distler and MountainWest acquisitions had taken place on January 1, 2020. The most significant pro forma adjustments relate to: (i) excluding approximately $48.7 million in transaction costs from the year ended December 31, 2021, and (ii) reflecting incremental interest expense of $48.4 million in 2021. The pro forma financial information has been prepared for comparative purposes only, and is not intended to be indicative of what the Company's results would have been had the acquisition occurred at the beginning of the periods presented or of what results may be in the future, for a number of reasons. The reasons include, but are not limited to, differences between the assumptions used to prepare the pro forma information, potential cost savings from operating efficiencies, nor the impact of incremental costs incurred in integrating the businesses.

Amounts below are in millions of dollars, except per share amounts.

	Unaudited Year Ended December 31, 2021
Total operating revenues	$ 4,236
Net income attributable to Southwest Gas Holdings, Inc.	$ 278
Basic earnings per share	$ 4.70
Diluted earnings per share	$ 4.69

Dispositions

In December 2022, the Company announced that the Board unanimously determined to take strategic actions to simplify the Company's portfolio of businesses. These actions included entering into a definitive agreement to sell 100% of the recently acquired MountainWest in an all-cash transaction to Williams for $1.5 billion in total enterprise value, subject to certain adjustments. Additionally, the Company determined it will pursue a separation of Centuri to form a new independent publicly traded utility infrastructure services company.

In December 2023, the Company announced its intent to pursue the Centuri Holdings IPO of newly issued shares of Centuri Holdings in the spring/summer 2024. The Board has determined that the Centuri Holdings IPO is the optimal path to advance the separation of Centuri as an independent utility infrastructure services company to maximize value for stockholders. Centuri

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Holdings has confidentially submitted a draft Registration Statement on Form S-1 with the SEC. The execution of the Centuri Holdings IPO is subject to market and other conditions, the completion of the SEC's review process, and final Board approval to proceed with the transaction. The Centuri Holdings IPO will be tax-free to both the Company and Centuri.

The primary use of cash proceeds from the Centuri Holdings IPO is expected to be the repayment of outstanding debt at Centuri to enhance its financial flexibility post-separation. Following the Centuri Holdings IPO, the Company intends to further reduce its ownership in Centuri through sales of its remaining Centuri Holdings shares into the market or through one or more exchange offers or a combination thereof. As of December 31, 2023, the Company had a U.S. federal net operating loss carryforward of $1.03 billion, which could be available to offset a taxable gain incurred by the Company in connection with a taxable disposition of the Centuri stock. The Company also retains strategic flexibility to separate Centuri through a tax-free spin-off of all or a part of Centuri in the event market conditions are not conducive to an IPO or secondary sales by the Company following an IPO.

As a result of entering into a definitive agreement to sell MountainWest and considering other factors, the Company determined that MountainWest met criteria to be characterized as held for sale as of December 31, 2022, and as a result, MountainWest's assets and liabilities, excluding income tax related balances, were presented as held for sale on the Company's consolidated balance sheet. The MountainWest sale did not meet the criteria for reporting discontinued operations as the sale did not represent a strategic shift that would have a major effect on the Company's operations or financial results. Company management considered the estimated proceeds, which were below the carrying value of the disposal group, and determined that the loss on disposal was attributable to goodwill, resulting in an impairment loss of $449.6 million. The goodwill impairment loss was reported in Goodwill impairment and cost to sell on the Company's Consolidated Statement of Income for the year ended December 31, 2022. The Company believes that the sale price of $1.5 billion, as adjusted for indebtedness and other estimated adjustments per the purchase and sale agreement, provided a reasonable indication of the fair value of MountainWest as it represented an exit price in an orderly transaction between market participants. The fair value of the MountainWest assets held-for-sale was previously estimated based on the preliminary closing statement and subject to certain adjustments, including a post-closing payment between the parties related to final working capital balances. The amount of the post-closing payment was finalized in May 2023. The Company recognized an additional loss on sale of $21 million during the quarter ended March 31, 2023. This reflected the accrued post-closing payment of $7.4 million related to cash and net working capital balances above/below a contractual benchmark, with the remaining charge associated with other changes in the assets and liabilities that were not subject to post-closing payment true-up provisions. As disclosed in **Note 1 - Background, Organization, and Summary of Significant Accounting Policies,** the Company identified an approximately $21 million misstatement related to its initial estimation of the loss recorded upon reclassifying MountainWest as an asset held for sale during the year ended December 31, 2022. Consequently, the impairment loss for the year ended December 31, 2022 was understated by approximately $21 million, which was corrected in the first quarter of 2023.

The carrying amounts of major classes of assets and liabilities relating to MountainWest, all of which were classified as current and reported as held for sale in the Company's Consolidated Balance Sheet as of December 31, 2022, are as follows:

(Thousands of dollars)		
Regulated operations plant, net of accumulated depreciation of $907 million	$	957,729
Other property and investments		49,546
Other current assets (1)		188,629
Goodwill, net of accumulated impairment of $449.6 million		508,395
Deferred charges and other assets (2)		39,050
Total assets		1,743,349
Less: cost to sell		5,819
Total current assets, held for sale	$	1,737,530
Other current liabilities (3)	$	55,188
Long-term debt		448,862
Other deferred credits and liabilities (3)		140,195
Total current liabilities, held for sale	$	644,245

(1) Includes cash and cash equivalents of $23.8 million, regulatory assets of $2.2 million, and "in-kind" system gas imbalance of $116.6 million due to a significant increase in natural gas prices in December 2022.

(2) Includes regulatory assets of $30.1 million.

(3) Includes $18.9 million of regulatory liabilities included in Other current liabilities, and $139 million of regulatory liabilities included in Other deferred credits and liabilities (including $60.2 million related to regulatory excess deferred/other taxes and gross-up and $58.8 million of accumulated removal costs).

In September 2022, the Federal Energy Regulatory Commission (the "FERC") issued an order initiating an investigation, pursuant to section 5 of the Natural Gas Act, to determine whether rates charged by MountainWest Overthrust Pipeline, LLC, a subsidiary of MountainWest, were just and reasonable and setting the matter for hearing. In March 2023, the parties agreed to a settlement, and as a result the Company recorded an additional loss of $28.4 million from the disposal of MountainWest in the first quarter of 2023, which is included in Goodwill impairment and loss on sale in the Company's Condensed Consolidated Statement of Income. The $28.4 million was paid in the third quarter of 2023 and the matter is now closed. The $28.4 million reduced Proceeds from the sale of businesses, net of cash sold in the Company's Condensed Consolidated Statements of Cash Flows. Other contingent commitments were part of the agreement as well, expenses for which have been immaterial to date and are expected to continue to be immaterial overall.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Management of Southwest Gas Holdings, Inc. and Southwest Gas Corporation has established disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) that are designed to provide reasonable assurance that information required to be disclosed in their respective reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and to provide reasonable assurance that such information is accumulated and communicated to management of each company, including each respective Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and benefits of controls must be considered relative to their costs. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or management override of the control. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and may not be detected.

Based on the most recent evaluation, as of December 31, 2023, management of Southwest Gas Holdings, Inc., including the Chief Executive Officer and Chief Financial Officer, believes the Company's disclosure controls and procedures are effective at attaining the level of reasonable assurance noted above.

Based on the most recent evaluation, as of December 31, 2023, management of Southwest Gas Corporation, including the Chief Executive Officer and Chief Financial Officer, believes Southwest's disclosure controls and procedures are effective at attaining the level of reasonable assurance noted above.

Management's Reports on Internal Control Over Financial Reporting

Management of Southwest Gas Holdings, Inc. is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined by Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Under the supervision and with the participation of Southwest Gas Holdings, Inc. management, including the principal executive officer and principal financial officer, an evaluation was conducted of the effectiveness of internal control over financial reporting based on the *"Internal Control – Integrated Framework"* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based upon management's evaluation under such framework, management concluded that internal control over financial reporting was effective as of December 31, 2023. The effectiveness of internal control over financial reporting as of December 31, 2023 has been audited by PricewaterhouseCoopers, LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Management of Southwest Gas Corporation is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Under the supervision and with the participation of Southwest Gas Corporation management, including the principal executive officer and principal financial officer, an evaluation was conducted of the effectiveness of internal control over financial reporting based on the *"Internal Control – Integrated Framework"* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based upon management's evaluation under such framework, management concluded that Southwest Gas Corporation's internal control over financial reporting was effective as of December 31, 2023. This annual report does not

include a report of Southwest Gas Corporation's registered public accounting firm regarding internal control over financial reporting pursuant to rules of the Securities and Exchange Commission that permit Southwest Gas Corporation to provide only this management's report in this annual report.

Changes in Internal Control Over Financial Reporting

There have been no changes in the Company's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during the fourth quarter of 2023 that have materially affected, or are likely to materially affect, the Company's internal control over financial reporting.

There have been no changes in Southwest's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during the fourth quarter of 2023 that have materially affected, or are likely to materially affect Southwest's internal control over financial reporting.

Item 9B. OTHER INFORMATION

During the fiscal quarter ended December 31, 2023, none of our directors or officers (as defined in Rule 16a-1(f) of the Exchange Act) adopted, modified, or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as those terms are defined under Item 408 of Regulation S-K.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item will be included under the headings "Election of Directors" and "Governance of the Company" in the Company's definitive proxy statement for the 2024 Annual Meeting of Stockholders, and such required information is incorporated herein by reference.

Southwest has adopted a code of ethics that applies to its principal executive officer, principal financial officer, and principal accounting officer and other persons performing similar functions. That code is part of the Company's Code of Business Conduct and Ethics which is available free of charge through the Company's investor relations website (investors.swgasholdings.com). The Company intends to include on its website any amendment to, or waiver from, a provision of its code of ethics that applies to the Company's principal executive officer, principal financial officer, principal accounting officer or persons performing similar functions that relates to any element of the code of ethics definition enumerated in Item 406(b) of Regulation S-K.

Item 11. EXECUTIVE COMPENSATION

Information with respect to Item 11 will be set forth in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

(a) *Compensation Committee Interlocks and Insider Participation.* Information with respect to Compensation Committee interlocks and insider participation is set forth under the heading "Governance of the Company" in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

(b) *Compensation Committee Report.* Information with respect to the Compensation Committee Report is set forth under the heading "Compensation Committee Report" in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

(a) *Security Ownership of Certain Beneficial Owners.* Information with respect to security ownership of certain beneficial owners is set forth under the heading "Securities Ownership by Directors, Director Nominees, Executive Officers, and Certain Beneficial Owners" in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

(b) *Security Ownership of Management.* Information with respect to security ownership of management is set forth under the heading "Securities Ownership by Directors, Director Nominees, Executive Officers, and Certain Beneficial Owners" in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

(c) *Changes in Control*. None.

(d) *Securities Authorized for Issuance Under Equity Compensation Plans.*

The following table sets forth the number of securities authorized for issuance under the Company's equity compensation plans at December 31, 2023.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights (2)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column a)
(Thousands of shares)	(a)	(b)	(c)
Equity compensation plans approved by security holders (1)	588	—	168
Equity compensation plans not approved by security holders	—	—	—
Total	588	$ —	168

(1) The number of securities to be issued upon vesting of awards includes 351,000 performance share units, which was derived by assuming that target performance will be achieved during the relevant performance period. The number of securities remaining available for future issuance includes shares relating to the Omnibus Incentive Plan. Actual securities issued will be net of tax.

(2) The weighted-average exercise price relates to outstanding stock options only. The Company's restricted stock unit awards, director deferred stock unit awards, and performance share unit awards have no exercise price. There were no stock options outstanding as of December 31, 2023.

Additional information regarding the equity compensation plans is included in **Note 9 - Share-Based Compensation** of this Annual Report on Form 10-K.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information with respect to Item 13 will be set forth in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information with respect to Item 14 will be set forth in the definitive 2024 Proxy Statement, which will be filed with the SEC within 120 days after December 31, 2023 and by this reference is incorporated herein.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report

(1) The Consolidated Financial Statements of the Company and Southwest required under this item are included in Item 8 of Part II in this Annual Report on Form 10-K.

(2) All schedules have been omitted because the required information is either inapplicable or included in the notes to the consolidated financial statements.

(3) Exhibits

Exhibit Number	Description of Document
2.01***	Purchase and Sale Agreement, dated as of December 14, 2022, by and between Williams Partners Operating LLC, Southwest Gas Holdings, Inc. and MountainWest Pipelines Holding Company. Incorporated herein by reference to Exhibit 2.1 to Form 8-K dated December 14, 2022, File No. 001-37976.
3(i)	Certificate of Incorporation of Southwest Gas Holdings, Inc., a Delaware corporation. Incorporated herein by reference to Exhibit 3.1 to Form 8-K12B dated September 20, 2019, File No. 001-37976.
3(ii)	Amended and Restated Bylaws of Southwest Gas Holdings, Inc., effective October 18, 2021. Incorporated herein by reference to Exhibit 3.1 to Form 8-K dated October 18, 2021, File No. 001-37976.
3(iii)	Amendment to Amended and Restated Bylaws of Southwest Gas Holdings, Inc., effective October 20, 2023. Incorporated herein by reference to Exhibit 3.1 to Form 8-K dated October 25, 2023, File No. 001-37976.
3(iv)	Certificate of Elimination of the Series A Junior Participating Preferred Stock. Incorporated herein by reference to Exhibit 3.1 to Form 8-K dated January 13, 2023, File No. 001-37976.
3(v)	Certificate of Designations of the Series A Junior Participating Preferred Stock. Incorporated herein by reference to Exhibit 3.1 to Form 8-K dated November 6, 2023, File No. 001-37976.
4.01	Indenture between City of Big Bear Lake, California, and Harris Trust and Savings Bank as Trustee, dated December 1, 1993, with respect to the issuance of $50,000,000 Industrial Development Revenue Bonds (Southwest Gas Corporation Project), 1993 Series A, due 2028. Incorporated herein by reference to Exhibit 4.11 to Form 10-K for the year ended December 31, 1993, File No. 001-07850.
4.02	Indenture between Southwest Gas Corporation and Harris Trust and Savings Bank dated July 15, 1996, with respect to Debt Securities. Incorporated herein by reference to Exhibit 4.04 to Form 8-K dated July 26, 1996, File No. 001–07850.
4.03	First Supplemental Indenture of Southwest Gas Corporation to Harris Trust and Savings Bank dated August 1, 1996, supplementing and amending the Indenture dated as of July 15, 1996, with respect to 7 1/2% and 8% Debentures, due 2006 and 2026, respectively. Incorporated herein by reference to Exhibit 4.11 to Form 8-K dated July 31, 1996, File No. 001-07850.
4.04	Second Supplemental Indenture of Southwest Gas Corporation to Harris Trust and Savings Bank dated December 30, 1996, supplementing and amending the Indenture dated as of July 15, 1996, with respect to Medium-Term Notes. Incorporated herein by reference to Exhibit 4.04 to Form 8-K dated December 30, 1996, File No. 001–07850.
4.05	Indenture of Trust between Clark County, Nevada, and the BNY Midwest Trust Company, as Trustee, dated as of March 1, 2003, relating to Clark County, Nevada Industrial Development Revenue Bonds Series 2003. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended September 30, 2008, File No. 001-07850.
4.06	Indenture of Trust between Clark County, Nevada and The Bank of New York Mellon Trust Company, N.A., as Trustee, dated as of September 1, 2008, relating to Clark County, Nevada Industrial Development Revenue Bonds Series 2008A. Incorporated herein by reference to Exhibit 10.02 to Form 10-Q for the quarter ended September 30, 2008, File No. 001-07850.
4.07	Indenture of Trust between Clark County, Nevada and The Bank of New York Mellon Trust Company, N.A., as Trustee, dated December 1, 2009, relating to Clark County, Nevada Industrial Development Revenue Bonds Series 2009A. Incorporated herein by reference to Exhibit 4.27 to Form 10-K for the year ended December 31, 2009, File No. 001-07850.

4.08	Note Purchase Agreement, dated November 18, 2010, by and between Southwest Gas Corporation and Metropolitan Life Insurance Company, John Hancock Life Insurance Company (U.S.A.), certain of their respective affiliates, and Union Fidelity Life Insurance Company. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated November 18, 2010, File No. 001-07850.
4.09	Amendment No. 1 to Note Purchase Agreement, dated March 28, 2014, by and among Southwest Gas Corporation and the holders of the Notes. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated March 31, 2014, File No. 001–07850.
4.10	Amendment No. 2 to Note Purchase Agreement, dated September 30, 2016, by and among Southwest Gas Corporation and the holders of the Notes. Incorporated herein by reference to Exhibit 4.02 to Form 10-Q for the quarter ended September 30, 2016, File No. 001–07850.
4.11	Form of 6.1% Senior Note due 2041. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated November 18, 2010, File No. 001-07850.
4.12	Indenture, dated as of October 4, 2013, by and between Southwest Gas Corporation and the Bank of New York Mellon Trust Company, N.A., as Trustee. 4.875% Notes due 2043. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated October 1, 2013, File No. 001-07850.
4.13	Southwest Gas Holdings, Inc. Dividend Reinvestment and Direct Stock Purchase Plan. Incorporated by reference to prospectus 424(b)(5) dated December 2, 2020, File No. 333-251074.
4.14	Indenture, dated September 29, 2016, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. 3.80% Senior Notes due 2046. Incorporated herein by reference to Exhibit 4.01 to Form 8-K dated September 26, 2016, File No. 001-07850.
4.15	Indenture, dated March 15, 2018, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated March 15, 2018, File Nos. 001-37976 and 001-07850.
4.16	First Supplemental Indenture, dated March 15, 2018, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated March 15, 2018, File Nos. 001-37976 and 001-07850.
4.17	Form of 3.70% Senior Note due 2028 (included in Exhibit 4.23). Incorporated herein by reference to Exhibit 4.24 to Form 10-K for the year ended December 31, 2018, File Nos. 001-37976 and 001-07850.
4.18	Indenture, dated as of May 31, 2019, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated May 28, 2019, File No. 001-07850.
4.19	First Supplemental Indenture, dated May 31, 2019, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated May 28, 2019, File No. 001-07850.
4.20	Form of 4.150% Senior Note due 2049. Incorporated by reference to Exhibit 4.3 to Form 8-K dated May 28, 2019, File No. 001-07850.
4.21	Indenture, dated June 4, 2020, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated June 1, 2020, File Nos. 001-07850 and 001-37976.
4.22	First Supplemental Indenture, dated June 4, 2020, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated June 1, 2020, File Nos. 001-07850 and 001-37976.
4.23	Form of 2.200% Senior Note due 2030. Incorporated by reference to Exhibit 4.3 to Form 8-K dated June 1, 2020, File Nos. 001-07850 and 001-37976.
4.24**	Description of Securities of Southwest Gas Holdings, Inc.
4.25	Second Supplemental Indenture, dated August 20, 2021, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated August 18, 2021, File Nos. 001-37976 and 001-07850.
4.26	Form of 3.18% Senior Note due 2051. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated August 18, 2021, File Nos. 001-37976 and 001-07850.

4.27	Third Supplemental Indenture, dated March 22, 2022, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated March 17, 2022, File Nos. 001-37976 and 001-07850.
4.28	Form of 4.05% Senior Note due 2032. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated March 17, 2022, File Nos. 001-37976 and 001-07850.
4.29	Fourth Supplemental Indenture, dated December 1, 2022, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated November 29, 2022, File Nos. 001-07850 and 001-37976.
4.30	Form of 5.800% Senior Note due 2027. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated November 29, 2022, File Nos. 001-07850 and 001-37976.
4.31	Fifth Supplemental Indenture, dated March 23, 2023, by and between Southwest Gas Corporation and The Bank of New York Mellon Trust Company, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated March 21, 2023, File Nos. 001-37976 and 001-07850.
4.32	Form of 5.450% Senior Note due 2028. Incorporated herein by reference to Exhibit 4.2 to Form 8-K dated March 21, 2023, File Nos. 001-37976 and 001-07850.
4.33	Tax-Free Spin Protection Plan, dated November 5, 2023, between Southwest Gas Holdings, Inc. and Equiniti Trust Company, LLC, as Rights Agent. Incorporated herein by reference to Exhibit 4.1 to Form 8-K dated November 6, 2023, File No. 001-37976.
4.34	The Company and Southwest hereby agree to furnish to the SEC, upon request, a copy of any instruments defining the rights of holders of long-term debt issued by Southwest Gas Holdings or its subsidiaries; the total amount of securities authorized thereunder does not exceed 10% of the consolidated total assets of Southwest Gas Holdings and its subsidiaries.
10.01	Project Agreement between Southwest Gas Corporation and City of Big Bear Lake, California, dated as of December 1, 1993. Incorporated herein by reference to Exhibit 10.05 to Form 10-K for the year ended December 31, 1993, File No. 001-07850.
10.02*	Southwest Gas Corporation Supplemental Executive Retirement Plan, amended and restated August 3, 2020. Incorporated herein by reference to Exhibit 10.03 to Form 10-Q for the quarter ended September 30, 2020, File Nos. 001-37976 and 001-07850.
10.03*	Southwest Gas Holdings, Inc. Management Incentive Plan, amended and restated August 3, 2020. Incorporated herein by reference to Exhibit 10.04 to Form 10-Q for the quarter ended September 30, 2020, File Nos. 001-37976 and 001-07850.
10.04*	Southwest Gas Corporation Directors Deferral Plan, amended and restated December 28, 2016. Incorporated herein by reference to Exhibit 10.05 to Form 10-K for the year ended December 31, 2018, File Nos. 001-37976 and 001-07850.
10.05*	Southwest Gas Corporation 1986 Executive Deferral Plan, amended and restated August 3, 2020. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended September 30, 2020, File Nos. 001-37976 and 001-07850.
10.06*	Southwest Gas Corporation 2005 Executive Deferral Plan, amended and restated August 3, 2020. Incorporated herein by reference to Exhibit 10.02 to Form 10-Q for the quarter ended September 30, 2020, File Nos. 001-37976 and 001-07850.
10.07	Financing agreement dated as of March 1, 2003 by and between Clark County, Nevada, and Southwest Gas Corporation relating to Clark County, Nevada Industrial Development Revenue Bonds Series 2003A, Series 2003B, Series 2003C, Series 2003D and Series 2003E. Incorporated herein by reference to Exhibit 10 to Form 10-Q for the quarter ended September 30, 2003, File No. 001-07850.
10.08	First Amendment to Financing Agreement by and between Clark County, Nevada, and Southwest Gas Corporation dated as of July 1, 2005, amending the Financing Agreement dated as of March 1, 2003, with respect to Clark County, Nevada Industrial Development Revenue Bonds Series 2003A, Series 2003B, Series 2003C, Series 2003D, and Series 2003E. Incorporated herein by reference to Exhibit 10.2 to Form 10-Q for the quarter ended June 30, 2005, File No. 001-07850.
10.09	Financing Agreement between Clark County, Nevada, and Southwest Gas Corporation, dated as of September 1, 2008, relating to Clark County, Nevada Industrial Development Revenue Bonds Series 2008A. Incorporated herein by reference to Exhibit 10.03 to Form 10-Q for the quarter ended September 30, 2008, File No. 001-07850.

10.10	Financing Agreement between Clark County, Nevada and Southwest Gas Corporation, dated December 1, 2009, relating to Clark County, Nevada Industrial Development Revenue Bonds Series 2009A. Incorporated herein by reference to Exhibit 10.21 to Form 10-K for the year ended December 31, 2009, File No. 001-07850.
10.11	Southwest Gas Corporation $400 million Credit Facility. Incorporated herein by reference to Exhibit 10.2 to Form 8-K dated April 10, 2020, File Nos. 001-07850 and 001-37976.
10.12*	Southwest Gas Holdings, Inc. 2006 Restricted Stock/Unit Plan, amended and restated as of December 28, 2016. Incorporated herein by reference to Exhibit 10.14 to Form 10-K for the year ended December 31, 2018, File Nos. 001-37976 and 001-07850.
10.13*	Form of Performance Share Award Agreement with Named Executive Officers. Incorporated herein by reference to Exhibit 10.19 to Form 10-K for the year ended December 31, 2016, File No. 001-07850.
10.14*	Form of Restricted Stock Unit Award Agreement with Named Executive Officers. Incorporated herein by reference to Exhibit 10.20 to Form 10-K for the year ended December 31, 2016, File No. 001-07850.
10.15	Southwest Gas Holdings, Inc. $100 million Credit Facility. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated April 10, 2020, File No. 001-37976.
10.16*	Centuri Employment Agreement with Paul Daily, Chief Executive Officer. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended June, 30 2017, File No. 001-07850.
10.17*	Centuri/NPL Executive Deferred Compensation Plan. Incorporated herein by reference to Exhibit 10.02 to Form 10-Q for the quarter ended June, 30 2017, File No. 001-07850.
10.18*	Centuri Long-term Capital Investment Program. Incorporated herein by reference to Exhibit 10.03 to Form 10-Q for the quarter ended June, 30 2017, File No. 001-07850.
10.19*	Centuri Short-term Incentive Program. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended March 31, 2018, File Nos. 001-37976 and 001-07850.
10.20*	Southwest Gas Holdings, Inc. Omnibus Incentive Plan. Incorporated herein by reference to Appendix B to the Proxy Statement dated March 27, 2017, File No. 001-37976.
10.21*	Form of Change in Control Agreement with Officers. Incorporated herein by reference to Exhibit 10.24 to Form 10-K for the year ended December 31, 2017, File Nos. 001-37976 and 001-07850.
10.22	Centuri $450 million Credit Facility Agreement. Incorporated herein by reference to Exhibit 10.25 to Form 10-K for the year ended December 31, 2017, File Nos. 001-37976 and 001-07850.
10.23*	Form of Centuri Construction Group, Inc. Short-term Incentive Program. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended March, 31 2018, File Nos. 001-37976 and 001-07850.
10.24*	Form of Centuri Construction Group, Inc. Executive Long-Term Incentive Plan. Incorporated herein by reference to Exhibit 10.02 to Form 10-Q for the quarter ended March, 31 2018, File Nos. 001-37976 and 001-07850.
10.25*	Southwest Gas Corporation Board of Directors Retirement Plan, amended and restated effective December 28, 2016. Incorporated herein by reference to Exhibit 10.28 to Form 10-K for the year ended December 31, 2018, File Nos. 001-37976 and 001-07850.
10.26*	Southwest Gas Corporation Directors Deferral Plan, amended and restated November 14, 2018. Incorporated herein by reference to Exhibit 10.29 to Form 10-K for the year ended December 31, 2018, File Nos. 001-37976 and 001-07850.
10.27	First Amendment to Centuri and subsidiaries Credit Facility Agreement, the other credit parties referred to therein, and Wells Fargo Bank. Incorporated herein by reference to Exhibit 10.30 to Form 10-K for the year ended December 31, 2018, File Nos. 001-37976 and 001-07850.
10.28*	Amendment to the Centuri Group, Inc. Executive Long-Term Incentive Plan. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended March 31, 2019, File Nos. 001-37976 and 001-07850.
10.29*	Amendment to the Centuri Group, Inc. Long-Term Capital Investment Plan. Incorporated herein by reference to Exhibit 10.02 to Form 10-Q for the quarter ended March 31, 2019, File Nos. 001-37976 and 1-7850.

10.30*	Form of Paul Daily Award Agreement under the Centuri Group, Inc. Executive Long-Term Incentive Plan. Incorporated herein by reference to Exhibit 10.03 to Form 10-Q for the quarter ended March 31, 2019, File Nos. 001-37976 and 001-07850.
10.31*	Amendment to the Centuri Group, Inc. Executive Deferred Compensation Plan. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended March 31, 2020, File Nos. 001-37976 and 001-07850.
10.32*	Southwest Gas Corporation Employees' Investment Plan. Incorporated herein by reference to Exhibit 4.1 to Form S-8 dated December 16, 2016, File No. 333-215145.
10.33	Term Loan Agreement, dated as of March 23, 2021, by and among Southwest Gas Corporation, The Bank of New York Mellon, as Administrative Agent, and the lenders party, book runners and syndication agents thereto. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated March 23, 2021, File Nos. 001-37976 and 001-07850.
10.34	Credit Agreement with Wells Fargo Securities, LLC and BofA Securities, Inc., as joint lead arrangers, Wells Fargo Bank, National Association, as administrative agent, Bank of America, N.A., as syndication agent, and the other lenders and agents party thereto. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated August 27, 2021, File No. 001-37976.
10.35	Amendment No. 1 to the Southwest Gas Corporation $400 million Credit Facility. Incorporated herein by reference to Exhibit 10.2 to Form 8-K dated December 28, 2021, File Nos. 001-37976 and 001-07850.
10.36	Amendment No. 1 to the Southwest Gas Holdings, Inc. $200 million Credit Facility. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated December 28, 2021, File Nos. 001-37976 and 001-07850.
10.37	Amendment No. 1, dated as of March 22, 2022, to the Term Loan Agreement, dated as of March 23, 2021, by and among Southwest Gas Corporation, the lenders, book runners and syndication agents party thereto and The Bank of New York Mellon, as Administrative Agent. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated March 17, 2022, File Nos. 001-07850 and 001-37976.
10.38*	Amended and Restated Award Agreement for the Centuri Group, Inc. Long-Term Incentive Plan. Incorporated herein by reference to Exhibit 10.3 to Form 10-Q for the quarter ended June 30, 2022, File Nos. 001-37976 and 001-07850.
10.39	Letter Agreement by and among Southwest Gas Holdings, Inc. and the Icahn Group, dated August 3, 2022. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated August 2, 2022, File No. 001-37976.
10.40	Amendment No. 1, dated as of September 26, 2022, to the 364-Day Term Loan Credit Agreement, dated as of November 1, 2021, with the lenders party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. as Syndication Agent, JPMorgan Chase Bank, N.A. and BofA Securities, Inc. as Joint Lead Arranger and Joint Bookrunner, and MUFG Bank, Ltd. as Documentation Agent. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated September 26, 2022, File No. 001-37976.
10.41*	Executive Employment Agreement by and between Southwest Gas Holdings, Inc., Southwest Gas Corporation and Robert J. Stefani. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated November 7, 2022, File Nos. 001-37976 and 001-07850.
10.42*	Change in Control Agreement by and between Southwest Gas Holdings, Inc., Southwest Gas Corporation and Robert J. Stefani. Incorporated herein by reference to Exhibit 10.2 to Form 8-K dated November 7, 2022, File Nos. 001-37976 and 001-07850.
10.43*	Amended Change in Control Agreement by and between Southwest Gas Holdings, Inc., Southwest Gas Corporation and Karen Haller. Incorporated herein by reference to Exhibit 10.46 to Form 10-K for the year ended December 31, 2022, File Nos. 001-37976 and 001-07850.
10.44	First Amendment to Centuri Credit Facility Agreement. Incorporated herein by reference to Exhibit 10.47 to Form 10-K for the year ended December 31, 2022, File Nos. 001-37976 and 001-07850.
10.45	364-Day Term Loan Credit Agreement, dated as of January 20, 2023, by and among Southwest Gas Corporation, JPMorgan Chase Bank, N.A., as Administrative Agent, and the Lenders from time to time party thereto. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated January 20, 2023. File Nos. 001-37976 and 001-07850.

10.46	Term Loan Credit Agreement, dated as of April 17, 2023, by and among Southwest Gas Holdings, Inc., the lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. as Syndication Agent, JPMorgan Chase Bank, N.A., BofA Securities, Inc., Wells Fargo Bank, N.A. and U.S. Bank, National Association as Joint Lead Arrangers and Joint Bookrunners, and Wells Fargo Bank, N.A. and U.S. Bank, National Association as Co-Documentation Agents. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated April 17, 2023, File Nos. 001-37976 and 001-07850.
10.47*	Grant Agreement for Time-Lapse Restricted Stock Units Under the Southwest Gas Holdings, Inc. Omnibus Incentive Plan. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated March 29, 2023, File Nos. 001-37976 and 001-07850.
10.48*	Performance Share Unit Grant Agreement Under the Southwest Gas Holdings, Inc. Omnibus Incentive Plan (UNI/ROE Shares). Incorporated herein by reference to Exhibit 10.2 to Form 8-K dated March 29, 2023, File Nos. 001-37976 and 001-07850.
10.49*	Performance Share Unit Grant Agreement Under the Southwest Gas Holdings, Inc. Omnibus Incentive Plan (EPS/ROE Shares). Incorporated herein by reference to Exhibit 10.3 to Form 8-K dated March 29, 2023, File Nos. 001-37976 and 001-07850.
10.50*	Centuri Grant Agreement for Time-Lapse Restricted Stock Units Under the Southwest Gas Holdings, Inc. Omnibus Incentive Plan. Incorporated herein by reference to Exhibit 10.4 to Form 8-K dated March 29, 2023, File Nos. 001-37976 and 001-07850.
10.51*	Centuri Performance Share Unit Grant Agreement Under the Southwest Gas Holdings, Inc. Omnibus Incentive Plan. Incorporated herein by reference to Exhibit 10.5 to Form 8-K dated March 29, 2023, File Nos. 001-37976 and 001-07850.
10.52	Amendment No. 2 to the Southwest Gas Holdings, Inc. Credit Facility. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated April 25, 2023, File Nos. 001-37976 and 001-07850.
10.53	Second Amendment to Second Amended and Restated Centuri Credit Agreement. Incorporated herein by reference to Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2023, File Nos. 001-37976 and 001-07850.
10.54	Form of Indemnification Agreement for Southwest Gas Holdings, Inc. Directors and Officers. Incorporated herein by reference to Exhibit 10.01 to Form 10-Q for the quarter ended September 30, 2023, File Nos. 001-37976 and 001-07850.
10.55	Form of Indemnification Agreement for Southwest Gas Corporation Directors and Officers. Incorporated herein by reference to Exhibit 10.02 to Form 10-Q for the quarter ended September 30, 2023, File Nos. 001-37976 and 001-07850.
10.56	Amendment No. 3 to Second Amended and Restated Centuri Credit Agreement. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated November 13, 2023, File No. 001-37976.
10.57	Amended and Restated Cooperation Agreement, dated as of November 21, 2023, by and among the Icahn Group and Southwest Gas Holdings, Inc. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated November 21, 2023, File No. 001-37976.
10.58*	Transition and Separation Letter, dated as of December 13, 2023, by and between Southwest Gas Holdings, Inc. and Paul M. Daily. Incorporated herein by reference to Exhibit 10.1 to Form 8-K dated December 13, 2023, File No. 001-37976.
21.01**	List of subsidiaries - Southwest Gas Holdings, Inc.
23.01**	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm - Southwest Gas Holdings, Inc.
23.02**	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm - Southwest Gas Corporation.
31.01**	Section 302 Certifications–Southwest Gas Holdings, Inc.
31.02**	Section 302 Certifications–Southwest Gas Corporation.
32.01**	Section 906 Certifications–Southwest Gas Holdings, Inc.
32.02**	Section 906 Certifications–Southwest Gas Corporation.
97.1**	Southwest Gas Holdings, Inc. Clawback Policy

101**	The following materials from the Annual Report on Form 10-K of Southwest Gas Holdings, Inc. and Southwest Gas Corporation for the year ended December 31, 2023, were formatted in Inline XBRL (Extensible Business Reporting Language): (1) Southwest Gas Holdings, Inc. Consolidated Balance Sheets, (ii) Southwest Gas Holdings, Inc. Consolidated Statements of Income, (iii) Southwest Gas Holdings, Inc. Consolidated Statements of Comprehensive Income, (iv) Southwest Gas Holdings, Inc. Consolidated Statements of Cash Flows, (v) Southwest Gas Holdings, Inc. Consolidated Statements of Equity, (vi) Southwest Gas Corporation Consolidated Balance Sheets, (vii) Southwest Gas Corporation Consolidated Statements of Income, (viii) Southwest Gas Corporation Consolidated Statements of Comprehensive Income, (ix) Southwest Gas Corporation Consolidated Statements of Cash Flows, (x) Southwest Gas Corporation Consolidated Statements of Equity. The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
104**	Cover Page Interactive Data File (embedded within the Inline XBRL document).

* Management Contracts or Compensation Plans

** Filed herewith

*** Southwest Gas Holdings, Inc. has omitted schedules and other similar attachments to such agreement pursuant to Item 601(b) of Regulation S-K. The Company will furnish a copy of such omitted document to the SEC upon request.

Item 16. FORM 10–K SUMMARY.

None.

Southwest Gas Holdings, Inc.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SOUTHWEST GAS HOLDINGS, INC.
(registrant)

Date: February 28, 2024

By: /s/ KAREN S. HALLER
Karen S. Haller
President and Chief Executive Officer

Southwest Gas Holdings, Inc.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ ANDREW W. EVANS (Andrew W. Evans)	Director	February 28, 2024
/s/ HENRY P. LINGINFELTER (Henry P. Linginfelter)	Director	February 28, 2024
/s/ RUBY SHARMA (Ruby Sharma)	Director	February 28, 2024
/s/ KAREN S. HALLER (Karen S. Haller)	Director, President and Chief Executive Officer	February 28, 2024
/s/ JANE LEWIS-RAYMOND (Jane Lewis-Raymond)	Director	February 28, 2024
/s/ ANNE L. MARIUCCI (Anne L. Mariucci)	Director	February 28, 2024
/s/ E. RENAE CONLEY (E. Renae Conley)	Chair of the Board of Directors	February 28, 2024
/s/ CARLOS A. RUISANCHEZ (Carlos A. Ruisanchez)	Director	February 28, 2024
/s/ ROBERT J. STEFANI (Robert J. Stefani)	Senior Vice President/ Chief Financial Officer	February 28, 2024
/s/ A. RANDALL THOMAN (A. Randall Thoman)	Director	February 28, 2024
/s/ ANDREW J. TENO (Andrew J. Teno)	Director	February 28, 2024
/s/ LESLIE T. THORNTON (Leslie T. Thornton)	Director	February 28, 2024
/s/ LORI L. COLVIN (Lori L. Colvin)	Vice President/Controller/ Chief Accounting Officer	February 28, 2024

Southwest Gas Corporation

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SOUTHWEST GAS CORPORATION
(registrant)

Date: February 28, 2024

By: /s/ KAREN S. HALLER
Karen S. Haller
Chief Executive Officer

Southwest Gas Corporation

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ KAREN S. HALLER (Karen S. Haller)	Director and Chief Executive Officer	February 28, 2024
/s/ E. RENAE CONLEY (E. Renae Conley)	Director	February 28, 2024
/s/ ROBERT J. STEFANI (Robert J. Stefani)	Director, Senior Vice President/ Chief Financial Officer	February 28, 2024
/s/ LORI L. COLVIN (Lori L. Colvin)	Vice President/Controller/ Chief Accounting Officer	February 28, 2024

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended September 30, 2023

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission File Number	Name of Registrant, Address of Principal Executive Offices and Telephone Number	State of Incorporation	I.R.S. Employer Identification Number
1-16681	**Spire Inc.** 700 Market Street St. Louis, MO 63101 314-342-0500	Missouri	74-2976504
1-1822	**Spire Missouri Inc.** 700 Market Street St. Louis, MO 63101 314-342-0500	Missouri	43-0368139
2-38960	**Spire Alabama Inc.** 605 Richard Arrington Blvd N Birmingham, AL 35203 205-326-8100	Alabama	63-0022000

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") (only applicable to Spire Inc.):

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock $1.00 par value	SR	New York Stock Exchange LLC
Depositary Shares, each representing a 1/1,000th interest in a share of 5.90% Series A Cumulative Redeemable Perpetual Preferred Stock, par value $25.00 per share	SR.PRA	New York Stock Exchange LLC

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if each registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933, as amended.
Spire Inc. Yes ☒ No ☐ Spire Missouri Inc. Yes ☐ No ☒ Spire Alabama Inc. Yes ☐ No ☒

Indicate by check mark if each registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.
Spire Inc. Yes ☐ No ☒ Spire Missouri Inc. Yes ☐ No ☒ Spire Alabama Inc. Yes ☐ No ☒

Indicate by check mark whether each registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Spire Inc. Yes ☒ No ☐ Spire Missouri Inc. Yes ☒ No ☐ Spire Alabama Inc. Yes ☒ No ☐

Indicate by check mark whether each registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Spire Inc. Yes ☒ No ☐ Spire Missouri Inc. Yes ☒ No ☐ Spire Alabama Inc. Yes ☒ No ☐

Indicate by check mark whether each registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

	Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
Spire Inc.	☒	☐	☐	☐	☐
Spire Missouri Inc.	☐	☐	☒	☐	☐
Spire Alabama Inc.	☐	☐	☒	☐	☐

If an emerging growth company, indicate by check mark if each registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.
Spire Inc. ☐ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

Indicate by check mark whether each registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.
Spire Inc. ☒ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

If securities are registered pursuant to Section 12(b) of the Exchange Act, indicate by check mark whether the financial statements of each registrant included in the filing reflect the correction of an error to previously issued financial statements.
Spire Inc. ☐ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).
Spire Inc. ☐ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

Indicate by check mark whether each registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Spire Inc. Yes ☐ No ☒ Spire Missouri Inc. Yes ☐ No ☒ Spire Alabama Inc. Yes ☐ No ☒

The aggregate market value of the common equity held by non-affiliates of Spire Inc. amounted to $3,580,140,878 as of March 31, 2023. All of Spire Missouri Inc.'s and Spire Alabama Inc.'s equity securities are owned by Spire Inc., their parent company and a reporting company under the Exchange Act.

The number of shares outstanding of each registrant's common stock, as of November 10, 2023, was as follows:

Spire Inc.	Common Stock, par value $1.00 per share	53,176,840
Spire Missouri Inc.	Common Stock, par value $1.00 per share (all owned by Spire Inc.)	25,855
Spire Alabama Inc.	Common Stock, par value $0.01 per share (all owned by Spire Inc.)	1,972,052

This combined Form 10-K represents separate filings by Spire Inc., Spire Missouri Inc., and Spire Alabama Inc. Information contained herein relating to an individual registrant is filed by that registrant on its own behalf. Each registrant makes no representation as to information relating to the other registrants, except that information relating to Spire Missouri Inc. and Spire Alabama Inc. is also attributed to Spire Inc.

Spire Missouri Inc. and Spire Alabama Inc. meet the conditions set forth in General Instructions I(1)(a) and (b) of Form 10-K and are therefore filing this Form 10-K with the reduced disclosure format specified in General Instructions I(2) to Form 10-K.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of proxy statement for Spire Inc. to be filed on or about December 13, 2023 — Part III.
Certain exhibits as indicated in Part IV.

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GLOSSARY OF KEY TERMS AND ABBREVIATIONS

AOCI	Accumulated other comprehensive income or loss
APSC	Alabama Public Service Commission
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
CCF	A gas measurement which represents a unit of volume equal to one hundred cubic feet
CCM	Cost Control Measure
Company	Spire and its subsidiaries unless the context suggests otherwise
EPS	Earnings per share
ESR	Enhanced Stability Reserve
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
GAAP	Accounting principles generally accepted in the United States of America
Gas Marketing	Segment including Spire Marketing, which provides natural gas marketing services
Gas Utility	Segment including the operations of the Utilities
GSA	Gas Supply Adjustment
ICE	Intercontinental Exchange
ISRS	Infrastructure System Replacement Surcharge
Midstream	Segment including Spire STL Pipeline and Spire Storage
MMBtu	Million British thermal units
MoPSC	Missouri Public Service Commission
MSPSC	Mississippi Public Service Commission
NYMEX	New York Mercantile Exchange, Inc.
NYSE	New York Stock Exchange
O&M	Operation and maintenance expense
OCI	Other comprehensive income or loss
OFO	Operational Flow Order
PGA	Purchased Gas Adjustment
RSE	Rate Stabilization and Equalization
SEC	U.S. Securities and Exchange Commission
Spire	Spire Inc.
Spire Alabama	Spire Alabama Inc.
Spire EnergySouth	Spire EnergySouth Inc., parent of Spire Gulf and Spire Mississippi
Spire Gulf	Spire Gulf Inc.
Spire Marketing	Spire Marketing Inc.
Spire Mississippi	Spire Mississippi Inc.
Spire Missouri	Spire Missouri Inc.
Spire STL Pipeline	Spire STL Pipeline LLC, or the 65-mile FERC-regulated pipeline it owns and operates to deliver natural gas into eastern Missouri
Spire Storage	The physical natural gas storage operations of Spire Storage West LLC and Spire Storage Salt Plains LLC
U.S.	United States
Utilities	Spire Missouri, Spire Alabama and the subsidiaries of Spire EnergySouth

PART I

FORWARD-LOOKING STATEMENTS

Certain matters discussed in this report, excluding historical information, include forward-looking statements. Certain words, such as "may," "anticipate," "believe," "estimate," "expect," "intend," "plan," "seek," "target," and similar words and expressions identify forward-looking statements that involve uncertainties and risks. Future developments may not be in accordance with our current expectations or beliefs and the effect of future developments may not be those anticipated. Among the factors that may cause results or outcomes to differ materially from those contemplated in any forward-looking statement are:

- Weather conditions and catastrophic events, particularly severe weather in U.S. natural gas producing areas;
- Volatility in gas prices, particularly sudden and sustained changes in natural gas prices, including the related impact on margin deposits associated with the use of natural gas derivative instruments, and the impact on our competitive position in relation to suppliers of alternative heating sources, such as electricity;
- Changes in gas supply and pipeline availability, including as a result of decisions by natural gas producers to reduce production or shut in producing natural gas wells and expiration or termination of existing supply and transportation arrangements that are not replaced with contracts with similar terms and pricing, as well as other changes that impact supply for and access to the markets in which our subsidiaries transact business;
- Acquisitions may not achieve their intended results;
- Legislative, regulatory and judicial mandates and decisions, some of which may be retroactive, including those affecting:
    - allowed rates of return and recovery of prudent costs,
    - incentive regulation,
    - industry structure,
    - purchased gas adjustment provisions,
    - rate design structure and implementation,
    - capital structures established for rate-setting purposes,
    - regulatory assets,
    - non-regulated and affiliate transactions,
    - franchise renewals,
    - authorization to operate facilities,
    - environmental or safety matters, including the potential impact of legislative and regulatory actions related to climate change and pipeline safety and security,
    - taxes,
    - pension and other postretirement benefit liabilities and funding obligations, or
    - accounting standards;
- The results of litigation;
- The availability of and access to, in general, funds to meet our debt obligations prior to or when they become due and to fund our operations and necessary capital expenditures, either through (i) cash on hand, (ii) operating cash flow, or (iii) access to the capital markets;
- Retention of, ability to attract, ability to collect from, and conservation efforts of, customers;
- Our ability to comply with all covenants in our indentures and credit facilities any violations of which, if not cured in a timely manner, could trigger a default of our obligations;
- Energy commodity market conditions;
- Discovery of material weakness in internal controls;
- The disruption, failure or malfunction of our operational and information technology systems, including due to cyberattacks; and
- Employee workforce issues, including but not limited to labor disputes, the inability to attract and retain key talent, and future wage and employee benefit costs, including costs resulting from changes in discount rates and returns on benefit plan assets.

Readers are urged to consider the risks, uncertainties, and other factors that could affect our business as described in this report. All forward-looking statements made in this report rely upon the safe harbor protections provided under the Private Securities Litigation Reform Act of 1995. We do not, by including this statement, assume any obligation to review or revise any particular forward-looking statement in light of future events.

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Item 1. Business

OVERVIEW

Spire Inc. ("Spire") was formed in 2000 and is the holding company for Spire Missouri Inc. ("Spire Missouri"), Spire Alabama Inc. ("Spire Alabama"), other gas utilities, and gas-related businesses. Spire Missouri was formed in 1857 and Spire Alabama was formed in 1948 by the merger of two gas companies. Spire is committed to transforming its business and pursuing growth through growing organically, investing in infrastructure, and advancing through innovation. The Company has three reportable business segments: Gas Utility, Gas Marketing and Midstream.

The Gas Utility segment includes the regulated operations of Spire Missouri, Spire Alabama, Spire Gulf Inc. ("Spire Gulf") and Spire Mississippi Inc. ("Spire Mississippi") (collectively, the "Utilities"). The business of the Utilities is subject to seasonal fluctuations with the peak period occurring in the winter heating season, typically November through April of each fiscal year. Spire Missouri is a public utility engaged in the purchase, retail distribution and sale of natural gas, with primary offices located in St. Louis, Missouri. Spire Missouri is the largest natural gas distribution utility system in Missouri, serving approximately 1.2 million residential, commercial and industrial customers in St. Louis, Kansas City, and other areas in Missouri. Spire Alabama is a public utility engaged in the purchase, retail distribution and sale of natural gas principally in central and northern Alabama, serving more than 0.4 million residential, commercial and industrial customers with primary offices located in Birmingham, Alabama. Spire Gulf and Spire Mississippi are utilities engaged in the purchase, retail distribution and sale of natural gas to 0.1 million customers in the Mobile, Alabama area and south-central Mississippi.

The Gas Marketing segment includes Spire Marketing Inc. ("Spire Marketing"), a wholly owned subsidiary providing natural gas marketing services.

The Midstream segment includes Spire STL Pipeline LLC ("Spire STL Pipeline") and Spire Storage (consisting of the operations of Spire Storage West LLC and Spire Storage Salt Plains LLC), which are subsidiaries engaged in the transportation and storage of natural gas.

As of September 30, 2023, Spire had 3,589 employees, including 1,967 for Spire Missouri and 802 for Spire Alabama. We believe that:

1. the safety and well-being of our employees is one of our most important responsibilities,
2. the development, education and advancement of employees is key to our sustainability, and
3. embracing an inclusive workforce full of diverse backgrounds and perspectives drives innovation.

We continue to implement processes, procedures and programs that reflect our focus on consistently reducing our employee injury and motor vehicle accident rates. In 2023, we held our 10th annual safety summit, and we encourage employees to identify potential safety improvements in the workplace, which is one of the driving forces behind reducing motor vehicle incidents and work-related injuries. We have also installed safety cameras in all Company vehicles, which are accompanied by driver coaching initiatives, to promote safe driving habits. To support employee wellness, we offer incentives for weight management and gym membership, as well as employee assistance programs to provide counseling services and emotional support, and we have a formalized comprehensive well-being program that focuses on the physical, emotional, social and financial health of every employee.

All employees have access to developmental assessments, customized training, specialized degree programs, and partnerships with best-in-class organizations related to industry courses, leadership and management workshops and computer application development seminars. In addition, all employees are eligible for up to $6,000 per year in tuition assistance and have access to the Spire Learning Center, our robust internal learning management system. In their first year, each construction and maintenance employee receives 80 hours of safety training, while each service and installation employee receives 200 hours of training. Field operations employees average 24 hours of technical and procedural training annually.

We regularly review and adjust our affirmative action plans based on placement and utilization rates, and we strive to create an even more diverse and inclusive work environment. Our Human Rights Policy demonstrates that Spire understands its universal responsibility to respect human rights and provides the basis for publicly affirming our values and embedding the responsibility into Spire's operations and the way we do business.

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Spire uses its website, SpireEnergy.com, as its primary channel for distribution of important information including news releases, analyst presentations and financial information. The information Spire, Spire Missouri and Spire Alabama file or furnish to the United States (U.S.) Securities and Exchange Commission (SEC), including annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and their amendments, and proxy statements are available free of charge under "Filings & reports" in the Investors section of Spire's website, SpireEnergy.com, as soon as reasonably practical after the information is filed with or furnished to the SEC. Information contained on Spire's website is not incorporated by reference in this report. The SEC also maintains a website that contains Spire's SEC filings (sec.gov).

GAS UTILITY

Natural Gas Supply

The Utilities' fundamental gas supply strategy is to meet the two-fold objective of 1) ensuring a dependable gas supply is available for delivery when needed and 2) insofar as is compatible with that dependability, purchasing gas that is economically priced. In structuring their natural gas supply portfolio, the Utilities focus on natural gas assets that are strategically positioned to meet the Utilities' primary objectives.

Spire Missouri focuses its gas supply portfolio around a number of large natural gas suppliers with equity ownership or control of assets strategically situated to complement its regionally diverse firm transportation arrangements. Spire Missouri utilizes Midcontinent, Gulf Coast, Northeast, and Rocky Mountain gas sources to provide a level of supply diversity that facilitates the optimization of pricing differentials as well as protecting against the potential of regional supply disruptions. Further, Spire STL Pipeline may deliver up to 400,000 million British thermal units (MMBtu) per day of natural gas into eastern Missouri, of which Spire Missouri is the foundation shipper with a contractual commitment of 350,000 MMBtu per day.

In fiscal 2023, Spire Missouri purchased natural gas from 24 different suppliers to meet its total service area current gas sales and storage injection requirements. Spire Missouri entered into firm agreements with suppliers including major producers and marketers providing flexibility to meet the temperature-sensitive needs of its customers. Natural gas purchased by Spire Missouri for delivery to its service areas included 50.3 billion cubic feet (Bcf) through the Southern Star Central Gas Pipeline, Inc. (Southern Star) system, 35.8 Bcf through the Enable Mississippi River Transmission LLC (MRT) system, 22.9 Bcf through the Spire STL Pipeline, 6.0 Bcf through the Tallgrass Interstate Gas Transmission, LLC (TIGT) system, 4.3 Bcf through the Panhandle Eastern Pipe Line Company, LP (PEPL) system, and 2.8 Bcf through the Rockies Express Pipeline, LLC (REX) system. Spire Missouri also holds firm transportation arrangements on several other interstate pipeline systems that provide access to gas supplies upstream. Some of Spire Missouri's commercial and industrial customers purchased their own gas with Spire Missouri transporting 51.2 Bcf to them through its distribution system.

The fiscal 2023 peak day send out of natural gas to Spire Missouri East customers, including transportation customers, occurred on December 23, 2022. The average temperature was 6 degrees Fahrenheit in St. Louis, and on that day Spire Missouri East customers consumed 1.04 Bcf of natural gas. This peak day demand was met with natural gas transported to St. Louis through the MRT, Missouri Gas Pipeline LLC, Spire STL Pipeline, and Southern Star transportation systems, and from Spire Missouri's on-system storage.

The fiscal 2023 peak day send out of natural gas to Spire Missouri West customers, including transportation customers, occurred on December 22, 2022. The average temperature was -3 degrees Fahrenheit in Kansas City, and on that day Spire Missouri West customers consumed 0.91 Bcf of natural gas. This peak day demand was met with natural gas transported to Kansas City through the Southern Star, PEPL, TIGT, and REX transportation systems.

Spire Alabama's distribution system is connected to two major interstate natural gas pipeline systems, Southern Natural Gas Company, L.L.C. (Southern Natural Gas) and Transcontinental Gas Pipe Line Company, LLC (Transco). It is also connected to two intrastate natural gas pipeline systems.

Spire Alabama purchases natural gas from various natural gas producers and marketers. Certain volumes are purchased under firm contractual commitments with other volumes purchased on a spot market basis. The purchased volumes are delivered to Spire Alabama's system using a variety of firm transportation, interruptible transportation and storage capacity arrangements designed to meet the system's varying levels of demand.

In fiscal 2023, Spire Alabama purchased natural gas from 24 different suppliers to meet current gas sales, storage injection, and liquefied natural gas (LNG) liquefaction requirements, of which one supplier is under a long-term supply agreement. Approximately 47.8 Bcf was purchased for delivery by Southern Natural Gas, 5.6 Bcf by BBT-AlaTenn, 3.8 Bcf by Transco, and 18.2 Bcf through intrastate pipelines to the Spire Alabama delivery points for its residential, commercial, and industrial customers.

The fiscal 2023 peak day send out for Spire Alabama was 0.6 Bcf of natural gas on December 23, 2022, when the average temperature was 13 degrees Fahrenheit in Birmingham, of which 80% was met with supplies transported through Southern Natural Gas, Transco, and intrastate facilities. The remaining 20% was fulfilled with LNG.

Spire Gulf's distribution system is directly connected to interstate pipelines, natural gas processing plants and gas storage facilities. Spire Gulf buys from a variety of producers and marketers, with BP Energy Company being the primary supplier.

Natural Gas Storage

Spire Missouri believes it currently has ample storage capacity to meet the demands of its distribution system, particularly to augment its supply during peak demand periods. Spire Missouri has a contractual right to store 21.6 Bcf of gas in MRT's storage facility located in Unionville, Louisiana, 16.0 Bcf of gas storage in Southern Star's system storage facilities located in Kansas and Oklahoma, 1.4 Bcf of firm storage on PEPL's system storage, and 1.0 Bcf of firm storage with Spire Storage Salt Plains. MRT's tariffs allow injections into storage from May 1 through November 1 and require the withdrawal from storage of all but 4.3 Bcf from November 1 through May 1. Southern Star tariffs allow both injections and withdrawals into storage year-round with ratchets that restrict the associated flows dependent upon the underlying inventory level per the contracts.

In addition, Spire Missouri supplements pipeline gas with natural gas withdrawn from its own underground storage field located in St. Louis and St. Charles Counties in Missouri. The field is designed to provide approximately 0.35 Bcf of natural gas withdrawals on a peak day and provides the ability to reinject natural gas during the heating season to replenish or increase deliverability, subject to maximum annual net withdrawals of approximately 4.0 Bcf of natural gas based on the inventory level that Spire Missouri plans to maintain.

Spire Alabama has a contractual right to store 12.7 Bcf of gas with Southern Natural Gas, 0.5 Bcf of gas with Gulf South Pipeline, 0.2 Bcf of gas with Transco and 0.2 Bcf of gas with Tennessee Gas Pipeline. In addition, Spire Alabama has 2.0 Bcf of on-system LNG storage that can provide the system with up to an additional 0.2 Bcf of natural gas daily to meet peak day demand.

Spire Gulf obtains adequate storage capacity through Gulf South Pipeline Company, LP, and Enstor Gas, LLC's Bay Gas Storage.

Union Agreements

The Company believes labor relations with its employees are good. Should that condition change, the Company could experience labor disputes, work stoppages or other disruptions that could negatively impact the Company's system operations, customer service, results of operations and cash flows.

The following table presents the Company's various labor agreements as of September 30, 2023:

Union	Local	Employees Covered	Contract Start Date	Contract End Date
Spire Missouri				
United Steel, Paper and Forestry, Rubber Manufacturing, Allied-Industrial and Service Workers International Union (USW)	884	67	August 10, 2021	July 31, 2024
USW	11-6	873	August 1, 2021	July 31, 2024
USW	11-6-03	98	August 1, 2021	July 31, 2024
USW	12561	132	August 1, 2022	July 31, 2025
USW	14228	40	August 1, 2022	July 31, 2025
USW	11-267	28	August 1, 2022	July 31, 2025
International Brotherhood of Electrical Workers	53	1	October 1, 2022	September 30, 2025
Gas Workers Metal Trades locals of the United Association of Journeyman and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada	781-Kansas City	215	August 1, 2022	July 31, 2025
Gas Workers Metal Trades locals of the United Association of Journeyman and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada	781-Monett	49	August 1, 2022	July 31, 2025
Total Spire Missouri		1,503		
Spire Alabama				
USW	12030	210	May 1, 2023	April 30, 2026
United Association of Gas Fitters	548	207	May 1, 2022	April 30, 2025
Total Spire Alabama		417		
Spire Gulf				
USW	541	61	August 1, 2023	July 31, 2026
Total Spire		1,981		

Operating Revenues and Customer Information

The following tables present information on Spire's revenues and volume sold and transported (before intersegment eliminations), and annual average numbers of customers for the three years ended September 30, 2023, 2022 and 2021.

Gas Utility Operating Revenues

(% of Total)	2023	2022	2021
Residential	67%	73%	58%
Commercial & Industrial	25%	17%	28%
Transportation	5%	6%	6%
Other	3%	4%	8%
Total	100%	100%	100%

Gas Utility Volume Sold and Transported

(In millions of CCF)	2023	2022	2021
Residential	965.3	994.7	1,069.6
Commercial & Industrial	468.7	468.9	479.0
Transportation	1,662.9	1,617.6	1,614.7
Interruptible	10.9	11.8	15.0
Total System	3,107.8	3,093.0	3,178.3
Off-System	112.9	82.0	69.4
Total	3,220.7	3,175.0	3,247.7

Gas Utility Customers	2023	2022	2021
Residential	1,621,822	1,618,515	1,612,385
Commercial & Industrial	112,753	113,077	112,635
Transportation	1,013	1,023	846
Interruptible	45	50	63
Total	1,735,633	1,732,665	1,725,929

Total annual average number of customers for Spire Missouri and Spire Alabama for fiscal 2023 was 1,203,003 and 430,290, respectively.

Regulatory Matters

For details on regulatory matters, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

Other Pertinent Matters

Spire Missouri is the only distributor of natural gas within its franchised service areas, while Spire Alabama is the main distributor of natural gas in its service areas. Spire Missouri and Spire Alabama have franchises in nearly all the communities where they provide service with terms varying from five years to an indefinite duration. A franchise is essentially a municipal permit to install and maintain pipes and construct other facilities in the community. All of the franchises are free from unduly burdensome restrictions and are adequate for the conduct of Spire Missouri's and Spire Alabama's current public utility businesses in their respective states. In recent years, although certain franchise agreements have expired, the Utilities have continued to provide service in those communities without formal franchises.

The principal competition for the Utilities comes from the local electric companies. Other competitors in the service areas include suppliers of fuel oil, coal, and propane, as well as natural gas pipelines that can directly connect to large volume customers. Coal has been price competitive as a fuel source for very large boiler plant loads, but environmental requirements have shifted the economic advantage to natural gas. Oil and propane can be used to fuel boiler loads and certain direct-fired process applications, but these fuels require on-site storage, thus limiting their competitiveness. Competition also comes from district steam systems in the downtown areas of both St. Louis and Kansas City and from municipally or publicly owned natural gas distributors located adjacent to

the Alabama service territories. Direct use of renewables will continue to grow in the future and compete against distributed generation using natural gas.

Residential, commercial, and industrial customers represent approximately 95% and 83% of fiscal 2023 operating revenues for Spire Missouri and Spire Alabama, respectively. Given the current level of natural gas supply and market conditions, the Utilities believe that the relative comparison of natural gas equipment and operating costs with those of competitive fuels will not change significantly in the foreseeable future, and that these markets will continue to be supplied by natural gas. In new multi-family and commercial rental markets, the Utilities' competitive exposures are presently limited to space and water heating applications.

Spire Missouri and Spire Alabama offer gas transportation service to its large commercial and industrial customers. Transportation customers represent approximately 2% and 14% of fiscal 2023 operating revenues for Spire Missouri and Spire Alabama, respectively. The Spire Missouri tariff approved for that type of service produces a margin similar to that which Spire Missouri would have received under their regular sales rates. Similarly, Spire Alabama's tariff is based on Spire Alabama's sales profit margin so that operating margins are unaffected.

The Utilities are subject to various environmental laws and regulations that, to date, have not materially affected the Utilities' or the Company's financial position and results of operations. For a detailed discussion of environmental matters, see Note 16, Commitment and Contingencies, of the Notes to Financial Statements in Item 8.

GAS MARKETING

Spire Marketing is engaged in the marketing of natural gas and related services throughout the U.S., which includes customers within and outside of the Utilities' service areas. For fiscal 2023 and 2022, Spire Marketing volumes averaged 1.40 Bcf/day and 1.73 Bcf/day, respectively. The majority of Spire Marketing's business is derived from the procurement and physical delivery of natural gas to a diverse customer base, primarily in the central and southern U.S. Through its retail operations, Spire Marketing offers natural gas marketing services to large commercial and industrial customers, while its wholesale business consists of producers, pipelines, power generators, municipalities, storage operators, and utility companies. Wholesale activities currently represent a majority of the total Gas Marketing business. The Gas Marketing strategy is to leverage its market expertise and risk management skills to manage and optimize the value of its portfolio of commodity, transportation, park and loan, and storage contracts while controlling costs and acting on new marketplace opportunities.

In the course of its business, Spire Marketing enters into agreements to purchase natural gas at a future date in order to lock up supply to cover future sales commitments to its customers. To secure access to the markets it serves, Spire Marketing contracts for transportation capacity on various pipelines from pipeline companies directly and from other parties through the secondary capacity market. Throughout fiscal 2023, Spire Marketing held approximately 1 Bcf per day of firm transportation capacity. In addition, to ensure reliability of service and to provide operational flexibility, Spire Marketing enters into firm storage contracts and interruptible park and loan transactions with various companies, where it is able to buy and retain gas to be delivered at a future date, at which time it sells the natural gas to third parties. As of September 30, 2023, Spire Marketing has contracted for approximately 18 Bcf of such storage and park and loan capacity for the 2023-2024 winter season.

MIDSTREAM

Spire Midstream consists of three facilities located in the U.S.: Spire STL Pipeline, Spire Storage West, and Spire Storage Salt Plains.

Spire STL Pipeline owns and operates a 65-mile pipeline connecting the Rockies Express Pipeline in Scott County, Illinois, to multiple delivery points in St. Louis County, Missouri, including Spire Missouri. Spire STL Pipeline's operating revenue is derived primarily from Spire Missouri as its foundation shipper. The pipeline is under the jurisdiction of the Federal Energy Regulatory Commission (FERC).

Spire Storage West is engaged in the storage of natural gas serving markets primarily in the western region of the U.S. The facility is located in southwestern Wyoming and consists of two storage fields operating under one FERC market-based rate tariff currently authorized to provide up to 55 Bcf of storage capacity to customers. The actual storage capacity was 23 Bcf as of September 30, 2023, and management is in the process of expanding it to 39 Bcf by 2025.

Spire Storage Salt Plains is located in north central Oklahoma and serves markets in the midcontinent and midwestern U.S. The facility operates under intrastate regulation and has a certificated capacity of 13 Bcf and working capacity of 10 Bcf.

OTHER

Other components of the Company's consolidated information include Spire's subsidiaries engaged in the operation of a propane pipeline and risk management, among other activities, and unallocated corporate items, including certain debt and associated interest costs.

Item 1A. Risk Factors

Spire's, Spire Missouri's and Spire Alabama's businesses and financial results are subject to a number of risks and uncertainties, including those set forth below. The risks described below are those management considers to be material. When considering any investment in these companies' securities, investors should carefully consider the following information, as well as information contained in the caption "Forward-Looking Statements," Item 7A, and other documents Spire, Spire Missouri, and Spire Alabama file with the SEC. This list is not exhaustive, and management places no priority or likelihood based on the risk descriptions, order of presentation or grouping.

RISKS AND UNCERTAINTIES THAT RELATE TO REGULATORY, LEGISLATIVE AND LITIGATION FACTORS

Regulatory and legislative developments in the energy industry related to climate change or in support of increased energy efficiency may adversely affect operations and financial results.

There have been a number of federal, state and local legislative and regulatory initiatives proposed in recent years in an attempt to control or limit the effects of global warming and overall climate change, including greenhouse gas emissions, such as methane and carbon dioxide. Adoption of this type of legislation by Congress or similar legislation by states or localities, or the adoption of related regulations by federal, state or local governments mandating a substantial reduction in greenhouse gas emissions, restricting the use of fossil fuels, such as natural gas, or restricting the construction of infrastructure could have far-reaching and significant impacts on the energy industry. Such new legislation or regulations could result in increased compliance costs or additional operating restrictions, adversely affect the demand for natural gas and/or midstream services, or impact the prices charged to customers, potentially reducing customer growth opportunities and/or increasing the cost of doing business.

In addition, legislative and regulatory initiatives by the federal, state and local governments addressing greenhouse gas emissions or restricting the use of natural gas could adversely affect customer demand. The promulgation of regulations of the emissions of greenhouse gases and efficiency for residential gas furnaces and other gas appliances or the potential enactment of congressional legislation addressing global warming and climate change may decrease customer usage, encourage fuel switching from gas to other energy forms, and may result in future additional compliance costs that could impact the Utilities' financial conditions and results of operations. At this time, we cannot predict the potential impact of such laws or regulations that may be adopted on the Company's and the Utilities' future business, financial condition or financial results.

Regulation of the Utilities' businesses may impact rates they are able to charge, costs, and profitability.

The Utilities are subject to regulation by federal, state and local authorities. At the state level, the Utilities are regulated in Missouri by the Missouri Public Service Commission (MoPSC), in Alabama by the Alabama Public Service Commission (APSC), and in Mississippi by the Mississippi Public Service Commission (MSPSC). These state public service commissions regulate many aspects of the Utilities' distribution operations, including construction and maintenance of facilities, operations, safety, the rates the Utilities may charge customers, the terms of service to their customers, transactions with their affiliates, the rate of return they are allowed to realize, and the accounting treatment for certain aspects of their operations. For further discussion of these accounting matters, see Regulatory Accounting under Critical Accounting Estimates in Item 7.

Accounting for the economics of rate regulation affects multiple financial statement line items (such as property, plant, and equipment; regulatory assets and liabilities; operating revenues; and operating expenses) and affects multiple disclosures in the Company's financial statements. There is a risk that the state public service commissions will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. A material disallowance of deferred costs could adversely affect the Utilities' results of operations.

The MoPSC also approves Spire Missouri's Infrastructure System Replacement Surcharge (ISRS). The ISRS allows Spire Missouri expedited recovery for its investment to upgrade its infrastructure and enhance its safety and reliability without the necessity of a formal rate case. Such investments are subject to review, and there is risk that any material disallowance of costs under ISRS could adversely affect the timing of revenues and cash flows.

The Utilities' ability to obtain and timely implement rate increases and rate supplements to maintain the current rate of return is subject to regulatory review and approval. There can be no assurance that they will be able to obtain rate increases or rate supplements or continue earning the current authorized rates of return. Spire Alabama's and Spire Gulf's rate setting process, Rate Stabilization and Equalization (RSE), is subject to regulation by the APSC and is implemented pursuant to APSC orders expiring September 30, 2025. RSE adjustments would continue after that date unless the APSC enters an order to the contrary in a manner consistent with the law. Spire Mississippi is subject to regulation by the MSPSC and utilizes the Rate Stabilization Adjustment (RSA) Rider. For further details, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

The Utilities could incur additional costs if required to adjust to new laws or regulations, revisions to existing laws or regulations or changes in interpretations of existing laws or regulations. In addition, as the regulatory environment for the natural gas industry increases in complexity, the risk of inadvertent noncompliance could also increase. If the Utilities fail to comply with applicable laws and regulations, whether existing or new, they could be subject to fines, penalties, business interruption or other enforcement action by the authorities that regulate the Utilities' operations.

Federal safety and integrity regulations related to pipeline and storage operators and owners of critical infrastructure may impose significant costs and liabilities on the Company.

The U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) requires pipeline and natural gas storage operators to develop integrity management programs to evaluate their pipelines comprehensively and to take additional measures to protect pipeline segments located in areas where a leak or rupture could potentially do the most harm.

The Company is required to maintain programs that are intended to assess pipeline integrity. Any repair, remediation, preventative or mitigating actions may require significant capital and operating expenditures. PHMSA constantly updates its regulations to ensure the highest levels of pipeline safety. As the operator of pipelines, Spire is required to:

- perform ongoing assessments of pipeline integrity;
- identify and characterize applicable threats to pipelines;
- improve data collection, integration and analysis;
- repair and remediate the pipeline as necessary; and
- implement preventative and mitigating actions.

The Transportation Security Administration (TSA) requires owners and operators of specified pipeline facilities to take action to prevent disruption and degradation to their infrastructure to achieve the following security outcomes:

- develop network segmentation policies and controls;
- create access control measures to secure and prevent unauthorized access to critical cyber systems;
- build continuous monitoring and detection policies and procedures to detect threats and correct anomalies; and
- reduce the risk of exploitation of unpatched systems in a timely manner using a risk-based methodology.

As such, pipeline owners and operators are required to establish and execute a TSA-approved Cybersecurity Implementation Plan, develop and maintain a Cybersecurity Incident Response Plan, and establish a Cybersecurity Assessment Program.

Costs to comply with these and other such future safety and integrity regulations are significant. Additionally, should the Company fail to comply with applicable statutes, rules, regulations and orders, it could be subject to significant fines, penalties, business interruption or other enforcement actions.

Environmental laws and regulations may require significant expenditures or increase operating costs.

The Utilities and Midstream companies are subject to federal, state and local environmental laws and regulations affecting many aspects of their present and future operations. These laws and regulations require these businesses to obtain and comply with a wide variety of environmental licenses, permits, inspections, and approvals. Failure to comply with these laws and regulations and failure to obtain any required permits and licenses may result in costs in the form of fines, penalties, business interruptions or other enforcement actions, which may be material. In addition, existing environmental laws and regulations could be revised or reinterpreted and/or new laws and

regulations could be adopted or become applicable to these companies or their facilities, thereby impacting the cost of compliance. The discovery of presently unknown environmental conditions, including former manufactured gas plant sites, and adverse claims under environmental laws and regulations may result in expenditures and liabilities, which could be material. To the extent environmental compliance costs are self-insured, or not fully covered by insurance or recovered in rates from customers, those costs may have an adverse effect on financial condition and results of operations.

The Utilities' liquidity may be adversely affected by delays in recovery of their costs, due to regulation.

In the normal course of business, there is a lag between when the Utilities incur increases in certain of their costs and the time in which those costs are considered for recovery in the ratemaking process. Cash requirements for increased gas supply costs, operating costs, increased funding levels of defined benefit pension and postretirement costs, capital expenditures, interest expense and other increases in the costs of doing business, including inflation, can require outlays of cash prior to the authorization of increases in rates charged to customers, as approved by the MoPSC, APSC, or MSPSC. Accordingly, the Utilities' liquidity can be adversely impacted to the extent higher costs are not timely recovered from their customers.

Changes to income tax policy, certain tax elections, tax regulations and future taxable income could adversely impact the Company's financial condition and results of operations.

The Company has significantly reduced its current federal and state income tax obligations over the past few years through tax planning strategies and application of tax rules which included the use of bonus depreciation deductions for certain expenditures for property. As a result, the Company generated large annual taxable losses that have resulted in significant federal and state net operating losses. The Company plans to utilize these net operating losses in the future. The value of these net operating losses could be reduced if the Company cannot generate enough taxable income in the future to utilize all of the net operating losses generated prior to the Tax Cuts and Jobs Act of 2017 before they expire due to income tax policy changes, lower-than-expected financial performance and/or regulatory actions.

Changes to income tax policy, laws and regulations, including but not limited to changes in tax rates, the deductibility of certain expenses including interest and/or changes in the deductibility of certain expenditures for property, could adversely impact the Company. Those impacts could include reducing the value of its net operating losses and could result in material charges to earnings. Further, the Company's financial condition and results of operations may be adversely impacted. Notably, the Inflation Reduction Act became effective on August 16, 2022. This new law provides various tax credits and incentives with respect to clean energy. The Company is still evaluating the impact and applicability of these programs to its operations, but they are not expected to have a material impact on the Company.

The Company may be involved in legal or administrative proceedings before various courts and governmental bodies that could adversely affect its results of operations and financial condition.

The Company may be involved in legal or administrative proceedings before various courts and governmental bodies with respect to general claims, rates, environmental issues, gas cost prudence reviews and other matters. For further details, see Contingencies in Note 16 to the financial statements in Item 8. Adverse decisions regarding these matters, to the extent they require the Company to make payments in excess of amounts provided for in its financial statements, or to the extent they are self-insured or not covered by insurance, could adversely affect the results of operations and financial condition.

Commodity markets and derivative instruments are regulated by federal agencies, and new developments in this area may adversely impact Spire Marketing's results of operations and financial condition.

As a participant in the natural gas market, Spire Marketing is subject to applicable statutes, rules, regulations and orders administered by FERC and the Commodity Futures Trading Commission (CFTC), including those directed generally to prevent fraud or manipulation involving natural gas transactions (physical or financial transactions). Spire Marketing could be subject to fines, penalties, business interruption or other enforcement actions by the FERC or CFTC, or both, for failure to comply with such rules. New regulatory and legislative actions may adversely impact Spire Marketing's results of operations and financial condition by potentially reducing customer growth opportunities and/or increasing the costs of doing business.

Spire Marketing uses bilateral contracts and derivative instruments such as futures contracts, options and swaps to hedge or mitigate ongoing commercial risks. Most standardized swaps, under the Dodd-Frank Act and regulations from the CFTC, are required to be cleared through a registered clearing facility and traded on a designated exchange or swap execution facility, subject to certain exceptions. These regulations may also require compliance with certain margin requirements for over-the-counter derivative contracts with certain regulated

entities, which could adversely affect liquidity and ability to use derivatives to hedge risks. In addition, the CFTC's rules require companies, including Spire Marketing, to maintain regulatory records of swap transactions, and to report swaps to centralized swap data repositories, among other compliance obligations.

Although Spire Marketing may qualify for exceptions to certain of these CFTC rules, its derivatives counterparties are likely subject to capital, margin, documentation and business conduct requirements imposed as a result of the Dodd-Frank Act. These obligations may increase transaction costs and may make it more difficult for Spire Marketing to enter into hedging transactions on favorable terms or affect the number and/or creditworthiness of available swap counterparties. In that event, Spire Marketing's inability to enter into derivatives instruments or other commercial risk hedging transactions on favorable terms, or at all, could increase operating expenses and expose it to unhedged commercial risks, including potential adverse changes in commodity prices.

In October 2020, the CFTC finalized its rules that modify and expand the applicability of speculative position limits on the amounts of certain futures contracts (including options thereon), cash-settled "lookalike" contracts for or linked to the commodities underlying the foregoing futures contracts, as well as economically equivalent swaps containing "identical material" contractual specifications, terms and conditions as the foregoing contracts. While Spire Marketing anticipates qualifying for a bona fide hedging exemption from such limits, the CFTC's final rules and earlier adopted aggregation rules may cause Spire Marketing's hedging strategies described above to be limited if Spire Marketing is unable to qualify for an exemption.

RISKS THAT RELATE TO OPERATIONAL FACTORS

The Company's ability to meet its customers' natural gas requirements may be impaired if contracted gas supplies, interstate pipeline and/or storage services are not available or delivered in a timely manner.

In order to meet their customers' annual and seasonal natural gas demands, the Utilities must obtain sufficient supplies, interstate pipeline capacity, and storage capacity. If they are unable to obtain these, either from their suppliers' inability to deliver the contracted commodity or the inability to secure replacement quantities, to the extent not mitigated by tariffs, contractual indemnification or insurance, the Utilities' financial condition and results of operations may be adversely impacted. If a substantial disruption in interstate natural gas pipelines' transmission and storage capacity were to occur during periods of heavy demand, the Utilities' financial results could be adversely impacted.

Spire Marketing's ability to deliver natural gas to its customers is contingent upon the performance of its suppliers and capability of pipeline and storage operators to fulfill delivery obligations to Spire Marketing under firm contracts. To the extent that it is unable to obtain the necessary supplies, Spire Marketing's financial position and results of operations may be adversely impacted.

Midstream is dependent upon third-party pipelines and other facilities to provide delivery options to and from its facilities. If any pipeline connection were to become unavailable for volumes of natural gas due to repairs, damage to the facility, lack of capacity or any other reason, the ability to continue receiving or delivering natural gas could be restricted, and to the extent not mitigated by contractual indemnification, insurance or tariffs, would thereby reduce its revenues. Any permanent interruption that causes a material reduction in volumes could result in an impairment loss that could have a material adverse effect on the financial condition and results of operations.

Transporting, distributing, and storing natural gas and propane involves numerous risks that may result in accidents and other operating risks.

Natural gas transportation, distribution and storage activities inherently involve a variety of integrity issues, hazards and operations risks, such as leaks, accidental explosions, blowouts, damage caused by third parties, and mechanical problems, which could cause substantial financial losses. In addition, these risks could result in serious injury to employees and non-employees, loss of human life, significant damage to property, environmental pollution, impairment of operations, and substantial losses to the Company and its subsidiaries. The location of pipelines and storage facilities near populated areas, including residential areas, commercial business centers, and industrial sites, could increase the level of damages resulting from these risks. Similar risks also exist for Spire Missouri's propane storage, transmission and minor distribution operations. These activities may subject the Company to litigation or administrative proceedings. Such litigation or proceedings could result in substantial monetary judgments, fines, penalties, business interruption or other enforcement actions against the Company and its subsidiaries or be resolved on unfavorable terms. In accordance with customary industry practices, the Utilities and other Spire businesses maintain insurance against a significant portion, but not all, of these risks and losses. To the extent the occurrence of any of these events is self-insured or not fully covered by

insurance, it could adversely affect the financial condition and results of operations of the Company and its subsidiaries.

Because of competition, the Company may not be able to retain existing customers or acquire new customers, or may be unsuccessful in retaining or acquiring contractual assets on favorable terms, which could have an adverse impact on its business, results of operations and financial condition.

The Utilities face the risk that larger commercial or industrial customers may bypass gas distribution services by directly connecting with interstate pipelines or, in the case of Spire Alabama and Spire Gulf, also from municipally or publicly owned gas distributors located adjacent to its service territory. The Utilities cannot provide any assurance that increased competition will not have a material adverse effect on their business, financial condition or results of operations.

The Utilities compete with distributors offering a broad range of services and prices, from full-service distributors to those offering delivery only. The Utilities also compete for retail customers with suppliers of alternative energy products, principally propane and electricity, and to a growing extent, distributed sources of renewable energy. If they are unable to compete effectively, the Utilities may lose existing customers and/or fail to acquire new customers, which in the aggregate could have a material adverse effect on their business, results of operations and financial condition. Along those lines, changes in wholesale natural gas prices compared with prices for electricity, fuel oil, coal, propane, or other energy sources can significantly impact the cost of delivered natural gas, which may affect the Utilities' retention of natural gas customers and may adversely impact their financial condition and results of operations.

Spire Storage is subject to competition from similar services provided by pipelines and from competing independent storage providers capable of serving its customers. Natural gas storage is a competitive business, with competitors having the ability to expand storage capacity. Increased competition in the natural gas storage business could reduce the demand and drive rates down for the Company's natural gas storage services.

Also, Spire Marketing profitability may be impacted by the effects of the expiration, in the normal course of business, of certain of its natural gas supply, sales, transportation and storage contracts if, because of competition or other reasons, those contracts cannot be replaced and/or renewed with arrangements with similar terms and pricing.

Significantly warmer-than-normal weather conditions and the effects of climate change may affect the Utilities' sale of heating energy and adversely impact their financial position and results of operations.

The Utilities' earnings are primarily generated by the sale of heating energy. Spire Missouri and Spire Mississippi each have a Weather Normalization Adjustment rider, Spire Alabama has a Temperature Adjustment Rider, and Spire Gulf has a Weather Impact Normalization Factor. These mechanisms, approved by the respective state regulatory body, provide better assurance of the recovery of fixed costs and margins during winter months despite variations in sales volumes due to the impacts of weather, while the annual rate designs of Alabama and Mississippi help adjust for other factors that affect customer usage. However, significantly warmer-than-normal weather conditions in the Utilities' service areas and other factors, such as climate change, alternative energy sources and increased efficiency of gas furnaces and other appliances, may result in reduced profitability and decreased cash flows attributable to lower gas sales. Furthermore, these mechanisms do not fully mitigate the impact of warmer weather and continuation of these adjustment factors is subject to regulatory discretion.

To the extent climate change results in warmer temperatures, financial results could be adversely affected through lower gas volumes and revenues and reduced marketing opportunities. Management believes it is likely that any such resulting impacts would occur over a long period of time and thus would be difficult to quantify with any degree of specificity. Another possible impact of climate change may be more frequent and more severe weather events, such as significant wind or flooding events, which could increase costs to repair damaged facilities and restore service to customers or result in lost revenues if the Company were unable to deliver natural gas to customers. Such weather events could also disrupt our usual gas supplies and make it impossible or extremely costly to find replacement gas for our customers. To the extent such impacts are self-insured, or not covered by insurance or recovered in rates, the foregoing events could have a material adverse effect on the Company's financial condition and results of operations.

The Company's natural gas storage business includes inherent geologic and operational risks.

The Company plans to continue to increase capacity, improve operating performance, and improve the integrity of its storage fields and associated above-ground facilities of Spire Storage. Construction of such assets is subject to various risks and uncertainties, including supply chain and labor disruptions, weather conditions during construction, equipment failures and construction quality issues. Any such disruptions, as well as any negative effects from the risks discussed below, could result in an impairment of Spire's investment in the project, and such impairment could have a material adverse effect on the Company's financial condition and results of operations.

Any damage to the Spire Storage facilities or pipelines, or lack of integrity to its storage fields, including damages caused by a blow-out, to the extent such impacts are self-insured or not covered by insurance, could have a material adverse effect on the Company's financial condition and results of operations.

The Company does not own all the land on which its storage facilities were constructed, and it is, therefore, subject to the possibility of more onerous terms or increased costs to retain necessary land use, if and when applicable property rights expire or are renewed. Changes in the terms of such land use could have an adverse impact on the financial condition and results of operations of the Company's storage business.

Increased dependence on technology may hinder the Company's business operations and adversely affect their financial condition and results of operations if such technologies fail.

The Company has implemented or acquired a variety of technological tools including both Company-owned information technology and technological services provided by outside parties. These tools and systems support critical functions including the Company's integrated planning, scheduling and dispatching of field resources, its automated meter reading system, customer care and billing, procurement and accounts payable, operational plant logistics, management reporting, and external financial reporting. The failure of these or other similarly important technologies, or the Company's inability to have these technologies supported, updated, expanded, or integrated into other technologies, could hinder its business operations and, to the extent such impacts are self-insured or not covered by insurance, could adversely impact its financial condition and results of operations.

Although the Company has, when possible, developed alternative sources of technology and built redundancy into its computer networks and tools, there can be no assurance these efforts to date would protect against all potential issues related to the loss of any such technologies or the Company's use of such technologies.

A cyberattack may disrupt the Company's operations or lead to a loss or misuse of confidential and proprietary information or potential liability.

The Company is subject to cybersecurity risks primarily related to breaches of security pertaining to sensitive customer, employee, and vendor information maintained by the Company, its subsidiaries, or its third-party vendors in the normal course of business, as well as breaches in the technology that manages natural gas supply and control operations and other business processes. A loss of confidential or proprietary data or security breaches of technology for operations or business processes could adversely affect the Company's reputation, diminish customer confidence, disrupt operations, and subject the Company to possible financial liability, any of which could have a material effect on its financial condition and results of operations.

The Company acknowledges increased dependence on technology increases its exposure to cyberattack. The Company closely monitors both preventive and detective measures to manage these risks and maintain cyber risk insurance to mitigate a significant portion, but not all, of these risks and losses. To the extent that the occurrence of any of these cyber events is self-insured or not covered by insurance, it could adversely affect the Company's financial condition and results of operations.

The Company's business activities are concentrated in a few states and regions.

The Utilities provide natural gas distribution services to customers in Alabama, Mississippi, and Missouri. Midstream is focused on the Rocky Mountain/Western and Midcontinent regions. Changes in the regional economies, politics, regulations and weather patterns of these states could negatively impact growth opportunities and the usage patterns and financial condition of customers and could adversely affect earnings, cash flows, and financial position.

RISKS THAT RELATE TO FINANCIAL, ECONOMIC AND MARKET FACTORS

As a holding company, Spire depends on its operating subsidiaries to meet its financial obligations.

Spire is a holding company with no significant assets other than the stock of its operating subsidiaries and cash investments. Spire, and Spire Missouri prior to the holding company's formation in 2000, has paid common stock dividends continuously since 1946. Spire's ability to pay dividends to its shareholders is dependent on the ability

of its subsidiaries to generate sufficient net income and cash flows to pay upstream dividends and make loans or loan repayments.

A downgrade in Spire's and/or its subsidiaries' credit ratings and/or reduced access to credit and capital markets may negatively affect its cost of capital or prevent it from executing operating strategies.

Currently, Spire, Spire Missouri, and Spire Alabama have investment-grade credit ratings. There is no assurance such credit ratings for any of these companies will remain in effect for any given period of time or such ratings will not be lowered, suspended or withdrawn entirely by the rating agencies, if, in each rating agency's judgment, circumstances so warrant. Spire has a working capital line of credit to meet its short-term liquidity needs. Spire's line of credit may be used to meet the liquidity needs of any of its subsidiaries, subject to sublimits. If the rating agencies lowered the credit rating at any of these entities, particularly below investment grade, it might significantly limit that entity's ability to secure new or additional credit facilities and would increase its costs of borrowing. Spire's and the Utilities' ability to borrow under current or new credit facilities and costs of that borrowing have a direct impact on their ability to execute their operating strategies.

Spire Marketing relies on its cash flows, ability to effect net settlements with counterparties, parental guaranties, and access to Spire's liquidity resources to satisfy its credit and working capital requirements. Spire Marketing's ability to rely on parental guaranties is dependent upon Spire's financial condition and credit ratings. If Spire's credit ratings were lowered, particularly below investment grade, counterparty acceptance of parental guaranties may diminish, resulting in decreased availability of credit. Additionally, under such circumstances, certain counterparties may require Spire Marketing to provide prepayments or cash deposits, amounts of which would be dependent upon natural gas market conditions. Reduced access to credit or increased credit requirements, which may also be caused by factors such as higher overall natural gas prices, may limit Spire Marketing's ability to enter into certain transactions. In addition, Spire Marketing has concentrations of counterparty credit risk in that a significant portion of its transactions are with (or are associated with) utility companies and their marketing affiliates. The concentration of counterparties has the potential to affect the Company's overall exposure to credit risk, either positively or negatively, in that customers in this group may be affected similarly by changes in economic, industry, or other conditions. Spire Marketing also has concentrations of credit risk in certain individually significant counterparties. Spire Marketing closely monitors its credit exposure and, although uncollectible amounts have not been significant, increased counterparty defaults are possible and may result in financial losses and/or capital limitations.

Regional supply/demand imbalances, fluctuations in natural gas commodity prices, changes in the terms and rates charged by midstream facilities, and infrastructure projects may adversely impact the future profitability of the Company.

Competition in the marketplace and fluctuations in natural gas commodity prices have a direct impact on Spire Marketing. Changing market conditions and prices, the narrowing of regional and seasonal price differentials and limited future price volatility may adversely impact its sales margins or affect its ability to procure gas supplies and/or to serve certain customers, which may reduce sales profitability and/or increase certain credit requirements caused by reductions in netting capability. Although the FERC regulates the interstate transportation of natural gas and establishes the general terms and conditions under which Spire Marketing may use interstate gas pipeline capacity to purchase and transport natural gas, Spire Marketing must occasionally renegotiate its transportation agreements with a concentrated group of pipeline companies. Renegotiated terms of new agreements, or increases in FERC-authorized rates of existing agreements, may impact Spire Marketing's future profitability. Profitability may also be adversely impacted if pipeline capacity or future storage capacity secured is not fully utilized.

Storage businesses are affected by various gas market fundamentals which impact the level of demand for storage services and the rates that can be charged for these services. These market fundamentals include: seasonal price spread; monthly, daily and hourly price volatility; locational basis for pricing points on pipelines connected to a storage facility; seasonal, daily and hourly weather; and operational impacts in supply and market areas served by a storage facility and its connected pipelines. These fundamentals have varying and potentially material adverse impacts on the various services offered by storage facilities and the rates that can be charged for these services in the market. These services include long-term firm storage, short-term park and loan, wheeling, and optimization. Rates below the variable costs to operate a storage facility could result in a decision to not operate all the capacity in the facility or to operate the facility at a loss if required to fulfill firm customer contract obligations. A sustained decline in these rates or a shut-in of all or a portion of one or more facilities' capacity could have an adverse impact on the Company's financial condition and results of operations.

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Spire Missouri's and Spire Alabama's income from off-system sales and capacity release is subject to fluctuations in market conditions and changing supply and demand conditions in areas the Utilities hold pipeline capacity rights. Specific factors impacting the Utilities' income from off-system sales and capacity release include the availability of attractively priced natural gas supply, availability of pipeline capacity, and market demand. Income from off-system sales and capacity release is shared with customers. Spire Missouri and Spire Alabama are allowed to retain 25% of the net margins achieved as a result of such off-system sales and capacity release. The Utilities' ability to retain such income in the future is also subject to regulatory discretion.

Rapid significant increases in natural gas prices may adversely affect the Utilities' liquidity and, in certain circumstances, results of operations.

The tariff rate schedules of Spire Missouri, Spire Gulf and Spire Mississippi contain Purchased Gas Adjustment (PGA) clauses and Spire Alabama's tariff rate schedule contains a Gas Supply Adjustment (GSA) rider that permit the Utilities to file for rate adjustments to recover the cost of purchased gas. Changes in the cost of purchased gas are flowed through to customers and may affect uncollectible amounts and cash flows and can therefore impact the amount of capital resources.

Currently, Spire Missouri is allowed to adjust the gas cost component of rates up to four times each year while Spire Alabama and Spire Gulf (collectively, the "Alabama Utilities") and Spire Mississippi may adjust the gas cost component of their rates on a monthly basis. Spire Missouri must make a mandatory gas cost adjustment at the beginning of the winter, in November, and during the next twelve months may make up to three additional discretionary gas cost adjustments, so long as each of these adjustments is separated by at least two months.

The MoPSC typically approves the Spire Missouri PGA changes on an interim basis, subject to refund and the outcome of a subsequent audit and prudence review. Due to such review process, there is a risk of a disallowance of full recovery of these costs. Any material disallowance of purchased gas costs would adversely affect results of operations. The Alabama Utilities' gas supply charges are submitted for APSC review on a monthly basis, regardless of whether there is a request for a change, so prudence review occurs on an ongoing basis. Spire Mississippi's PGA is adjusted on a monthly basis for the most recent charges and is filed at the MSPSC on a monthly basis.

Increases in the prices the Utilities charge for gas may also adversely affect revenues because they could lead customers to reduce usage and cause some customers to have trouble paying the resulting higher bills. These higher prices may increase bad debt expenses and ultimately reduce earnings. Rapid increases in the price of purchased gas may result in an increase in short-term debt.

To lower financial exposure to commodity price fluctuations, Spire Missouri enters into contracts to hedge the forward commodity price of its natural gas supplies. As part of this strategy, Spire Missouri may use fixed-price forward physical purchase contracts, swaps, futures, and option contracts. However, Spire Missouri does not hedge the entire exposure of energy assets or positions to market price volatility, and the coverage will vary over time. Any costs, gains, or losses experienced through hedging procedures, including carrying costs, generally flow through the PGA clause, thereby limiting Spire Missouri's exposure to earnings volatility. However, variations in the timing of collections of such gas costs under the PGA clause and the effect of cash payments for margin deposits associated with Spire Missouri's use of natural gas derivative instruments may cause short-term cash requirements to vary. These procedures remain subject to prudence review by the MoPSC.

Other than fixed-price forward physical purchase contracts, Spire Alabama, Spire Gulf, and Spire Mississippi currently do not utilize risk mitigation strategies that incorporate commodity hedge instruments, but Spire Alabama has the ability to do so through its GSA.

Risk management policies, including the use of derivative instruments, may not fully protect Spire Marketing's sales and results of operations from volatility and may result in financial losses.

In the course of its business, Spire Marketing enters into contracts to purchase and sell natural gas at fixed prices and index-based prices. Commodity price risk associated with these contracts has the potential to impact earnings and cash flows. To minimize this risk, Spire Marketing has a risk management policy that provides for daily monitoring of a number of business measures, including fixed price commitments.

Spire Marketing currently manages the commodity price risk associated with fixed-price commitments for the purchase or sale of natural gas by either closely matching the offsetting physical purchase or sale of natural gas at fixed prices or through the use of natural gas futures, options, and swap contracts traded on or cleared through the New York Mercantile Exchange, Inc. and/or the Intercontinental Exchange to lock in margins. These exchange-traded/cleared contracts may be designated as cash flow hedges of forecasted transactions. However, market conditions and regional price changes may cause ineffective portions of matched positions to result in financial losses. Additionally, to the extent that Spire Marketing's natural gas contracts are classified as trading activities or do not otherwise qualify for the normal purchases or normal sales designation (or the designation is not elected), the contracts are recorded as derivatives at fair value each period. Accordingly, the associated gains and losses are reported directly in earnings and may cause volatility in results of operations. Gains or losses (realized and unrealized) on certain wholesale purchase and sale contracts, consisting of those classified as trading activities, are required to be presented on a net basis (instead of a gross basis) in the statements of consolidated income. Such presentation could result in volatility in the Company's operating revenues.

Spire's pension and other postretirement benefit plans are subject to investment and interest rate risk that could negatively impact its financial condition.

Spire and its subsidiaries have pension and other postretirement benefit plans that provide benefits to many of their employees and retirees. Costs of providing benefits and related funding requirements of these plans are subject to changes in the market value of the assets that fund the plans. The funded status of the plans and the related costs reflected in the Company's financial statements are affected by various factors, which are subject to an inherent degree of uncertainty, including economic conditions, financial market performance, interest rates, life expectancies and demographics. Recessions and volatility in the domestic and international financial markets have negatively affected the asset values of the Company's pension plans at various times in the past. Poor investment returns or lower interest rates may necessitate accelerated funding of the plans to meet minimum federal government requirements, which could have an adverse impact on the Company's financial condition and results of operations. For more information, including regulatory provisions affecting the Utilities' plans, see Note 13, Pension Plans and Other Postretirement Benefits, of the Notes to Financial Statements in Item 8.

In connection with acquisitions, Spire and Spire Missouri recorded goodwill and long-lived assets that could become impaired and adversely affect its financial condition and results of operations.

Spire and Spire Missouri assess goodwill for impairment annually or more frequently if events or circumstances occur that would more likely than not reduce the fair value of a reporting unit below its carrying value. The Company and Spire Missouri assess their long-lived assets for impairment whenever events or circumstances indicate an asset's carrying amount may not be recoverable. To the extent the value of goodwill or long-lived assets becomes impaired, the Company and Spire Missouri may be required to incur impairment charges that could have a material impact on their results of operations.

Since interest rates are a key component, among other assumptions, in the models used to estimate the fair values of the Company's reporting units, rises in interest rates would generally decrease the calculated fair values and future impairments may occur. Due to the subjectivity of the assumptions and estimates underlying the impairment analysis, Spire and Spire Missouri cannot provide assurance that future analyses will not result in impairment. These assumptions and estimates include projected cash flows, current and future rates for contracted capacity, growth rates, weighted average cost of capital and market multiples.

GENERAL RISK FACTORS

Resources expended to pursue or integrate business acquisitions, investments or other business arrangements may adversely affect Spire's financial position and results of operations and return on investments made may not meet the Company's expectations.

From time to time, Spire may seek to grow through strategic acquisitions, investments or other business arrangements. Attractive acquisition and investment opportunities may be difficult to complete on economically acceptable terms. It is possible for Spire to expend considerable resources pursuing acquisitions and investments that for a variety of reasons do not move forward. Similarly, investment opportunities may be hindered or halted by regulatory or legal actions. To the extent acquisitions or investments are made, such transactions involve a number of risks, including but not limited to, the assumption of material liabilities, the diversion of management's attention from daily operations, difficulties in assimilation and retention of employees, securing adequate capital to support the transaction, and obtaining regulatory approval. Uncertainties exist in assessing the value, risks, profitability, and liabilities associated with certain businesses or assets and there is a possibility that anticipated operating and financial efficiencies expected to result from an acquisition or investment do not develop. Additionally, there are no assurances resources expended will achieve their intended result.

The failure to complete an acquisition successfully or to integrate acquisitions or investments it may undertake could have an adverse effect on the Spire's financial condition and results of operations and the market's perception of the Company's execution of its strategy. To the extent Spire engages in any of the above activities together with or through one or more of its subsidiaries, including the Utilities, such subsidiaries may face the same risks.

Unexpected losses may adversely affect Spire's or its subsidiaries' financial condition and results of operations.

As with most businesses, there are operations and business risks inherent in the activities of Spire's subsidiaries. If, in the normal course of business, Spire or any of its subsidiaries becomes a party to litigation, such litigation could result in substantial monetary judgments, fines, penalties, business interruption or other enforcement actions or be resolved on unfavorable terms. In accordance with customary practice, Spire and its subsidiaries maintain insurance against a significant portion of, but not all, risks and losses, though it does reinsure a portion of the risk from certain of Spire's insurers through its captive insurance company. Spire and its operating companies employ many strategies to gain assurance such risks are appropriately managed, mitigated, or insured, as appropriate. To the extent a loss is self-insured or not fully covered by insurance or other risk mitigation strategies, that loss could adversely affect Spire's and/or its subsidiaries' financial condition and results of operations.

Catastrophic events may adversely affect the Company's facilities and operations.

Catastrophic events such as fires, earthquakes, explosions, floods, tornadoes, hurricanes, tropical storms, winter storms, terrorist acts, acts of civil unrest, pandemic illnesses or other similar occurrences could adversely affect the Utilities' facilities and operations, as well as those of Midstream. Emergency planning and training programs are in place to respond to events that could cause business interruptions; however, unanticipated events or a combination of events, failure in resources needed to respond to events, or slow or inadequate response to events may have an adverse impact. To the extent the impacts of such catastrophic events are not covered by insurance or recovered in rates, this could have a material adverse effect on the Company's financial condition and results of operations.

Workforce risks may affect the Company's financial results.

The Company and its subsidiaries are subject to various workforce risks, including, but not limited to, the risk that it will be unable to attract and retain qualified personnel; that it will be unable to effectively transfer to new personnel the knowledge and expertise of an aging workforce as those workers retire; and that it will be unable to reach collective bargaining arrangements with the unions that represent certain of its workers, which could result in work stoppages.

The Company may be adversely affected by economic conditions.

Periods of slowed economic activity generally result in decreased energy consumption, particularly by industrial and large commercial companies, a loss of existing customers, and fewer new customers. As a consequence, national or regional recessions or other downturns in economic activity could adversely affect revenues and cash flows or restrict future growth. Economic conditions in the Utilities' service territories may also adversely impact the Utilities' ability to collect accounts receivable, resulting in an increase in bad debt expense.

Changes in accounting standards may adversely impact the Company's financial condition and results of operations.

Spire and its subsidiaries are subject to changes in U.S. generally accepted accounting principles (GAAP), SEC regulations and other interpretations of financial reporting requirements for public utilities. Neither the Company nor any of its subsidiaries have any control over the impact these changes may have on their financial condition or results of operations nor the timing of such changes. The potential issues associated with rate-regulated accounting, along with other potential changes to GAAP that the U.S. Financial Accounting Standards Board (FASB) continues to consider may be significant.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Spire

Refer to the information below about the principal properties of Spire Missouri and Spire Alabama. The Spire EnergySouth utilities own more than 5,000 miles of pipelines. Other properties of Spire and its subsidiaries do not constitute a significant portion of its properties. The current leases for office space in downtown St. Louis commenced in early 2015, with terms ranging from 10 to 20 years, with multiple renewal options. For further information on leases see Note 17, Leases, of the Notes to Financial Statements in Item 8.

Spire Missouri

The principal properties of Spire Missouri consist of its gas distribution system, which includes more than 32,000 miles of main and related service lines, odorization and regulation facilities, and customer meters. The mains and service lines are located in municipal streets or alleys, public streets or highways, or on lands of others for which Spire Missouri has obtained the necessary legal rights to place and operate its facilities on such property. Spire Missouri has an underground natural gas storage facility, several operating centers, and other related properties. Substantially all of Spire Missouri's utility plant is subject to the liens of its mortgage. All the properties of Spire Missouri are held in fee, by easement, or under lease agreements.

Spire Alabama

The properties of Spire Alabama consist primarily of its gas distribution system, which includes more than 24,000 miles of main and related service lines, odorization and regulation facilities, and customer meters. The mains and service lines are located in municipal streets or alleys, public streets or highways, or on lands of others for which Spire Alabama has obtained the necessary legal rights to place and operate its facilities on such property. Spire Alabama also has four LNG facilities, several operating centers, and other related properties. All of the properties of Spire Alabama are held in fee, by easement, or under lease agreements.

Item 3. Legal Proceedings

For a description of pending regulatory matters of Spire, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8. For a description of environmental and other legal matters, see Contingencies in Note 16 of the Notes to Financial Statements in Item 8.

Item 4. Mine Safety Disclosures

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS – Listed below are executive officers as defined by the SEC for Spire as of November 16, 2023, along with their ages (as of September 30, 2023), positions and business experience during the past five years.

Name	Age	Position with Company (1)	Appointed (2)
S. L. Lindsey	57	President and Chief Executive Officer	October 2023
		Executive Vice President, Chief Operating Officer (until October 2023)	January 2020
		Executive Vice President, Chief Executive Officer of Gas Utilities and Distribution Operations (until December 2019)	October 2012
		Chief Executive Officer, Spire Missouri	December 2018
		Chief Executive Officer, Spire Alabama	September 2014
S. Sitherwood (3)	63	Executive Vice President, Senior Advisor	October 2023
		President and Chief Executive Officer (until October 2023)	February 2012
		Chairman of the Board, Spire Missouri	January 2015
		Chairman of the Board, Spire Alabama	September 2014
S. P. Rasche	63	Executive Vice President and Chief Financial Officer	November 2013
		Chief Financial Officer, Spire Missouri (until January 2020)	May 2012
		Chief Financial Officer, Spire Alabama (until January 2020)	September 2014
M. C. Darrell (4)	65	Senior Vice President, Chief Legal and Compliance Officer	May 2012
M. C. Geiselhart	64	Senior Vice President, Chief Strategy and Corporate Development Officer	January 2015

(1) The information provided relates to the Company and its principal subsidiaries. Many of the executive officers have served or currently serve as officers or directors for other subsidiaries of the Company.
(2) Officers of Spire are normally reappointed by its Board of Directors in November of each year. Officers of Spire Missouri and Spire Alabama are normally reappointed by their boards of directors in January of each year.
(3) Ms. Sitherwood has announced she will retire effective January 1, 2024.
(4) Mr. Darrell has announced he will retire effective December 1, 2023.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

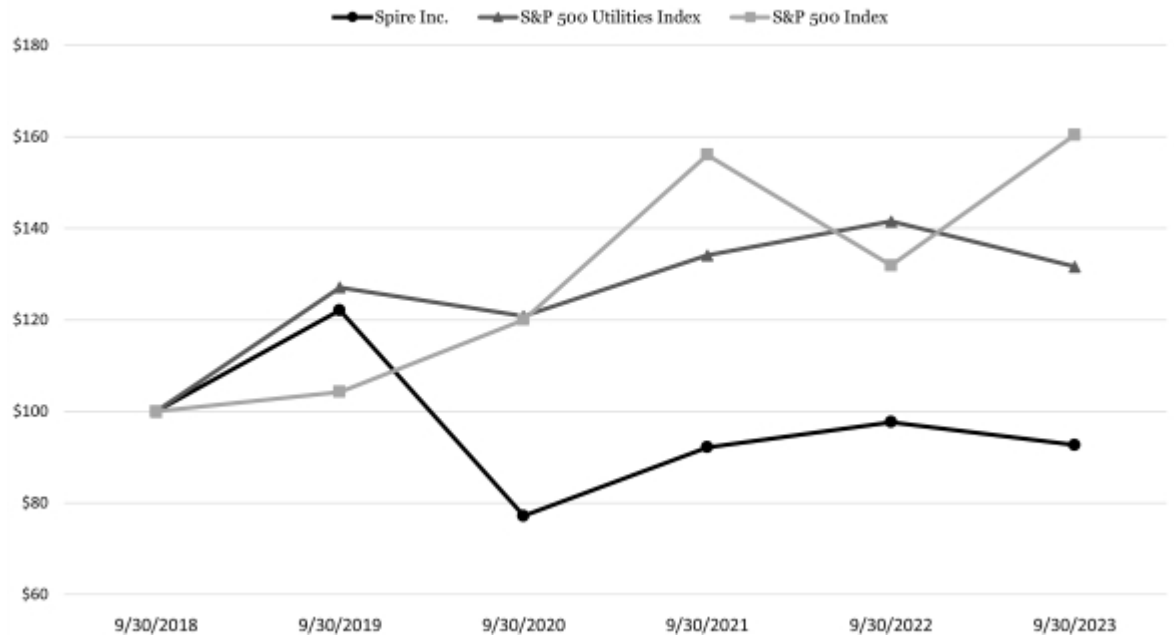
Spire

Spire's common stock trades on The New York Stock Exchange (NYSE) under the symbol "SR". The number of holders of record as of November 10, 2023 was 2,531.

Dividends are payable on the Company's common stock at the discretion of its Board of Directors (the "Board"). Spire, and Spire Missouri prior to the holding company's formation in 2000, has paid common stock dividends continuously since 1946, with 2023 marking the 20th consecutive year of increasing dividends on an annualized basis. Although the Board expects to continue paying dividends on the common stock for the foreseeable future, the declaration of dividends is not guaranteed. The amount of dividends on the common stock, if any, will depend upon the Company's financial condition, results of operations, capital requirements, and other factors.

Performance Graph

COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN*



September 30	2018	2019	2020	2021	2022	2023
Spire Inc.	$ 100.00	$ 122.09	$ 77.17	$ 92.14	$ 97.66	$ 92.65
S&P 500 Utilities Index	100.00	127.10	120.79	134.09	141.56	131.63
S&P 500 Index	100.00	104.25	120.05	156.07	131.92	160.44

* Cumulative total return is based on a $100 investment on September 30, 2018, assuming reinvestment of dividends.

The S&P 500 Utilities Index is comprised of 30 utilities heavily weighted to large capitalization (median market cap of $22.3 billion) electric utilities. In 2023, stocks of small and mid cap electric utilities and gas utility companies (like Spire) in general traded lower relative to the large cap electric sector.

For disclosures related to securities authorized for issuance under equity compensation plans, see Note 3, Stock-Based Compensation, of the Notes to Financial Statements in Item 8.

During the three months ended September 30, 2023, the only repurchases of the Company's common stock were pursuant to elections by employees to have shares of stock withheld to cover employee tax withholding obligations upon the vesting of performance-based and time-vested restricted stock and stock units. The following table provides information on those repurchases:

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
July 1, 2023 – July 31, 2023	—	—	—	—
August 1, 2023 – August 31, 2023	—	—	—	—
September 1, 2023 – September 30, 2023	749	$60.65	—	—
Total	749	$60.65	—	—

Spire Missouri

Spire Missouri common stock is owned by its parent, Spire Inc., and is not traded on any stock exchange.

Spire Missouri's mortgage contains restrictions on its ability to pay cash dividends on its common stock, as described in further detail in Note 5, Shareholders' Equity, of the Notes to Financial Statements in Item 8. As of September 30, 2023 and 2022, the amount under the mortgage's formula that was available to pay dividends was $1,678.5 million and $1,579.4 million, respectively.

Spire Alabama

Spire Alabama common stock is owned by its parent, Spire Inc., and is not traded on any stock exchange.

Item 6. (Reserved)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

(Dollars in millions, except per share and per unit amounts)

INTRODUCTION

This section analyzes the financial condition and results of operations of Spire Inc. (the "Company"), Spire Missouri Inc., and Spire Alabama Inc. Spire Missouri, Spire Alabama and Spire EnergySouth are wholly owned subsidiaries of the Company. Spire Missouri, Spire Alabama and the subsidiaries of Spire EnergySouth are collectively referred to as the "Utilities." The subsidiaries of Spire EnergySouth are Spire Gulf and Spire Mississippi. This section includes management's view of factors that affect the respective businesses of the Company, Spire Missouri and Spire Alabama, explanations of financial results including changes in earnings and costs from the prior periods, and the effects of such factors on the Company's, Spire Missouri's and Spire Alabama's overall financial condition and liquidity. Unless otherwise indicated, references to years herein are references to the fiscal years ending September 30 for the Company and its subsidiaries.

Reference is made to "Item 1A. Risk Factors" and "Forward-Looking Statements," which describe important factors that could cause actual results to differ from expectations and non-historical information contained herein. In addition, the following discussion should be read in conjunction with the audited financial statements and accompanying notes thereto of Spire, Spire Missouri and Spire Alabama included in "Item 8. Financial Statements and Supplementary Data."

OVERVIEW

The Company has three reportable segments: Gas Utility, Gas Marketing, and Midstream. Most of Spire's earnings are derived from its Gas Utility segment, which reflects the regulated activities of the Utilities. Due to the seasonal nature of the Utilities' business and the volumetric Spire Missouri rate design, earnings of Spire and each of the Utilities are typically concentrated during the heating season of November through April each fiscal year.

Gas Utility - Spire Missouri

Spire Missouri is Missouri's largest natural gas distribution utility and is regulated by the MoPSC. Spire Missouri serves St. Louis, Kansas City, and other areas throughout the state. Spire Missouri purchases natural gas in the wholesale market from producers and marketers and ships the gas through interstate pipelines into its own distribution facilities for sale to residential, commercial and industrial customers. Spire Missouri also transports gas through its distribution system for certain larger customers who buy their own gas on the wholesale market. Spire Missouri delivers natural gas to customers at rates and in accordance with tariffs authorized by the MoPSC. The earnings of Spire Missouri are primarily generated by the sale of heating energy.

Gas Utility - Spire Alabama

Spire Alabama is the largest natural gas distribution utility in the state of Alabama and is regulated by the APSC. Spire Alabama's service territory is located in central and northern Alabama. Among the cities served by Spire Alabama are Birmingham, the center of the largest metropolitan area in the state, and Montgomery, the state capital. Spire Alabama purchases natural gas through interstate and intrastate suppliers and distributes the purchased gas through its distribution facilities for sale to residential, commercial, and industrial customers and other end-users of natural gas. Spire Alabama also transports gas through its distribution system for certain large commercial and industrial customers for a transportation fee. Effective December 1, 2020, for most of these transportation service customers, Spire Alabama also purchases gas on the wholesale market for sale to the customer upon delivery to the Spire Alabama distribution system. All Spire Alabama services are provided to customers at rates and in accordance with tariffs authorized by the APSC.

Gas Utility - Spire EnergySouth

Spire Gulf and Spire Mississippi are utilities engaged in the purchase, retail distribution and sale of natural gas to approximately 100,000 customers in southern Alabama and south-central Mississippi. Spire Gulf is regulated by the APSC, and Spire Mississippi is regulated by the MSPSC.

Gas Marketing

Spire Marketing is engaged in the marketing of natural gas and related activities on a non-regulated basis and is reported in the Gas Marketing segment. Spire Marketing markets natural gas to customers across the U.S. (and into Canada), including customers inside and outside of the Utilities' service areas. It holds firm transportation and storage contracts in order to effectively manage its transactions with counterparties, which primarily include producers, municipalities, electric and gas utility companies, and large commercial and industrial customers.

Midstream

Spire's midstream operations consist of Spire STL Pipeline and Spire Storage (composed of Spire Storage West LLC and Spire Salt Plains Storage LLC). Spire STL Pipeline owns and operates a FERC-regulated 65-mile pipeline connecting the Rockies Express Pipeline in Scott County, Illinois, to delivery points in St. Louis County, Missouri, including Spire Missouri's storage facility. Spire STL Pipeline's operating revenue is derived primarily from Spire Missouri as its foundation shipper. Spire Storage is engaged in the storage of natural gas in the western region of the U.S. Spire Storage consists of two storage fields in Wyoming operating under one FERC market-based rate tariff, and a storage field in Oklahoma that operates under intrastate jurisdiction with authorizations from FERC under Section 311 of the Natural Gas Policy Act to provide certain interstate storage, transportation, and hub services.

Other

Other components of the Company's consolidated information include Spire's subsidiaries engaged in the operation of a propane pipeline and risk management, among other activities, and unallocated corporate items, including certain debt and associated interest costs.

Business Evaluation Factors

Based on the nature of the business of the Company and its subsidiaries, as well as current economic conditions, management focuses on several key variables in evaluating the financial condition and results of operations and managing the business.

For the Gas Utility segment, these include:

- the Utilities' ability to recover from their customers the costs of purchasing and distributing natural gas;
- the impact of weather and other factors, such as customer conservation, on revenues and expenses;
- changes in the regulatory environment at the federal, state, and local levels, as well as decisions by regulators, that impact the Utilities' ability to earn the authorized rate of return and recover prudent costs in each of the service territories they serve;
- the Utilities' ability to access credit markets and maintain working capital sufficient to meet operating requirements;
- the effect of natural gas price volatility on the business; and
- the ability to manage costs, integrate and standardize operations, and upgrade infrastructure.

In the Gas Marketing segment, these include:

- the risks of competition;
- fluctuations and volatility in natural gas prices;
- the changing flow and availability of natural gas;
- new national infrastructure projects;
- the ability to procure firm transportation and storage services at reasonable rates;
- credit and/or capital market access; and
- counterparty risks.

In the Midstream segment, these include:

- the impact of seasonal weather patterns;
- fluctuations and volatility in natural gas prices;
- the changing flow and availability of natural gas;
- the efficiency of the injection and withdrawal processes for natural gas storage;
- competitive factors in the energy industry;
- energy and other regulation in Spire's storage and transportation service areas; and
- counterparty risks.

Further information regarding how management seeks to manage these key variables is discussed below.

Gas Utility

The Utilities seek to provide reliable natural gas services at a reasonable cost, while maintaining and building secure and dependable infrastructures. The Utilities' strategies focus on improving both performance and the ability to recover their authorized distribution costs and rates of return. The Utilities' distribution costs are the essential, primarily fixed, expenditures they must incur to operate and maintain more than 60,000 miles of mains and services comprising their natural gas distribution systems and related storage facilities.

The Utilities' distribution costs include wages and employee benefit costs, depreciation and maintenance expenses, and other regulated utility operating expenses, excluding natural and propane gas expense. Distribution costs are considered in the rate-making process, and recovery of these types of costs is included in revenues generated through the Utilities' tariff rates. Spire Missouri's tariff rates are approved by the MoPSC, whereas Spire Alabama's tariff rates are approved by the APSC. Spire Gulf and Spire Mississippi have tariff rates that are approved by the APSC and MSPSC, respectively.

Spire Missouri and Spire Alabama also have off-system sales and capacity release income streams that are regulated by tariff but remain subject to fluctuations in market conditions. Some of the factors impacting the level of off-system sales include the availability and cost of Spire's natural gas supply, the weather in its service areas and the weather in other markets. When Spire's service areas experience warmer-than-normal weather while other markets experience colder weather or supply constraints, some of Spire's natural gas supply is available for sale to third parties not on Spire's system.

The Utilities work actively to reduce the impact of wholesale natural gas price volatility on their costs by strategically structuring their natural gas supply portfolios to increase their gas supply availability and pricing alternatives. They may also use derivative instruments to hedge against significant changes in the commodity price of natural gas. Nevertheless, the overall cost of purchased gas remains subject to fluctuations in market conditions. The Purchased Gas Adjustment (PGA) clause of Spire Missouri, Spire Gulf and Spire Mississippi and the Gas Supply Adjustment (GSA) rider of Spire Alabama allow the Utilities to flow through to customers, subject to prudence review by the public service commissions, the cost of purchased gas supplies, including costs, cost reductions and related carrying costs associated with the use of derivative instruments to mitigate volatility in the cost of natural gas. As of September 30, 2023, Spire Missouri had active derivative positions, but Spire Alabama has had no gas supply derivative instrument activity since 2010. The Utilities believe they will continue to be able to obtain sufficient gas supply. The price of natural gas supplies and other economic conditions may affect sales volumes, due to the conservation efforts of customers, and cash flows associated with the timing of collection of gas costs and related accounts receivable from customers.

The Utilities rely on short-term credit and long-term capital markets, as well as cash flows from operations, to satisfy their seasonal cash requirements and fund their capital expenditures. The Utilities access the commercial paper market through a program administered by the holding company, which then loans borrowed funds to the Utilities. The Utilities directly access the long-term bond market. Access to debt markets is dependent on current conditions in the credit and capital markets. Management focuses on maintaining a strong balance sheet and believes the Utilities currently have adequate access to credit and capital markets and will have sufficient liquidity and capital resources to meet their foreseeable obligations. See the "Liquidity and Capital Resources" section for additional information.

Gas Marketing

Spire Marketing utilizes its natural gas supply agreements, transportation agreements, park and loan agreements, storage agreements and other executory contracts to support a variety of services to its customers at competitive prices. It closely monitors and manages the natural gas commodity price and volatility risks associated with providing such services to its customers through the use of a variety of risk management activities, including the use of exchange-traded/cleared derivative instruments and other contractual arrangements. Spire Marketing is committed to managing commodity price risk while it seeks to expand the services that it now provides. Nevertheless, income from the Gas Marketing operations is subject to more fluctuations in market conditions than the Utilities' operations.

The Gas Marketing business is directly impacted by the effects of competition in the marketplace, the impacts of new infrastructure, surplus natural gas supplies, and the addition of new demand from exports, power generation and industrial load. Spire Marketing's management expects a growing need for marketing services across the country as customers manage seasonal variability and marketplace volatility.

In addition to its own operating cash flows, Spire Marketing relies on Spire's parental guaranties to secure its purchase and sales obligations of natural gas, and it also has access to Spire's liquidity resources. A large portion of Spire Marketing's receivables are from customers in the energy industry. It also enters into netting arrangements with many of its energy counterparties to reduce overall credit and collateral exposure. On a net dollar exposure basis, the majority of Spire Marketing's customers are utilities or utility affiliates. Although Spire Marketing's uncollectible amounts are closely monitored and have not been significant, increases in uncollectible amounts from customers are possible and could adversely affect Spire Marketing's liquidity and results of operations.

Spire Marketing carefully monitors the creditworthiness of counterparties to its transactions. It performs in-house credit reviews of potential customers and may require credit assurances such as prepayments, letters of credit or parental guaranties when appropriate. Credit limits for customers are established and monitored.

Spire Marketing cannot be certain that all of its wholesale purchase and sale transactions will settle physically. As such, these transactions are designated as trading activities for financial reporting purposes, due to their settlement characteristics. Results of operations from trading activities are reported on a net basis in natural gas expenses.

In the course of its business, Spire Marketing enters into commitments associated with the purchase or sale of natural gas. In accordance with U.S. GAAP, some of its purchase and sale transactions are not recognized in earnings until the natural gas is physically delivered, while other energy-related transactions, including those designated as trading activities, are required to be accounted for as derivatives with the changes in their fair value (representing unrealized gains or losses) recorded in earnings in periods prior to settlement. Because related transactions of a purchase and sale strategy may be accounted for differently, there may be timing differences in the recognition of earnings under GAAP and economic earnings realized upon settlement. The Company reports both GAAP and net economic earnings (non-GAAP), as discussed in the section "Non-GAAP Measures".

Midstream

In its Midstream segment, Spire seeks to drive growth through supporting natural gas grid reliability, the ability to manage exposure to gas price volatility, and providing access to key supply basins for the shipment of natural gas. These transportation and storage operations serve a variety of natural gas customers, including Spire's other businesses.

Absolute natural gas prices do not directly impact the results of this segment, but there is a relationship between natural gas prices and the revenues derived from the transportation and storage of natural gas. Natural gas price trends and demand for natural gas influence these price relationships through market volatility or changes in absolute prices of one supply/market point to another. Further, natural gas price differences between the various hubs Spire serves could influence the volumes of gas transported or stored on Spire's system and the related transportation and storage rates.

Spire carefully monitors the creditworthiness of counterparties to its transactions. It performs in-house credit reviews of potential customers and may require credit assurances such as prepayments, letters of credit or

parental guaranties when appropriate. Credit limits for customers are established and monitored.

NON-GAAP MEASURES

Net income, earnings per share and operating income reported by Spire, Spire Missouri and Spire Alabama are determined in accordance with GAAP. Spire, Spire Missouri and Spire Alabama also provide the non-GAAP financial measures of net economic earnings, net economic earnings per share and contribution margin. Management and the Board of Directors use non-GAAP financial measures, in addition to GAAP financial measures, to understand and compare operating results across accounting periods, for financial and operational decision making, for planning and forecasting, to determine incentive compensation and to evaluate financial performance. These non-GAAP operating metrics should not be considered as alternatives to, or more meaningful than, the related GAAP measures. Reconciliations of non-GAAP financial measures to the most directly comparable GAAP measures are provided on the following pages.

Net Economic Earnings and Net Economic Earnings Per Share

Net economic earnings and net economic earnings per share are non-GAAP measures that exclude from net income, as applicable, the impacts of fair value accounting and timing adjustments associated with energy-related transactions, the impacts of acquisition, divestiture and restructuring activities, and the largely non-cash impacts of impairments and other non-recurring or unusual items such as certain regulatory, legislative or GAAP standard-setting actions. In addition, net economic earnings per share would exclude the impact, in the fiscal year of issuance, of any shares issued to finance acquisitions that have yet to be included in net economic earnings.

The fair value and timing adjustments are made in instances where the accounting treatment differs from what management considers the economic substance of the underlying transaction, including the following:

- Net unrealized gains and losses on energy-related derivatives that are required by GAAP fair value accounting associated with current changes in the fair value of financial and physical transactions prior to their completion and settlement. These unrealized gains and losses result primarily from two sources:
  1) changes in the fair values of physical and/or financial derivatives prior to the period of settlement; and
  2) ineffective portions of accounting hedges, required to be recorded in earnings prior to settlement, due to differences in commodity price changes between the locations of the forecasted physical purchase or sale transactions and the locations of the underlying hedge instruments;
- Lower of cost or market adjustments to the carrying value of commodity inventories resulting when the net realizable value of the commodity falls below its original cost, to the extent that those commodities are economically hedged; and
- Realized gains and losses resulting from the settlement of economic hedges prior to the sale of the physical commodity.

These adjustments eliminate the impact of timing differences and the impact of current changes in the fair value of financial and physical transactions prior to their completion and settlement. Unrealized gains or losses are recorded in each period until being replaced with the actual gains or losses realized when the associated physical transactions occur. Management believes that excluding the earnings volatility caused by recognizing changes in fair value prior to settlement and other timing differences associated with related purchase and sale transactions provides a useful representation of the economic effects of only the actual settled transactions and their effects on results of operations. While management uses these non-GAAP measures to evaluate all of its businesses, the net effect of these fair value and timing adjustments on the Utilities' earnings is minimal because gains or losses on their natural gas derivative instruments are deferred pursuant to state regulation.

Contribution Margin

In addition to operating revenues and operating expenses, management also uses the non-GAAP measure of contribution margin when evaluating results of operations. Contribution margin is defined as operating revenues less natural gas costs and gross receipts tax expense. The Utilities pass to their customers (subject to prudence review by, as applicable, the MoPSC, APSC or MSPSC) increases and decreases in the wholesale cost of natural gas in accordance with their PGA clauses or GSA riders. The volatility of the wholesale natural gas market results in fluctuations from period to period in the recorded levels of, among other items, revenues and natural gas cost expense. Nevertheless, increases and decreases in the cost of gas associated with system gas sales volumes and gross receipts tax expense (which are calculated as a percentage of revenues), with the same amount (excluding immaterial timing differences) included in revenues, have no direct effect on operating income. Therefore,

management believes that contribution margin is a useful supplemental measure, along with the remaining operating expenses, for assessing the Company's and the Utilities' performance.

EARNINGS

This section contains discussion and analysis of the results for the year ended September 30, 2023 compared to the results for the year ended September 30, 2022. The discussion and analysis of the results for the year ended September 30, 2022 compared to the results of the year ended September 30, 2021 can be found in Part II, Item 7 of Spire Inc.'s fiscal 2022 Annual Report on Form 10-K, filed with the U.S. Securities and Exchange Commission (SEC) on November 16, 2022.

The following sections present and discuss the financial metrics in total and by registrant and segment.

Spire

The following tables reconcile the Company's net economic earnings to the most comparable GAAP number, net income.

	Gas Utility	Gas Marketing	Midstream	Other	Consol-idated	Per Diluted Share**
Year Ended September 30, 2023						
Net Income (Loss) [GAAP]	$ 200.5	$ 39.1	$ 12.0	$ (34.1)	$ 217.5	$ 3.85
Adjustments, pre-tax:						
Fair value and timing adjustments	—	11.4	—	—	11.4	0.21
Acquisition activities	—	—	2.5	—	2.5	0.05
Income tax effect of adjustments*	—	(2.9)	(0.4)	—	(3.3)	(0.06)
Net Economic Earnings (Loss) [Non-GAAP]	$ 200.5	$ 47.6	$ 14.1	$ (34.1)	$ 228.1	$ 4.05
Year Ended September 30, 2022						
Net Income (Loss) [GAAP]	$ 198.6	$ 35.6	$ 11.1	$ (24.5)	$ 220.8	$ 3.95
Adjustments, pre-tax:						
Fair value and timing adjustments	—	(11.4)	—	—	(11.4)	(0.22)
Income tax effect of adjustments*	4.1	2.8	—	—	6.9	0.13
Net Economic Earnings (Loss) [Non-GAAP]	$ 202.7	$ 27.0	$ 11.1	$ (24.5)	$ 216.3	$ 3.86
Year Ended September 30, 2021						
Net Income (Loss) [GAAP]	$ 237.2	$ 44.8	$ 11.1	$ (21.4)	$ 271.7	$ 4.96
Adjustments, pre-tax:						
Missouri regulatory adjustments	(9.0)	—	—	—	(9.0)	(0.17)
Fair value and timing adjustments	0.3	3.0	—	—	3.3	0.06
Divestiture activities	—	—	—	(1.3)	(1.3)	(0.02)
Income tax effect of adjustments*	2.1	(0.8)	—	0.3	1.6	0.03
Net Economic Earnings (Loss) [Non-GAAP]	$ 230.6	$ 47.0	$ 11.1	$ (22.4)	$ 266.3	$ 4.86

* Income tax effect is calculated by applying federal, state and local income tax rates applicable to ordinary income to the amounts of the pre-tax reconciling items and then adding any estimated effects of enacted state or local income tax laws for periods before the related effective date and, in the case of fiscal 2022, includes the $4.1 Spire Missouri regulatory adjustment discussed below.

** Net economic earnings per share is calculated by replacing consolidated net income with consolidated net economic earnings in the GAAP diluted earnings per share calculation, which includes reductions for cumulative preferred dividends and participating shares.

Reconciliations of contribution margin to the most directly comparable GAAP measure are shown below.

	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Year Ended September 30, 2023						
Operating Income (Loss)	$ 350.8	$ 49.3	$ 24.3	$ (5.8)	$ —	$ 418.6
Operation and maintenance expenses	461.8	19.4	30.5	21.9	(16.0)	517.6
Depreciation and amortization	244.4	1.5	8.4	0.5	—	254.8
Taxes, other than income taxes	210.3	1.2	2.9	0.1	—	214.5
Less: Gross receipts tax expense	(131.5)	(0.3)	—	—	—	(131.8)
Contribution Margin [Non-GAAP]	1,135.8	71.1	66.1	16.7	(16.0)	1,273.7
Natural gas costs	1,189.6	107.7	—	—	(36.5)	1,260.8
Gross receipts tax expense	131.5	0.3	—	—	—	131.8
Operating Revenues	$ 2,456.9	$ 179.1	$ 66.1	$ 16.7	$ (52.5)	$ 2,666.3

	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Year Ended September 30, 2022						
Operating Income	$ 339.9	$ 46.9	$ 20.8	$ 0.6	$ —	$ 408.2
Operation and maintenance expenses	413.3	14.6	22.2	14.9	(15.4)	449.6
Depreciation and amortization	227.9	1.4	7.5	0.5	—	237.3
Taxes, other than income taxes	176.2	0.6	2.6	0.1	—	179.5
Less: Gross receipts tax expense	(109.6)	(0.2)	—	—	—	(109.8)
Contribution Margin [Non-GAAP]	1,047.7	63.3	53.1	16.1	(15.4)	1,164.8
Natural gas costs	788.8	171.4	—	—	(36.3)	923.9
Gross receipts tax expense	109.6	0.2	—	—	—	109.8
Operating Revenues	$ 1,946.1	$ 234.9	$ 53.1	$ 16.1	$ (51.7)	$ 2,198.5

	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Year Ended September 30, 2021						
Operating Income (Loss)	$ 374.0	$ 58.5	$ 19.5	$ (1.8)	$ —	$ 450.2
Operation and maintenance expenses	422.2	17.1	24.2	16.0	(13.7)	465.8
Depreciation and amortization	204.4	1.2	6.9	0.6	—	213.1
Taxes, other than income taxes	157.0	0.9	2.0	0.2	—	160.1
Less: Gross receipts tax expense	(93.9)	(0.1)	—	—	—	(94.0)
Contribution Margin [Non-GAAP]	1,063.7	77.6	52.6	15.0	(13.7)	1,195.2
Natural gas costs	961.7	18.8	—	0.1	(34.3)	946.3
Gross receipts tax expense	93.9	0.1	—	—	—	94.0
Operating Revenues	$ 2,119.3	$ 96.5	$ 52.6	$ 15.1	$ (48.0)	$ 2,235.5

Select changes from the year ended September 30, 2022 to the year ended September 30, 2023 are summarized in the following table and discussed below.

Changes FY23 from FY22	Gas Utility	Gas Marketing	Midstream	Other, Net of Eliminations	Consolidated
Net Income	$ 1.9	$ 3.5	$ 0.9	$ (9.6)	$ (3.3)
Net Economic Earnings [Non-GAAP]	(2.2)	20.6	3.0	(9.6)	11.8
Operating Revenues	510.8	(55.8)	13.0	(0.2)	467.8
Contribution Margin [Non-GAAP]	88.1	7.8	13.0	(0.0)	108.9
Operation and Maintenance Expenses	48.5	4.8	8.3	6.4	68.0
Other Income (Expense)					32.1
Interest Expense					65.9
Income Tax					(20.1)

The increase in interest expense reflects the significant increase in short-term interest rates and higher long-term debt levels versus the prior year, combined with higher average levels of short-term borrowings in the current year. Weighted-average short-term interest rates were 5.0% in the current year, versus 1.1% in the prior year.

The change in other income was $22.6 after removing the impact of the Postretirement Non-Service Cost Transfer (NSC Transfer) of $9.5. This increase was driven primarily by Spire Missouri, the result of increased inventory carrying-cost credits combined with favorable mark-to-market valuations on non-qualified retirement trusts. The year-over-year growth also benefited from investment gains experienced by other subsidiaries.

Income tax expense decreased $20.1. The current year benefited from lower pre-tax income and a one-time tax credit study, while the prior year included $4.1 expense related to the 2021 Missouri rate order.

Gas Utility

For the twelve months ended September 30, 2023, Gas Utility net income was $1.9 higher than the prior-year period, as the $2.6 and $1.8 growth at Spire Missouri and Spire EnergySouth, respectively, was partly offset by the $2.5 decrease at Spire Alabama. Net economic earnings in the current year was $2.2 lower than the prior year, which tracks net income after removing the Spire Missouri $4.1 GAAP regulatory tax adjustment in the prior-year period. These results are described in further detail below.

The increase in Gas Utility operating revenues for fiscal 2023 was attributable to the following factors:

Spire Missouri and Spire Alabama – Higher PGA/GSA gas cost recoveries	$ 436.1
Spire Missouri – 2021 and 2022 rate case outcomes	60.7
Spire Alabama – RSE: net adjustments	22.0
Spire Missouri and Spire Alabama – Higher gross receipts taxes	21.5
Spire EnergySouth	6.9
Spire Missouri – Volumetric usage including weather mitigation impact	4.1
Spire Alabama – Volumetric usage including weather mitigation impact	(30.6)
Spire Missouri and Spire Alabama – Lower off-system sales	(12.3)
All other factors	2.4
Total Variation	$ 510.8

The primary driver of revenue growth in the current year was $436.1 in higher gas cost recoveries at the utilities of Spire Missouri and Spire Alabama, reflecting higher average gas costs being passed through to customers. The current year also benefited from a $60.7 increase at Spire Missouri resulting from the current-year impacts of the 2022 and 2021 rate orders. The current year results also include $22.0 in net favorable rate adjustments under the RSE mechanism at Spire Alabama, higher gross receipts taxes of $21.5 at Spire Missouri and Spire Alabama, growth of $6.9 at Spire EnergySouth, and favorable volume/usage of $4.1 at Spire Missouri. These benefits were only partly offset by a $30.6 reduction due to volume/usage at Spire Alabama, and a combined $12.3 reduction in off-system sales between Spire Missouri and Spire Alabama.

The year-over-year increase in Gas Utility contribution margin was attributable to the following factors:

Spire Missouri – 2021 and 2022 rate case outcomes	$	60.7
Spire Alabama – RSE: net adjustments		19.6
Spire Missouri - Volumetric usage including weather mitigation impact		5.4
Spire EnergySouth		3.3
Spire Alabama – Volumetric usage including weather mitigation impact		(2.2)
All other factors		1.3
Total Variation	$	88.1

The contribution margin growth was primarily driven by the $60.7 increase from the Spire Missouri 2022 and 2021 rate order implementations, $19.6 from favorable rate adjustments within the RSE framework at Spire Alabama, and a $3.3 increase at Spire EnergySouth. The $5.4 favorable volume impact at Spire Missouri was partly offset by the $2.2 volume decline at Spire Alabama, both net of weather mitigation impacts.

O&M expenses for the twelve months ended September 30, 2023, were $48.5 higher than the prior year. Expenses increased $15.4 after removing the $9.1 impact of the NSC Transfer and approximately $24 due to the change in treatment of Spire Missouri general overheads that were being deferred in the prior-year period. The O&M increase was driven by a $22.1 increase in operations and customer experience costs and a $5.0 increase in bad debt expense. These increases were only partly offset by a $5.3 reduction in outside services, favorable administrative and general (A&G) expenses, and lower employee-related expenses.

Taxes, other than income taxes, increased $34.1, and were driven by $21.9 in higher pass-through gross receipts taxes, along with higher property taxes resulting from the continued infrastructure build-out by the Utilities. Depreciation and amortization expenses for fiscal 2023 were $16.5 higher than the same period in the prior year primarily driven by continued infrastructure capital expenditures across all the Utilities.

Gas Marketing

Net income growth of $3.5 reflects the strong operating results experienced in the current-year, driven by favorable market conditions in the first half of fiscal 2023 that allowed the business to take advantage of regional basis differentials to optimize storage and transportation positions. These gains were partly offset by unfavorable year-over-year after-tax unrealized fair market value adjustments of $17.1, and slightly higher O&M costs associated with higher employee-related expenses. Net economic earnings exceeds net income growth as net economic earnings excludes the impacts of the unrealized fair market value adjustments.

The decline in operating revenues primarily reflects lower commodity pricing in fiscal 2023 versus the prior year.

Gas Marketing contribution margin increased $7.8 from the same period last year, driven by incremental optimization of storage and transportation assets in the current year, which were only partly offset by unfavorable year-over-year fair value adjustments of $22.8.

Midstream

Net income and net economic earnings for the Company's Midstream segment increased $0.9 and $3.0, respectively, for the year ended September 30, 2023 versus the prior-year period. Strong net income performance at Spire Storage West reflecting optimized operational and withdrawal commitments that were partly offset by the acquisition of Spire Storage Salt Plains, whose impacts are excluded from net economic earnings.

The $13.0 increase in operating revenues and contribution margin is attributable to the $8.1 growth at Spire Storage West and to the Spire Storage Salt Plains acquisition in April 2023. The O&M increase of $8.3 is driven by a $2.1 increase at Spire Storage West supporting the higher level of billable storage activity, with the remaining increase due principally to Spire Storage Salt Plains operations as well as acquisition and transaction costs for the previously announced and pending Missouri Gas Company (MoGas) acquisition.

Other

The Company's other activities incurred a $34.1 loss for the twelve months ended September 30, 2023, $9.6 higher than the prior-year period. The larger current-year loss was driven by higher interest expense, reflecting both higher borrowings and interest rates, combined with higher corporate costs, partly offset by lower income tax expense.

Spire Missouri

	Year Ended September 30,	
	2023	2022
Operating Income	$ **207.1**	$ **204.0**
Operation and maintenance expenses	296.2	255.7
Depreciation and amortization	158.7	145.3
Taxes, other than income taxes	157.5	129.0
Less: Gross receipts tax expense	(96.7)	(79.6)
Contribution Margin [Non-GAAP]	**722.8**	**654.4**
Natural gas costs	943.4	587.0
Gross receipts tax expense	96.7	79.6
Operating Revenues	$ **1,762.9**	$ **1,321.0**
Net Income	$ **117.5**	$ **114.9**

Operating revenues for the twelve months ended September 30, 2023 were $441.9 higher than the comparable prior-year period. A key driver was an increase in gas recovery costs totaling $362.3. Further, $60.7 of the increase attributable to fiscal 2023 results represent the cumulative impacts of the implementation of the 2022 and 2021 rate orders. Higher gross receipts taxes contributed a $17.1 increase, and volume (net of weather mitigation) contributed $4.1 growth. These revenue growth drivers were only partially offset by lower off-system sales of $5.2.

Temperatures in Spire Missouri's service areas during fiscal 2023 were 1.4% warmer than during fiscal 2022 and 10.4% warmer than normal. The Spire Missouri total system volume sold and transported was 1,592.0 million centum of cubic feet (CCF) for the year ended September 30, 2023, compared with 1,602.8 million CCF last year. Total off-system volume sold and transported was 14.5 million CCF for fiscal 2023, compared with 19.1 million for fiscal 2022.

Contribution margin for the fiscal year ended September 30, 2023 increased $68.4 from the same period in the prior year. The increase was the result of the previously mentioned timing of the 2022 and 2021 rate case implementations generating $60.7 incremental contribution margin, combined with favorable volumetric impacts of $5.4.

Reported O&M expenses for the current year period increased $40.5 versus the prior year. Expenses increased $8.6 after removing the $7.9 impact of the NSC Transfer and the approximately $24 of general overheads that were deferred in the prior year. The increase reflects higher non-employee operations expense of $14.7 and higher bad debt expense of $2.2, partly offset by lower outside service costs and favorable A&G expenses in the current year.

Depreciation and amortization expenses were up $13.4, the result of continued investment in infrastructure upgrades. Other income was higher by $18.4, after removing the $7.9 due to the NSC Transfer. This variance is primarily attributable to increased natural gas inventory carrying cost credits, combined with favorable mark-to-market valuations on non-qualified retirement trusts. Interest expense increased $36.5, primarily reflecting higher short-term interest rates and net long-term debt issuances in the current year.

Net income increased $2.6 over the comparable prior-year period.

Spire Alabama

	Year Ended September 30,	
	2023	2022
Operating Income	$ **119.7**	$ **112.6**
Operation and maintenance expenses	136.4	130.1
Depreciation and amortization	69.3	66.8
Taxes, other than income taxes	43.0	38.1
Less: Gross receipts tax expense	(29.9)	(25.5)
Contribution Margin [Non-GAAP]	**338.5**	**322.1**
Natural gas costs	202.7	161.5
Gross receipts tax expense	29.9	25.5
Operating Revenues	$ **571.1**	$ **509.1**
Net Income	$ **66.0**	$ **68.5**

The $62.0 increase in operating revenues reflects a $73.8 increase in gas cost recoveries pursuant to the GSA mechanism, $22.0 higher net rate adjustments under the RSE mechanism, and higher gross receipts taxes of $4.4. These favorable impacts were partly offset by a $30.6 reduction attributable to weather/volumetric impacts, and a $7.1 decrease in off-system sales.

Temperatures in Spire Alabama's service area during fiscal 2023 were 10.7% warmer than during fiscal 2022 and 18.8% warmer than normal. Spire Alabama's total system volume sold and transported was 1,026.2 million CCF during the year ended September 30, 2023, compared with 1,010.8 million CCF during the prior year. Off-system sales volume for fiscal 2023 totaled 98.8 million CCF compared with 63.1 million CCF for fiscal 2022.

Contribution margin increased $16.4, which was principally a result of net favorable RSE adjustments of $19.6. This growth was tempered by unfavorable weather/volumetric impacts totaling $2.2, after applying weather mitigation.

Excluding the impact of the NSC Transfer of $1.1, the increase in O&M of $5.2 was largely due to a $2.3 increase in bad debt expense. Depreciation expense was up $2.5 reflecting the continued infrastructure investments in the service territory.

The variance in other income is primarily the impact of the year-over-year change in the NSC Transfer. Interest expense increased $13.6, primarily reflecting higher short-term interest rates and long-term debt issuances in the current year. Resulting fiscal 2023 net income declined $2.5 versus fiscal 2022.

LIQUIDITY AND CAPITAL RESOURCES

Recent Cash Flows

	2023	2022	2021
Net cash provided by operating activities	$ 440.2	$ 55.0	$ 249.8
Net cash used in investing activities	(695.5)	(546.7)	(622.0)
Net cash provided by financing activities	260.6	500.9	379.4

Net cash provided by operating activities increased $385.2 from 2022 to 2023 after decreasing $194.8 from 2021 to 2022. In addition to the changes in net income between the respective periods (discussed above), the remaining changes were related to regulatory timing and fluctuations in working capital items, as discussed below in the Future Cash Requirements section. Specifically, the timing and amounts of regulatory adjustments for purchased gas costs resulted in a large change in deferred recovery in 2022, greatly reducing net cash provided by operating activities that year.

In 2023, the Company's net cash used in investing activities was $148.8 more than in 2022, primarily driven by a $110.3 increase in capital expenditures and the $37.0 acquisition of Spire Storage Salt Plains. Capital expenditures increased $60.0 in the Gas Utility segment (primarily due to meter and other infrastructure upgrades) and $51.0 in the Midstream segment (primarily due to the ongoing Wyoming storage facility expansion).

In 2022, the Company used $75.3 less cash in investing activities than in 2021, primarily driven by a $72.6 decrease in capital expenditures, with Gas Utility down $61.8 and Midstream down $10.4.

Net cash provided by financing activities was down $240.3 in 2023 compared to 2022 as a result of lower net debt issuances, lower common stock issuances, and higher dividends. Although the net increase in long-term debt was $473.8 in fiscal 2023 compared to only $244.2 in fiscal 2022, Spire reduced short-term debt by $82.0 in fiscal 2023 after increasing short-term borrowings $365.5 in 2022.

Net cash provided by financing activities was up $121.5 in 2022 compared to 2021. As noted above, 2022 net short-term debt issuances were $365.5, which was $341.5 higher than in 2021. In addition, the combination of lower net repayments of long-term debt ($59.6) and higher cash generated from the issuance of common stock ($50.9) in 2022 contributed $110.5 to the year-over-year increase. A significant offset to these increases was a $329.1 decline in cash generated from the issuance of long-term debt, coupled with $8.7 higher common stock dividend payments.

Future Cash Requirements

The Company’s short-term borrowing requirements typically peak during colder months when the Utilities borrow money to cover the lag between when they purchase natural gas and when their customers pay for that gas. Changes in the wholesale cost of natural gas (including cash payments for margin deposits associated with Spire Missouri’s use of natural gas derivative instruments), variations in the timing of collections of gas cost under the Utilities’ PGA clauses and GSA riders, the seasonality of accounts receivable balances, and the utilization of stored gas inventories cause short-term cash requirements to vary during the year and from year to year, and may cause significant variations in the Company’s cash provided by or used in operating activities.

Spire’s material cash requirements as of September 30, 2023, are related to capital expenditures, principal and interest payments on long-term debt, natural gas purchase obligations, and common and preferred stock dividends.

Total Company capital expenditures are planned to be $765 for fiscal 2024, though Spire had purchase commitments for less than a quarter of these as of September 30, 2023.

As detailed in Note 6, Long-Term Debt, of the Notes to Financial Statements in Item 8, $156.6 of the total $3,732.7 principal amount is due in fiscal 2024. Using each long-term debt instrument’s stated maturity and fixed rates or variable rates as of September 30, 2023, interest payments are projected to total $1,817.3, of which $150.7 is due in fiscal 2024.

Spire’s natural gas purchase obligations totaled $1,613.2, including $650.1 for fiscal 2024, representing the minimum payments required under existing natural gas transportation and storage contracts and natural gas supply agreements. The amounts reflect fixed obligations as well as obligations to purchase natural gas at future market prices, calculated using forward market prices as of September 30, 2023. Each of the Utilities generally recovers costs related to its purchases, transportation and storage of natural gas through the operation of its PGA clause or GSA rider, subject to prudence review by the appropriate regional public service commission. Additional contractual commitments are generally entered into prior to or during the heating season.

Spire dividends declared and payable as of September 30, 2023, totaled $43.1, while annualized dividends based on the regular quarterly amounts declared on November 10, 2023, are estimated at $175.3.

Spire will pay $175 cash, subject to customary working capital and other closing adjustments, to acquire MoGas Pipeline, an interstate natural gas pipeline, and Omega Pipeline, a connected gas distribution system, from CorEnergy Infrastructure Trust, Inc. if the transaction closes (currently anticipated in the second quarter of fiscal 2024). For further discussion of this pending acquisition, see Note 16, Commitments and Contingencies, of the Notes to Financial Statements in Item 8.

Source of Funds

It is management's view that the Company, Spire Missouri and Spire Alabama have adequate access to capital markets and will have sufficient capital resources, both internal and external, to meet anticipated requirements.

The Company's, Spire Missouri's and Spire Alabama's access to capital markets, including the commercial paper market, and their respective financing costs, may depend on the credit rating of the entity that is accessing the capital markets. Their debt is rated by two rating agencies: Standard & Poor's Corporation ("S&P") and Moody's Investors Service ("Moody's"). As of September 30, 2023, the debt ratings of the Company, Spire Missouri and Spire Alabama (shown in the following table) remain at investment grade with a stable outlook (other than Moody's negative outlook for Spire Alabama debt).

	S&P	Moody's
Spire Inc. senior unsecured long-term debt	BBB+	Baa2
Spire Inc. preferred stock	BBB	Ba1
Spire Inc. short-term debt	A-2	P-2
Spire Missouri senior secured long-term debt	A	A1
Spire Alabama senior unsecured long-term debt	A-	A2

Cash and Cash Equivalents

Bank deposits were used to support working capital needs of the business. Spire had no temporary cash investments as of September 30, 2023 or 2022.

Short-term Debt

The Company's short-term cash requirements can be met through the sale of commercial paper or the use of a revolving credit facility. For information about these resources, see Note 7, Notes Payable and Credit Agreements, of the Notes to Financial Statements in Item 8 and "Interest Rate Risk" under "Market Risk" below.

Long-term Debt and Equity

At September 30, 2023, Spire had outstanding principal of long-term debt totaling $3,732.7, of which $1,798.0 was issued by Spire Missouri, $750.0 was issued by Spire Alabama, and $229.7 was issued by other subsidiaries. For more information about long-term debt, see Note 6 of the Notes to Financial Statements in Item 8 and "Interest Rate Risk" under "Market Risk" below.

Effective March 5, 2022, Spire Missouri was authorized by the MoPSC to issue conventional term loans, first mortgage bonds, unsecured debt, preferred stock and common stock in an aggregate amount of up to $800.0 for financings placed any time before December 31, 2024. Under this authorization through September 30, 2023, Spire Missouri has issued $79.1 of common stock and $400.0 of first mortgage bonds. Spire Alabama has no standing authority to issue long-term debt and must petition the APSC for each planned issuance.

On October 13, 2022, Spire Alabama issued $90.0 of notes due October 15, 2029, bearing interest at 5.32% and $85.0 of notes due October 15, 2032, bearing interest at 5.41%. Interest is payable semi-annually. The notes are senior unsecured obligations and rank equal in right to payment with all other senior unsecured indebtedness of Spire Alabama. Also on October 13, 2022, Spire Gulf issued $30.0 of first mortgage bonds due October 15, 2037, bearing interest at 5.61% payable semi-annually. The bonds rank equal in right to payment with the other first mortgage bonds issued by Spire Gulf. The bonds were issued under a supplemental indenture with collateral fall away provisions whereby, under certain conditions, Spire Gulf may elect to exchange the bonds, which are secured, for unsecured notes.

On February 13, 2023, Spire Missouri issued $400.0 aggregate principal amount of its 4.80% Series First Mortgage Bonds due 2033. Interest is payable semi-annually. The notes are senior secured indebtedness of Spire Missouri and rank equally with all other existing and future senior secured indebtedness issued by Spire Missouri under its mortgage and deed of trust. The bonds are secured by a first mortgage lien on substantially all of the real properties of Spire Missouri, subject to limited exceptions.

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On March 7, 2023, Spire issued $150.0 aggregate principal amount of its 5.80% Series 2023 Senior Notes due March 15, 2033. Interest is payable semi-annually. The notes are senior unsecured obligations of the Company.

Spire has a shelf registration statement on Form S-3 on file with the SEC for the issuance and sale of up to 250,000 shares of common stock under its Dividend Reinvestment and Direct Stock Purchase Plan. There were 244,182 and 237,891 shares at September 30, 2023 and November 10, 2023, respectively, remaining available for issuance under this Form S-3. Spire and Spire Missouri also have a universal shelf registration statement on Form S-3 on file with the SEC for the issuance of various equity and debt securities, which expires on May 9, 2025.

Spire has an "at-the-market" (ATM) equity distribution agreement, pursuant to which the Company may offer and sell, from time to time, shares of its common stock (including shares of common stock that may be sold pursuant to forward sale agreements entered into in connection with the ATM equity distribution agreement). In the second and third quarters of fiscal 2023, Spire executed forward sale agreements for a total of 2,315,921 shares, 1,744,549 of which must be settled on or before December 28, 2023 and 571,372 of which were settled on September 27, 2023, generating net proceeds of $38.5. Had the remaining shares under the forward agreements been settled as of September 30, 2023, it would have generated net proceeds of $111.2. As of September 30, 2023, Spire may sell additional shares with an aggregate offering price of up to $17.9 under the current Board of Directors authorization expiring May 2025. For additional information about the ATM program, see Note 5 of the Notes to Financial Statements in Item 8.

In February 2021, Spire issued 3.5 million equity units for an aggregate stated amount of $175.0, resulting in net proceeds of $169.3 after underwriting fees and other issuance costs. See Note 5, Shareholders' Equity, of the Notes to Financial Statements in Item 8 for additional discussion of these equity units.

Including the current portion of long-term debt, the Company's long-term consolidated capitalization consisted of 44% equity at September 30, 2023 and 46% equity at September 30, 2022. For more information about equity, see Note 5 of the Notes to Financial Statements in Item 8.

ENVIRONMENTAL MATTERS

The Utilities and other Spire subsidiaries own and operate natural gas distribution, transmission and storage facilities, the operations of which are subject to various environmental laws, regulations and interpretations. While environmental issues resulting from such operations arise in the ordinary course of business, such issues have not materially affected the Company's, Spire Missouri's or Spire Alabama's financial position and results of operations. As environmental laws, regulations and their interpretations change, however, the Company and the Utilities may be required to incur additional costs. For information relative to environmental matters, see Contingencies in Note 16 of the Notes to Financial Statements in Item 8.

REGULATORY MATTERS

For discussions of regulatory matters for Spire, Spire Missouri, and Spire Alabama, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

ACCOUNTING PRONOUNCEMENTS

The Company, Spire Missouri and Spire Alabama have evaluated recently issued accounting standards and concluded that none will have a material impact on their financial position or results of operations upon adoption.

CRITICAL ACCOUNTING ESTIMATES

Our discussion and analysis of our financial condition, results of operations, liquidity and capital resources are based upon our financial statements, which have been prepared in accordance with GAAP, which requires that we make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. We believe the following represent the more significant items requiring the use of judgment and estimates in preparing our financial statements:

Regulatory Accounting – The Utilities account for their regulated operations in accordance with FASB Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also, regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities). Management believes that the current regulatory environment supports the continued use of these regulatory accounting principles and that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process. For Spire Missouri and Spire Alabama, management believes the following represent the more significant items recorded through the application of this accounting guidance:

PGA Clause – Spire Missouri's PGA clauses allows it to flow through to customers, subject to a prudence review by the MoPSC, the cost of purchased gas supplies, including the costs, cost reductions and related carrying costs associated with the use of natural gas derivative instruments to hedge the purchase price of natural gas. The difference between actual costs incurred and costs recovered through the application of the PGA clauses are recorded as regulatory assets and regulatory liabilities that are recovered or refunded in a subsequent period. The PGA clauses also permit the application of carrying costs to all over- or under-recoveries of gas costs, including costs and cost reductions associated with the use of derivative instruments, and also provide for a portion of income from off-system sales and capacity release revenues to be flowed through to customers.

GSA Rider – Spire Alabama's rate schedules for natural gas distribution charges contain a GSA rider, established in 1993, which permits the pass-through to customers of changes in the cost of gas supply. Spire Alabama's tariff provides a temperature adjustment mechanism, also included in the GSA, that is designed to moderate the impact of departures from normal temperatures on Spire Alabama's earnings. The temperature adjustment applies primarily to residential, small commercial and small industrial customers. Other non-temperature weather related conditions that may affect customer usage are not included in the temperature adjustment. In prior years, Spire Alabama entered into cash flow derivative commodity instruments to hedge its exposure to price fluctuations on its gas supply. Spire Alabama recognizes all derivatives at fair value as either assets or liabilities on the balance sheet. Any realized gains or losses are passed through to customers using the mechanisms of the GSA rider in accordance with Spire Alabama's APSC approved tariff and are recognized as a regulatory asset or regulatory liability. All derivative commodity instruments in a gain position are valued on a discounted basis incorporating an estimate of performance risk specific to each related counterparty. Derivative commodity instruments in a loss position are valued on a discounted basis incorporating an estimate of performance risk specific to Spire Alabama. Spire Alabama currently has no active gas supply derivative positions.

ISRS – The ISRS allows Spire Missouri expedited recovery for its investment to upgrade its infrastructure and enhance its safety and reliability without the necessity of a formal rate case. Spire Missouri records ISRS revenues as authorized by the MoPSC and estimates the probability and amount of any refunds based on commission precedent, current legal rulings, the opinion of legal counsel, and other considerations.

For more information, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

Employee Benefits and Postretirement Obligations – Pension and postretirement obligations are calculated by actuarial consultants that utilize several statistical factors and other assumptions provided by management related to future events, such as discount rates, returns on plan assets, compensation increases, and mortality rates. For the Utilities, the amount of expense recognized and the amounts reflected in other comprehensive income are dependent upon the regulatory treatment provided for such costs, as discussed further below. Certain liabilities related to group medical benefits and workers' compensation claims, portions of which are self-insured and/or contain "stop-loss" coverage with third-party insurers to limit exposure, are established based on historical trends.

The amount of net periodic pension and other postretirement benefit costs recognized in the financial statements related to the Utilities' qualified pension plans and other postretirement benefit plans is based upon allowances, as approved by the MoPSC (for Spire Missouri) and as approved by the APSC (for Spire Alabama). The allowances have been established in the rate-making process for the recovery of these costs from customers. The differences between these amounts and actual pension and other postretirement benefit costs incurred for financial reporting purposes are deferred as regulatory assets or regulatory liabilities. GAAP also requires that changes that affect the funded status of pension and other postretirement benefit plans, but that are not yet required to be recognized as components of pension and other postretirement benefit costs, be reflected in other comprehensive income. For the Utilities' qualified pension plans and other postretirement benefit plans, amounts that would otherwise be reflected in other comprehensive income are deferred with entries to regulatory assets or regulatory liabilities.

For more information, see Note 13, Pension Plans and Other Postretirement Benefits, of the Notes to Financial Statements in Item 8.

The tables below reflect the sensitivity of Spire's plans to potential changes in key assumptions:

Pension Plan Benefits:			
Actuarial Assumptions	**Increase/ (Decrease)**	**Estimated Increase/ (Decrease) to Projected Benefit Obligation**	**Estimated Increase/ (Decrease) to Annual Net Pension Cost***
Discount Rate	0.25%	$ (9.3)	$ 0.1
	(0.25)%	9.7	(0.1)
Expected Return on Plan Assets	0.25%	—	(1.0)
	(0.25)%	—	1.0
Rate of Future Compensation Increase	0.25%	0.6	0.1
	(0.25)%	(0.6)	(0.1)

Postretirement Benefits:			
Actuarial Assumptions	**Increase/ (Decrease)**	**Estimated Increase/ (Decrease) to Projected Postretirement Benefit Obligation**	**Estimated Increase/ (Decrease) to Annual Net Postretirement Benefit Cost***
Discount Rate	0.25%	$ (2.5)	$ —
	(0.25)%	2.6	—
Expected Return on Plan Assets	0.25%	—	(0.7)
	(0.25)%	—	0.7

* Excludes the impact of regulatory deferral mechanism. See Note 13, Pension Plans and Other Postretirement Benefits, of the Notes to Financial Statements in Item 8 for information regarding the regulatory treatment of these costs.

Income Taxes – Income tax calculations require estimates due to book-tax differences, estimates with respect to regulatory treatment of certain items, and uncertainty in the interpretation of tax laws and regulations. Critical assumptions and judgments also include projections of future taxable income to determine the ability to utilize net operating losses and credit carryforwards prior to their expiration. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Management regularly assesses financial statement tax provisions to identify any change in regulatory treatment or tax related estimates and assumptions that could have a material impact on cash flows, financial position and/or results of operations. For more information, see Note 12, Income Taxes, of the Notes to Financial Statements in Item 8.

For further discussion of significant accounting policies, see Note 1, Summary of Significant Accounting Policies, of the Notes to Financial Statements in Item 8.

MARKET RISK

Commodity Price Risk

Gas Utility

The Utilities' commodity price risk, which arises from market fluctuations in the price of natural gas, is primarily managed through the operation of Spire Missouri's PGA clauses and Spire Alabama's GSA rider. The PGA clauses and GSA rider allows the Utilities to flow through to customers, subject to prudence review by the MoPSC and APSC, the cost of purchased gas supplies. Spire Missouri is allowed the flexibility to make up to three discretionary PGA changes during each year, in addition to its mandatory November PGA change, so long as such changes are separated by at least two months. Spire Missouri is able to mitigate, to some extent, changes in commodity prices through the use of physical storage supplies and regional supply diversity. Spire Alabama is allowed to make monthly changes to the GSA rate, but increases cannot exceed a 5% increase over the prior effective residential billing rate. The Utilities also have risk management policies that allow for the purchase of natural gas derivative instruments with the goal of managing its price risk associated with purchasing natural gas on behalf of its customers. These policies prohibit speculation. As of September 30, 2023, Spire Missouri had active natural gas derivative positions, but Spire Alabama did not. Costs and cost reduction, including carrying costs, associated with the use of natural gas derivative instruments are allowed to be passed on to customers through the operation of the PGA clauses or GSA rider. Accordingly, the Utilities do not expect any adverse earnings impact as a result of the use of these derivative instruments. However, the timing of recovery for cash payments related to margin requirements may cause short-term cash requirements to vary. For more information about the Utilities' natural gas derivative instruments, see Note 10, Derivative Instruments and Hedging Activities, of the Notes to Financial Statements in Item 8.

Gas Marketing

In the course of its business, Spire's non-regulated gas marketing subsidiary, Spire Marketing, enters into contracts to purchase and sell natural gas at fixed prices and natural gas index-based prices. Commodity price risk associated with these contracts has the potential to impact earnings and cash flows. To minimize this risk, Spire Marketing has a risk management policy that provides for daily monitoring of a number of business measures, including fixed price commitments. In accordance with the risk management policy, Spire Marketing manages the price risk associated with its fixed price commitments. This risk is currently managed either by closely matching the offsetting physical purchase or sale of natural gas at fixed-prices or through the use of natural gas futures, options and swap contracts traded on or cleared through the New York Mercantile Exchange (NYMEX) and Intercontinental Exchange (ICE) to lock in margins. At September 30, 2023 and 2022, Spire Marketing's unmatched fixed-price positions were not material to Spire's financial position or results of operations.

As mentioned above, Spire Marketing uses natural gas futures, options and swap contracts traded on or cleared through the NYMEX and ICE to manage the commodity price risk associated with its fixed-price natural gas purchase and sale commitments. These derivative instruments may be designated as cash flow hedges of forecasted purchases or sales. Such accounting treatment, if elected, generally permits a substantial portion of the gain or loss to be deferred from recognition in earnings until the period that the associated forecasted purchase or sale is recognized in earnings. To the extent a hedge is effective, gains or losses on the derivatives will be offset by changes in the value of the hedged forecasted transactions. At September 30, 2022 and 2021, Spire Marketing had no designated cash flow hedges. Information about the fair values of Spire Marketing's exchange-traded/cleared natural gas derivative instruments is presented below:

	Derivative Fair Values	Cash Margin	Derivatives and Cash Margin
Net balance of derivative assets at September 30, 2022	$ 10.6	$ 15.2	$ 25.8
Changes in fair value	(35.0)	—	(35.0)
Settlements/purchases - net	12.2	—	12.2
Changes in cash margin	—	3.1	3.1
Net balance of derivative assets at September 30, 2023	$ (12.2)	$ 18.3	$ 6.1

	As of September 30, 2023					
Maturity by Fiscal Year	**Total**	**2024**	**2025**	**2026**	**2027**	**2028**
Fair values of exchange-traded/cleared natural gas derivatives - net	$ (12.1)	$ (8.6)	$ (3.3)	$ (0.2)	$ —	$ —
Fair values of basis swaps - net	0.5	0.7	—	(0.1)	(0.1)	—
Fair values of puts and calls - net	(0.1)	(0.1)	—	—	—	—
Position volumes [millions of MMBtu, long or (short)]:						
Net futures/swap/option positions	21.4	7.9	9.9	2.3	1.2	0.1
Net basis swap positions	14.1	6.2	3.7	2.2	1.8	0.2
Net puts and calls positions	(0.8)	(0.8)	—	—	—	—

Certain of Spire Marketing's physical natural gas derivative contracts are designated as normal purchases or normal sales, as permitted by GAAP. This election permits the Company to account for the contract in the period the natural gas is delivered. Contracts not designated as normal purchases or normal sales, including those designated as trading activities, are accounted for as derivatives with changes in fair value recognized in earnings in the periods prior to settlement.

Below is a reconciliation of the beginning and ending balances for physical natural gas contracts accounted for as derivatives, none of which will settle beyond fiscal 2024:

Net balance of derivative liabilities at September 30, 2022	$ (8.9)
Changes in fair value	19.6
Settlements	(1.7)
Net balance of derivative liabilities at September 30, 2023	$ 9.0

For further details related to Spire Marketing's derivatives and hedging activities, see Note 10, Derivative Instruments and Hedging Activities, of the Notes to Financial Statements in Item 8.

Counterparty Credit Risk

Spire Marketing has concentrations of counterparty credit risk in that a significant portion of its transactions are with energy producers, utility companies and pipelines. These concentrations of counterparties have the potential to affect the Company's overall exposure to credit risk, either positively or negatively, in that each of these three groups may be affected similarly by changes in economic, industry or other conditions. Spire Marketing also has concentrations of credit risk with certain individually significant counterparties. To the extent possible, Spire Marketing enters into netting arrangements with its counterparties to mitigate exposure to credit risk. It is also exposed to credit risk associated with its derivative contracts designated as normal purchases and normal sales. Spire Marketing closely monitors its credit exposure and, although uncollectible amounts have not been significant, increased counterparty defaults are possible and may result in financial losses and/or capital limitations. For more information on these and other concentrations of credit risk, including how Spire Marketing manages these risks, see Note 11, Concentrations of Credit Risk, of the Notes to Financial Statements in Item 8.

Interest Rate Risk

The Company is subject to interest rate risk associated with its short-term debt issuances. Based on average short-term borrowings during fiscal 2023, an increase of 100 basis points in the underlying average interest rate for short-term debt would have caused an increase in interest expense (and a decrease in pre-tax earnings and cash flows) of approximately $8.4 on an annual basis. Portions of such an increase may be offset through the Utilities' application of PGA and GSA carrying costs. At September 30, 2023, Spire had fixed-rate long-term debt totaling $3,432.7, of which $1,498.0 was issued by Spire Missouri, $750.0 was issued by Spire Alabama, and $1,184.7 was issued by Spire and other subsidiaries. While the long-term debt issues are fixed-rate, they are subject to changes in fair value as market interest rates change. However, increases or decreases in fair value would impact earnings and cash flows only if the Company were to reacquire any of these issues in the open market prior to maturity. Under GAAP applicable to the Utilities' regulated operations, losses or gains on early redemptions of long-term debt would typically be deferred as regulatory assets or regulatory liabilities and amortized over a future period.

Refer to Note 10, Derivative Instruments and Hedging Activities, of the Notes to Financial Statements in Item 8 for details on the Company's interest rate swap transactions.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

For this discussion, see "Market Risk" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Spire Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Spire Inc. and subsidiaries (the "Company") as of September 30, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended September 30, 2023, of the Company and our report dated November 16, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for their assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Reports on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Spire Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Spire Inc. and subsidiaries (the "Company") as of September 30, 2023 and 2022, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows, for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of September 30, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated November 16, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Matters – Impact of Rate Regulation on the Financial Statements – Refer to Note 15 to the financial statements

Critical Audit Matter Description

The Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also,

regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities).

The Company is subject to rate regulation by the Missouri and Alabama Public Service Commissions (the "Commissions"), which have jurisdiction with respect to the rates of natural gas companies within their respective geographies. The Company has stated that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process.

Accounting for the economics of rate regulation affects multiple financial statement line items, including property, plant, and equipment; regulatory assets and liabilities; operating revenues; and depreciation expense, and affects multiple disclosures in the Company's financial statements. There is a risk that the Commissions will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. As a result, we identified the impact of rate regulation as a critical audit matter due to the high degree of subjectivity involved in assessing the impact of current and future regulatory orders on events that have occurred as of September 30, 2023, and the judgments made by management to support its assertions about impacted account balances and disclosures. Management judgments included assessing the likelihood of (1) recovery in future rates of incurred costs or (2) refunds to customers or future reduction in rates. Given that management's accounting judgments are based on assumptions about the outcome of future decisions by the Commissions, auditing these rate-impacted account balances and disclosures, and the related judgments, requires specialized knowledge of accounting for rate regulation due to the inherent complexities associated with the specialized rules related to accounting for the effects of cost-based regulation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the Commissions included the following, among others:

- We tested the effectiveness of management's controls over evaluating the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We tested the effectiveness of management's controls over the initial recognition of amounts as property, plant, and equipment; regulatory assets or liabilities; and the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates.
- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments, in the financial statements.
- We read relevant regulatory orders issued by the Commissions for the Company in Missouri, Alabama, and Mississippi; regulatory statutes, interpretations, procedural memorandums, and filings made by interveners; and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedents of the Commissions' treatment of similar costs under similar circumstances.
- We obtained from management the regulatory orders that support the probability of recovery, refund, and/or future reduction in rates for regulatory assets and liabilities and assessed management's assertion that amounts are probable of recovery, refund, or a future reduction in rates.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

We have served as the Company's auditor since 1953.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholder and the Board of Directors of Spire Missouri Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Spire Missouri Inc. (a wholly owned subsidiary of Spire Inc.) (the "Company") as of September 30, 2023 and 2022, the related statements of comprehensive income, shareholder's equity, and cash flows, for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of their internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Matters – Impact of Rate Regulation on the Financial Statements – Refer to Note 15 to the financial statements

Critical Audit Matter Description

The Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also,

regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities).

The Company is subject to rate regulation by the Missouri Public Service Commission (the "Commission"), which has jurisdiction with respect to the rates of natural gas companies within Missouri's geography. The Company has stated that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process.

Accounting for the economics of rate regulation affects multiple financial statement line items, including property, plant, and equipment; regulatory assets and liabilities; operating revenues; and depreciation expense, and affects multiple disclosures in the Company's financial statements. There is a risk that the Commission will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. As a result, we identified the impact of rate regulation as a critical audit matter due to the high degree of subjectivity involved in assessing the impact of current and future regulatory orders on events that have occurred as of September 30, 2023, and the judgments made by management to support their assertions about impacted account balances and disclosures. Management judgments included assessing the likelihood of (1) recovery in future rates of incurred costs or (2) refunds to customers or future reduction in rates. Given that management's accounting judgments are based on assumptions about the outcome of future decisions by the Commission, auditing these rate-impacted account balances and disclosures, and the related judgments, requires specialized knowledge of accounting for rate regulation due to the inherent complexities associated with the specialized rules related to accounting for the effects of cost-based regulation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the Commission included the following, among others:

- We tested the effectiveness of management's controls over evaluating the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We tested the effectiveness of management's controls over the initial recognition of amounts as property, plant, and equipment; regulatory assets or liabilities; and the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates.
- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments, in the financial statements.
- We read relevant regulatory orders issued by the Commission for the Company in Missouri; regulatory statutes, interpretations, procedural memorandums, and filings made by interveners; and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedents of the Commission's treatment of similar costs under similar circumstances.
- We obtained from management the regulatory orders that support the probability of recovery, refund, and/or future reduction in rates for regulatory assets and liabilities and assessed management's assertion that amounts are probable of recovery, refund, or a future reduction in rates.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

We have served as the Company's auditor since 1953.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholder and the Board of Directors of Spire Alabama Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Spire Alabama Inc. (a wholly owned subsidiary of Spire Inc.) (the "Company") as of September 30, 2023 and 2022, the related statements of income, shareholder's equity, and cash flows, for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of their internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Matters – Impact of Rate Regulation on the Financial Statements – Refer to Note 15 to the financial statements

Critical Audit Matter Description

The Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also,

regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities).

The Company is subject to rate regulation by the Alabama Public Service Commission (the "Commission"), which has jurisdiction with respect to the rates of natural gas companies within Alabama's geography. The Company has stated that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process.

Accounting for the economics of rate regulation affects multiple financial statement line items, including property, plant, and equipment; regulatory assets and liabilities; operating revenues; and depreciation expense, and affects multiple disclosures in the Company's financial statements. There is a risk that the Commission will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. As a result, we identified the impact of rate regulation as a critical audit matter due to the high degree of subjectivity involved in assessing the impact of current and future regulatory orders on events that have occurred as of September 30, 2023, and the judgments made by management to support their assertions about impacted account balances and disclosures. Management judgments included assessing the likelihood of (1) recovery in future rates of incurred costs or (2) refunds to customers or future reduction in rates. Given that management's accounting judgments are based on assumptions about the outcome of future decisions by the Commission, auditing these rate-impacted account balances and disclosures, and the related judgments, requires specialized knowledge of accounting for rate regulation due to the inherent complexities associated with the specialized rules related to accounting for the effects of cost-based regulation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the Commission included the following, among others:

- We tested the effectiveness of management's controls over evaluating the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We tested the effectiveness of management's controls over the initial recognition of amounts as property, plant, and equipment; regulatory assets or liabilities; and the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates.
- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments, in the financial statements.
- We read relevant regulatory orders issued by the Commission for the Company in Alabama; regulatory statutes, interpretations, procedural memorandums, and filings made by interveners; and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedents of the Commission's treatment of similar costs under similar circumstances.
- We obtained from management the regulatory orders that support the probability of recovery, refund, and/or future reduction in rates for regulatory assets and liabilities and assessed management's assertion that amounts are probable of recovery, refund, or a future reduction in rates.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

We have served as the Company's auditor since 2014.

SPIRE INC.
CONSOLIDATED STATEMENTS OF INCOME

(In millions, except per share amounts)	Years Ended September 30 2023	2022	2021
Operating Revenues	$ 2,666.3	$ 2,198.5	$ 2,235.5
Operating Expenses:			
Natural gas	1,260.8	923.9	946.3
Operation and maintenance	517.6	449.6	465.8
Depreciation and amortization	254.8	237.3	213.1
Taxes, other than income taxes	214.5	179.5	160.1
Total Operating Expenses	2,247.7	1,790.3	1,785.3
Operating Income	418.6	408.2	450.2
Interest Expense	185.7	119.8	106.6
Other Income (Expense), Net	23.4	(8.7)	(3.4)
Income Before Income Taxes	256.3	279.7	340.2
Income Tax Expense	38.8	58.9	68.5
Net Income	217.5	220.8	271.7
Provision for preferred dividends	14.8	14.8	14.8
Income allocated to participating securities	0.3	0.3	0.4
Net Income Available to Common Shareholders	$ 202.4	$ 205.7	$ 256.5
Weighted Average Number of Common Shares Outstanding:			
Basic	52.5	52.0	51.6
Diluted	52.6	52.1	51.7
Basic Earnings Per Share of Common Stock	$ 3.86	$ 3.96	$ 4.97
Diluted Earnings Per Share of Common Stock	$ 3.85	$ 3.95	$ 4.96

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In millions)	Years Ended September 30 2023	2022	2021
Net Income	$ 217.5	$ 220.8	$ 271.7
Other Comprehensive Income, Before Tax:			
Cash flow hedging derivative instruments:			
Net hedging gain arising during the period	20.1	56.7	61.2
Amounts reclassified into regulatory liabilities	(17.5)	—	—
Amounts reclassified into net income	(2.4)	(1.2)	(1.3)
Net gain on cash flow hedging derivative instruments	0.2	55.5	59.9
Net gain (loss) on defined benefit pension and other postretirement plans	0.2	1.5	(1.3)
Net unrealized gain (loss) on available-for-sale debt securities	0.1	(0.4)	(0.2)
Other Comprehensive Income, Before Tax	0.5	56.6	58.4
Income Tax Expense Related to Items of Other Comprehensive Income	0.1	13.0	13.6
Other Comprehensive Income, Net of Tax	0.4	43.6	44.8
Comprehensive Income	$ 217.9	$ 264.4	$ 316.5

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED BALANCE SHEETS

(Dollars in millions, except per share amounts)	September 30 2023	2022
ASSETS		
Utility Plant	$ 8,210.1	$ 7,664.9
Less: Accumulated depreciation and amortization	2,431.2	2,294.5
Net Utility Plant	5,778.9	5,370.4
Non-utility Property (net of accumulated depreciation and amortization of $71.1 and $50.7 at September 30, 2023 and 2022, respectively)	628.5	491.4
Other Investments	102.6	87.8
Total Other Property and Investments	731.1	579.2
Current Assets:		
Cash and cash equivalents	5.6	6.5
Accounts receivable:		
Utility	192.4	210.8
Other	128.6	443.8
Allowance for credit losses	(32.5)	(31.9)
Delayed customer billings	22.0	21.3
Inventories:		
Natural gas	223.7	371.8
Propane gas	8.6	8.6
Materials and supplies	47.2	41.9
Regulatory assets	348.3	355.4
Prepayments	48.2	41.1
Other	84.8	122.7
Total Current Assets	1,076.9	1,592.0
Deferred Charges and Other Assets:		
Goodwill	1,171.6	1,171.6
Regulatory assets	1,249.2	1,112.4
Other	305.9	258.1
Total Deferred Charges and Other Assets	2,726.7	2,542.1
Total Assets	$ 10,313.6	$ 10,083.7

SPIRE INC.
CONSOLIDATED BALANCE SHEETS (Continued)

	September 30	
	2023	2022
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Preferred stock ($25.00 par value per share; 10.0 million depositary shares authorized, issued and outstanding at September 30, 2023 and 2022)	$ 242.0	$ 242.0
Common stock (par value $1.00 per share; 70.0 million shares authorized; 53.2 million shares and 52.5 million shares issued and outstanding at September 30, 2023, and 2022, respectively)	53.2	52.5
Paid-in capital	1,616.5	1,571.3
Retained earnings	958.0	905.5
Accumulated other comprehensive income	47.6	47.2
Total Shareholders' Equity	2,917.3	2,818.5
Temporary equity	16.5	13.1
Long-term debt (less current portion)	3,554.0	2,958.5
Total Capitalization	6,487.8	5,790.1
Current Liabilities:		
Current portion of long-term debt	156.6	281.2
Notes payable	955.5	1,037.5
Accounts payable	253.1	617.4
Advance customer billings	20.9	18.7
Wages and compensation accrued	47.0	50.2
Customer deposits	27.7	28.2
Taxes accrued	104.1	90.1
Regulatory liabilities	7.3	3.7
Other	183.2	226.6
Total Current Liabilities	1,755.4	2,353.6
Deferred Credits and Other Liabilities:		
Deferred income taxes	743.7	675.1
Pension and postretirement benefit costs	137.3	163.0
Asset retirement obligations	577.4	520.9
Regulatory liabilities	472.4	418.2
Other	139.6	162.8
Total Deferred Credits and Other Liabilities	2,070.4	1,940.0
Commitments and Contingencies (Note 16)		
Total Capitalization and Liabilities	$ 10,313.6	$ 10,083.7

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(Dollars in millions, except per share amounts)	Common Stock Shares	Common Stock Par	Preferred Stock	Paid-in Capital	Retained Earnings	AOCI*	Total
Balance at September 30, 2020	51,611,789	$ 51.6	$ 242.0	$1,549.2	$ 720.7	$(41.2)	$2,522.3
Net income	—	—	—	—	271.7	—	271.7
Dividend reinvestment plan	24,565	—	—	1.6	—	—	1.6
Stock-based compensation costs	—	—	—	9.1	—	—	9.1
Stock issued under stock-based compensation plans	65,316	0.1	—	(0.1)	—	—	—
Employees' tax withholding for stock-based compensation	(16,787)	—	—	(1.1)	—	—	(1.1)
Equity units issued	—	—	—	(40.8)	—	—	(40.8)
Temporary equity adjustment to redemption value	—	—	—	—	1.3	—	1.3
Dividends declared:							
Common stock ($2.60 per share)	—	—	—	—	(135.9)	—	(135.9)
Preferred stock ($1.475 per depositary share)	—	—	—	—	(14.8)	—	(14.8)
Other comprehensive income, net of tax	—	—	—	—	—	44.8	44.8
Balance at September 30, 2021	51,684,883	$ 51.7	$ 242.0	$1,517.9	$ 843.0	$ 3.6	$2,658.2
Net income	—	—	—	—	220.8	—	220.8
Common stock issued	719,625	0.7	—	49.6	—	—	50.3
Dividend reinvestment plan	24,154	—	—	1.6	—	—	1.6
Stock-based compensation costs	—	—	—	4.1	—	—	4.1
Stock issued under stock-based compensation plans	93,936	0.1	—	(0.1)	—	—	—
Employees' tax withholding for stock-based compensation	(28,055)	—	—	(1.8)	—	—	(1.8)
Dividends declared:							
Common stock ($2.74 per share)	—	—	—	—	(143.5)	—	(143.5)
Preferred stock ($1.475 per depositary share)	—	—	—	—	(14.8)	—	(14.8)
Other comprehensive income, net of tax	—	—	—	—	—	43.6	43.6
Balance at September 30, 2022	52,494,543	$ 52.5	$ 242.0	$1,571.3	$ 905.5	$ 47.2	$2,818.5
Net income	—	—	—	—	217.5	—	217.5
Common stock issued	611,872	0.6	—	39.9	—	—	40.5
Dividend reinvestment plan	22,230	—	—	1.5	—	—	1.5
Stock-based compensation costs	—	—	—	5.3	—	—	5.3
Stock issued under stock-based compensation plans	60,007	0.1	—	(0.1)	—	—	—
Employees' tax withholding for stock-based compensation	(18,428)	—	—	(1.4)	—	—	(1.4)
Temporary equity adjustment to redemption value	—	—	—	—	2.3	—	2.3
Dividends declared:							
Common stock ($2.88 per share)	—	—	—	—	(152.5)	—	(152.5)
Preferred stock ($1.475 per depositary share)	—	—	—	—	(14.8)	—	(14.8)
Other comprehensive income, net of tax	—	—	—	—	—	0.4	0.4
Balance at September 30, 2023	53,170,224	$ 53.2	$ 242.0	$1,616.5	$ 958.0	$ 47.6	$2,917.3

* Accumulated other comprehensive income (loss)

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)	Years Ended September 30 2023	2022	2021
Operating Activities:			
Net Income	$ 217.5	$ 220.8	$ 271.7
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	254.8	237.3	213.1
Deferred income taxes and investment tax credits	36.9	57.9	67.0
Changes in assets and liabilities:			
Accounts receivable	334.2	(26.5)	(343.0)
Inventories	142.8	(117.2)	(111.0)
Regulatory assets and liabilities	(68.7)	(409.0)	76.6
Accounts payable	(389.2)	190.7	177.7
Delayed/advance customer billings, net	1.5	(25.5)	(12.4)
Taxes accrued	15.0	11.2	8.9
Other assets and liabilities	(117.6)	(93.5)	(116.1)
Other	13.0	8.8	17.3
Net cash provided by operating activities	440.2	55.0	249.8
Investing Activities:			
Capital expenditures	(662.5)	(552.2)	(624.8)
Business acquisition	(37.0)	—	—
Other	4.0	5.5	2.8
Net cash used in investing activities	(695.5)	(546.7)	(622.0)
Financing Activities:			
Issuance of long-term debt	755.0	300.0	629.1
Repayment of long-term debt	(281.2)	(55.8)	(115.4)
(Repayment) Issuance of short-term debt, net	(82.0)	365.5	24.0
Issuance of common stock	41.9	51.9	1.0
Dividends paid on common stock	(150.7)	(141.9)	(133.2)
Dividends paid on preferred stock	(14.8)	(14.8)	(14.8)
Other	(7.6)	(4.0)	(11.3)
Net cash provided by financing activities	260.6	500.9	379.4
Net Increase in Cash, Cash Equivalents, and Restricted Cash	5.3	9.2	7.2
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	20.5	11.3	4.1
Cash, Cash Equivalents, and Restricted Cash at End of Year	$ 25.8	$ 20.5	$ 11.3
Supplemental disclosure of cash paid for:			
Interest, net of amounts capitalized	$ (177.5)	$ (119.9)	$ (98.7)
Income taxes	(2.0)	(1.8)	(1.5)

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
STATEMENTS OF COMPREHENSIVE INCOME

	Years Ended September 30		
(In millions)	**2023**	**2022**	**2021**
Operating Revenues	$ 1,762.9	$ 1,321.0	$ 1,516.6
Operating Expenses:			
Natural gas	943.4	587.0	786.8
Operation and maintenance	296.2	255.7	261.1
Depreciation and amortization	158.7	145.3	129.2
Taxes, other than income taxes	157.5	129.0	110.9
Total Operating Expenses	1,555.8	1,117.0	1,288.0
Operating Income	207.1	204.0	228.6
Interest Expense	97.4	60.9	50.3
Other Income (Expense), Net	19.4	(6.9)	(8.9)
Income Before Income Taxes	129.1	136.2	169.4
Income Tax Expense	11.6	21.3	25.3
Net Income	117.5	114.9	144.1
Other Comprehensive Income (Loss), Net of Tax	0.2	1.5	(1.3)
Comprehensive Income	$ 117.7	$ 116.4	$ 142.8

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
BALANCE SHEETS

(Dollars in millions, except per share amounts)	September 30 2023	2022
ASSETS		
Utility Plant	$ 4,964.9	$ 4,550.4
Less: Accumulated depreciation and amortization	1,043.2	982.1
Net Utility Plant	3,921.7	3,568.3
Other Property and Investments	65.7	58.9
Current Assets:		
Cash and cash equivalents	0.8	—
Accounts receivable:		
Utility	142.6	131.5
Associated companies	1.3	3.7
Other	21.1	44.5
Allowance for credit losses	(26.2)	(24.9)
Delayed customer billings	17.9	16.1
Inventories:		
Natural gas	132.8	215.3
Propane gas	8.6	8.6
Materials and supplies	24.2	22.0
Regulatory assets	293.1	288.1
Prepayments	26.7	23.3
Total Current Assets	642.9	728.2
Deferred Charges and Other Assets:		
Goodwill	210.2	210.2
Regulatory assets	617.6	547.6
Other	147.4	105.0
Total Deferred Charges and Other Assets	975.2	862.8
Total Assets	$ 5,605.5	$ 5,218.2

SPIRE MISSOURI INC.
BALANCE SHEETS (continued)

	September 30	
	2023	2022
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock (par value $1.00 per share; 50.0 million shares authorized; 25,855 and 25,325 issued and outstanding at September 30, 2023 and 2022, respectively)	$ 0.1	$ 0.1
Paid-in capital	854.8	816.1
Retained earnings	992.4	931.9
Accumulated other comprehensive loss	(2.5)	(2.7)
Total Shareholder's Equity	1,844.8	1,745.4
Long-term debt (less current portion)	1,785.4	1,387.7
Total Capitalization	3,630.2	3,133.1
Current Liabilities:		
Current portion of long-term debt	—	250.0
Notes payable – associated companies	540.6	445.3
Accounts payable	85.8	119.0
Accounts payable – associated companies	10.5	13.3
Advance customer billings	11.0	7.0
Wages and compensation accrued	23.6	33.8
Customer deposits	5.8	6.5
Taxes accrued	60.3	50.4
Other	48.7	45.6
Total Current Liabilities	786.3	970.9
Deferred Credits and Other Liabilities:		
Deferred income taxes	531.8	500.1
Pension and postretirement benefit costs	103.3	115.5
Asset retirement obligations	111.1	110.6
Regulatory liabilities	389.4	331.8
Other	53.4	56.2
Total Deferred Credits and Other Liabilities	1,189.0	1,114.2
Commitments and Contingencies (Note 16)		
Total Capitalization and Liabilities	$ 5,605.5	$ 5,218.2

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
STATEMENTS OF SHAREHOLDER'S EQUITY

(Dollars in millions)	Common Stock Shares	Common Stock Par	Paid-in Capital	Retained Earnings	AOCI*	Total
Balance at September 30, 2020	24,577	$ 0.1	$ 765.0	$ 672.9	$ (2.9)	$ 1,435.1
Net income	—	—	—	144.1	—	144.1
Other comprehensive loss, net of tax	—	—	—	—	(1.3)	(1.3)
Balance at September 30, 2021	24,577	0.1	765.0	817.0	(4.2)	1,577.9
Net income	—	—	—	114.9	—	114.9
Common stock issued to Spire Inc.	748	—	51.1	—	—	51.1
Other comprehensive income, net of tax	—	—	—	—	1.5	1.5
Balance at September 30, 2022	25,325	0.1	816.1	931.9	(2.7)	1,745.4
Net income	—	—	—	117.5	—	117.5
Common stock issued to Spire Inc.	530	—	38.7	—	—	38.7
Dividends declared	—	—	—	(57.0)	—	(57.0)
Other comprehensive income, net of tax	—	—	—	—	0.2	0.2
Balance at September 30, 2023	25,855	$ 0.1	$ 854.8	$ 992.4	$ (2.5)	$ 1,844.8

* Accumulated other comprehensive income (loss)

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
STATEMENTS OF CASH FLOWS

(In millions)	Years Ended September 30 2023	2022	2021
Operating Activities:			
Net Income	$ 117.5	$ 114.9	$ 144.1
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	158.7	145.3	129.2
Deferred income taxes and investment tax credits	11.6	21.3	25.3
Changes in assets and liabilities:			
Accounts receivable	16.0	163.8	(207.4)
Inventories	80.2	(45.4)	(79.0)
Regulatory assets and liabilities	(22.4)	(314.3)	35.9
Accounts payable	(45.7)	25.3	23.1
Delayed/advance customer billings, net	2.2	(26.4)	(13.0)
Taxes accrued	9.7	9.3	2.1
Other assets and liabilities	(108.4)	(48.0)	(115.0)
Other	1.7	1.4	0.7
Net cash provided by (used in) operating activities	221.1	47.2	(54.0)
Investing Activities:			
Capital expenditures	(447.5)	(354.1)	(382.6)
Other	4.1	3.6	1.3
Net cash used in investing activities	(443.4)	(350.5)	(381.3)
Financing Activities:			
Issuance of long-term debt	400.0	300.0	304.1
Repayment of long-term debt	(250.0)	—	(55.0)
(Repayment) issuance of short-term debt, net	—	(250.0)	250.0
Borrowings from (repayments to) Spire, net	95.3	204.4	(60.3)
Issuance of common stock	38.7	51.1	—
Dividends paid	(57.0)	—	—
Other	(3.9)	(2.2)	(3.5)
Net cash provided by financing activities	223.1	303.3	435.3
Net Increase in Cash and Cash Equivalents	0.8	—	—
Cash and Cash Equivalents at Beginning of Year	—	—	—
Cash and Cash Equivalents at End of Year	$ 0.8	$ —	$ —
Supplemental disclosure of cash paid for:			
Interest, net of amounts capitalized	$ (93.8)	$ (58.9)	$ (45.9)
Income taxes	(0.2)	—	—

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
STATEMENTS OF INCOME

(In millions)	Years Ended September 30 2023	2022	2021
Operating Revenues	$ 571.1	$ 509.1	$ 494.0
Operating Expenses:			
Natural gas	202.7	161.5	145.3
Operation and maintenance	136.4	130.1	132.5
Depreciation and amortization	69.3	66.8	62.1
Taxes, other than income taxes	43.0	38.1	37.1
Total Operating Expenses	451.4	396.5	377.0
Operating Income	119.7	112.6	117.0
Interest Expense	34.9	21.3	20.2
Other Income, Net	1.5	0.4	2.0
Income Before Income Taxes	86.3	91.7	98.8
Income Tax Expense	20.3	23.2	25.0
Net Income	$ 66.0	$ 68.5	$ 73.8

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
BALANCE SHEETS

(Dollars in millions, except per share amounts)	September 30 2023	2022
ASSETS		
Utility Plant	$ 2,862.6	$ 2,732.6
Less: Accumulated depreciation and amortization	1,273.0	1,184.1
Net Utility Plant	1,589.6	1,548.5
Current Assets:		
Cash and cash equivalents	1.2	2.4
Accounts receivable:		
Utility	42.2	69.9
Associated companies	1.2	1.3
Other	6.6	6.5
Allowance for credit losses	(5.7)	(6.3)
Delayed customer billings	3.6	4.8
Inventories:		
Natural gas	52.4	72.5
Materials and supplies	19.1	16.3
Regulatory assets	41.6	56.9
Prepayments	6.4	5.8
Total Current Assets	168.6	230.1
Deferred Charges and Other Assets:		
Regulatory assets	606.9	538.2
Deferred income tax	—	11.0
Other	84.2	81.3
Total Deferred Charges and Other Assets	691.1	630.5
Total Assets	$ 2,449.3	$ 2,409.1

SPIRE ALABAMA INC.
BALANCE SHEETS (continued)

	September 30	
	2023	**2022**
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock and paid-in capital (par value $0.01 per share; 3,000,000 shares authorized; 1,972,052 issued and outstanding at September 30, 2023 and 2022)	$ 285.9	$ 316.9
Retained earnings	642.1	589.1
Total Shareholder's Equity	928.0	906.0
Long-term debt	745.9	571.5
Total Capitalization	1,673.9	1,477.5
Current Liabilities:		
Notes payable – associated companies	124.1	260.9
Accounts payable	28.4	85.6
Accounts payable – associated companies	4.6	4.4
Advance customer billings	8.1	9.9
Wages and compensation accrued	6.6	7.6
Customer deposits	19.3	19.0
Taxes accrued	34.5	31.3
Other	14.7	22.4
Total Current Liabilities	240.3	441.1
Deferred Credits and Other Liabilities:		
Deferred income taxes	9.1	—
Pension and postretirement benefit costs	27.2	40.5
Asset retirement obligations	451.0	398.7
Regulatory liabilities	21.2	23.0
Other	26.6	28.3
Total Deferred Credits and Other Liabilities	535.1	490.5
Commitments and Contingencies (Note 16)		
Total Capitalization and Liabilities	$ 2,449.3	$ 2,409.1

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
STATEMENTS OF SHAREHOLDER'S EQUITY

(Dollars in millions)	Common Stock Shares	Common Stock Par	Paid-in Capital	Retained Earnings	Total
Balance at September 30, 2020	1,972,052	$ —	$ 350.9	$ 500.8	$ 851.7
Net income	—	—	—	73.8	73.8
Dividends declared	—	—	—	(22.0)	(22.0)
Return of capital to Spire	—	—	(22.0)	—	(22.0)
Balance at September 30, 2021	1,972,052	—	328.9	552.6	881.5
Net income	—	—	—	68.5	68.5
Dividends declared	—	—	—	(32.0)	(32.0)
Return of capital to Spire	—	—	(12.0)	—	(12.0)
Balance at September 30, 2022	1,972,052	—	316.9	589.1	906.0
Net income	—	—	—	66.0	66.0
Dividends declared	—	—	—	(13.0)	(13.0)
Return of capital to Spire	—	—	(31.0)	—	(31.0)
Balance at September 30, 2023	1,972,052	$ —	$ 285.9	$ 642.1	$ 928.0

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
STATEMENTS OF CASH FLOWS

(In millions)	Years Ended September 30 2023	2022	2021
Operating Activities:			
Net Income	$ 66.0	$ 68.5	$ 73.8
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	69.3	66.8	62.1
Deferred income taxes	20.3	23.2	25.0
Changes in assets and liabilities:			
Accounts receivable	27.1	(21.2)	(17.8)
Inventories	17.2	(42.5)	(15.4)
Regulatory assets and liabilities	(49.5)	(101.7)	29.2
Accounts payable	(42.3)	26.3	14.0
Delayed/advance customer billings	(0.6)	0.5	0.5
Taxes accrued	3.3	0.8	2.5
Other assets and liabilities	18.7	(3.7)	(37.8)
Other	0.4	0.2	0.3
Net cash provided by operating activities	129.9	17.2	136.4
Investing Activities:			
Capital expenditures	(117.6)	(141.5)	(169.8)
Other	1.3	0.8	0.7
Net cash used in investing activities	(116.3)	(140.7)	(169.1)
Financing Activities:			
Issuance of long-term debt	175.0	—	150.0
Repayment of long-term debt	—	(50.0)	—
(Repayments to) borrowings from Spire, net	(136.8)	211.9	(72.4)
Return of capital to Spire	(31.0)	(12.0)	(22.0)
Dividends paid	(21.0)	(24.0)	(22.0)
Other	(1.0)	—	(0.9)
Net cash (used in) provided by financing activities	(14.8)	125.9	32.7
Net (Decrease) Increase in Cash and Cash Equivalents	(1.2)	2.4	—
Cash and Cash Equivalents at Beginning of Year	2.4	—	—
Cash and Cash Equivalents at End of Year	$ 1.2	$ 2.4	$ —
Supplemental disclosure of cash paid for:			
Interest, net of amounts capitalized	$ (30.1)	$ (21.0)	$ (17.9)
Income taxes	—	—	—

See the accompanying Notes to Financial Statements.

SPIRE INC., SPIRE MISSOURI INC., AND SPIRE ALABAMA INC.
NOTES TO FINANCIAL STATEMENTS
(Dollars in millions, except per share, per unit and per gallon amounts)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION – These notes are an integral part of the accompanying audited financial statements of Spire Inc. ("Spire" or the "Company") presented on a consolidated basis, Spire Missouri Inc. ("Spire Missouri") and Spire Alabama Inc. ("Spire Alabama"). Spire Missouri, Spire Alabama and Spire EnergySouth Inc. ("Spire EnergySouth") are wholly owned subsidiaries of Spire. Spire Missouri, Spire Alabama and the subsidiaries of Spire EnergySouth (Spire Gulf Inc. and Spire Mississippi Inc.) are collectively referred to as the "Utilities." Unless otherwise indicated, references to years herein are references to the fiscal years ending September 30 for the Company and its subsidiaries.

The accompanying audited financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The consolidated financial position, results of operations and cash flows of Spire include the accounts of the Company and all its subsidiaries. Transactions and balances between consolidated entities have been eliminated from the consolidated financial statements of Spire. In compliance with GAAP, transactions between Spire Missouri and Spire Alabama and their affiliates, as well as intercompany balances on their balance sheets, have not been eliminated from their separate financial statements.

NATURE OF OPERATIONS – Spire has three reportable segments: Gas Utility, Gas Marketing, and Midstream. The Gas Utility segment consists of the regulated natural gas distribution operations of the Company and is the core business segment of Spire in terms of revenue and earnings. The Gas Utility segment is comprised of the operations of: Spire Missouri, serving St. Louis, Kansas City, and other areas in Missouri; Spire Alabama, serving central and northern Alabama; and the subsidiaries of Spire EnergySouth, serving the Mobile, Alabama area and south-central Mississippi. The Gas Marketing segment includes Spire's primary gas-related business, Spire Marketing Inc. ("Spire Marketing"), which provides non-regulated natural gas services throughout the United States (U.S.). The Midstream segment includes Spire STL Pipeline and Spire Storage, which are subsidiaries engaged in the transportation and storage of natural gas. The activities of the Company's other subsidiaries are reported as Other and are described in Note 14, Information by Operating Segment. Spire Missouri and Spire Alabama each have a single reportable segment.

USE OF ESTIMATES – The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

SYSTEM OF ACCOUNTS – The accounts of the Utilities are maintained in accordance with the Uniform System of Accounts prescribed by the applicable state public service commissions, which systems substantially conform to that prescribed by the Federal Energy Regulatory Commission (FERC).

REGULATED OPERATIONS – The Utilities account for their regulated operations in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*. This topic sets forth the application of GAAP for those companies whose rates are established by or are subject to approval by an independent third-party regulator. The provisions of this accounting guidance require, among other things, that financial statements of a regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. In addition, regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities). Management believes that the current regulatory environment supports the continued use of these regulatory accounting principles and that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process. See additional discussion on regulated operations in Note 15, Regulatory Matters.

PROPERTY, PLANT, AND EQUIPMENT –

Utility Plant – Utility plant is stated at original cost. The cost of additions to utility plant includes contracted work, direct labor and materials, allocable overheads and an allowance for funds used during construction. The costs of units of property retired, replaced or renewed are removed from utility plant and are charged to accumulated depreciation. Maintenance and repairs of property and replacement and renewal of items determined to be less than units of property are charged to maintenance expenses.

Utility plant is depreciated using the composite method on a straight-line basis over the estimated service lives of the various classes of property at rates approved by the applicable regulatory commission. For Spire Missouri and for Spire Alabama, the annual depreciation and amortization expense in fiscal years 2023, 2022 and 2021 averaged approximately 3% of the original cost of depreciable and amortizable property.

Non-utility Property – Non-utility property is recorded at the original cost of acquisition or construction, which includes material, labor, contractor services and, for FERC-regulated projects, an allowance for funds used during construction. Repairs, replacements and renewals of items of property determined to be less than a unit of property or that do not increase the property's life or functionality are charged to maintenance expense. Upon retirement or sale of non-utility property, the original cost and related accumulated depreciation are removed from the accounts and any gain or loss is included in the income statements. Costs related to software developed or obtained for internal use are capitalized and amortized on a straight-line basis over the estimated useful life of the related software. If software is retired prior to being fully amortized, the difference is recorded as a loss in the income statements.

Accrued Capital Expenditures – Accrued capital expenditures, shown in the following table, are excluded from capital expenditures in the statements of cash flows until paid.

September 30	2023	2022	2021
Spire	$ 104.3	$ 77.8	$ 59.5
Spire Missouri	56.5	45.6	37.1
Spire Alabama	4.6	19.2	13.6

ASSET RETIREMENT OBLIGATIONS – Spire, Spire Missouri and Spire Alabama record legal obligations associated with the retirement of long-lived assets in the period in which the obligations are incurred, if sufficient information exists to reasonably estimate the fair value of the obligations. Obligations are recorded as both a cost of the related long-lived asset and as a corresponding liability. Subsequently, the asset retirement costs are depreciated over the life of the asset and the asset retirement obligations are accreted to the expected settlement amounts. Spire, Spire Missouri and Spire Alabama record asset retirement obligations associated with certain safety requirements to purge and seal gas distribution mains upon retirement, the plugging and abandonment of storage wells and other storage facilities, specific service line obligations, and certain removal and disposal obligations related to components of Spire Missouri's, Spire Alabama's and Spire Gulf's distribution systems and general plant. Asset retirement obligations recorded by Spire's other subsidiaries are not material. As authorized by the Missouri Public Service Commission (MoPSC) and the Alabama Public Service Commission (APSC), Spire Missouri, Spire Alabama and Spire Gulf accrue future asset removal costs associated with their property, plant and equipment even if a legal obligation does not exist. Such accruals are provided for through depreciation expense and are recorded with corresponding credits to regulatory liabilities or regulatory assets. When those utilities retire depreciable utility plant and equipment, they charge the associated original costs to accumulated depreciation and amortization, and any related removal costs incurred are charged to regulatory liabilities or regulatory assets. The difference between removal costs recognized in depreciation rates and the accretion expense and depreciation expense recognized for financial reporting purposes is a timing difference between recovery of these costs in rates and their recognition for financial reporting purposes. Accordingly, these differences are deferred as regulatory liabilities or regulatory assets. In the rate setting process, the regulatory liabilities or regulatory assets are excluded from the rate base upon which those utilities have the opportunity to earn their allowed rates of return.

The following table presents a reconciliation of the beginning and ending balances of asset retirement obligations at September 30, as reported in the balance sheets.

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Asset retirement obligations, beginning of year	$ 520.9	$ 519.6	$ 110.6	$ 143.4	$ 398.7	$ 362.8
Liabilities incurred during the period	7.9	3.2	0.9	1.2	2.0	0.5
Liabilities settled during the period	(6.8)	(9.2)	(2.5)	(4.1)	(2.5)	(2.0)
Accretion	21.5	21.1	4.5	5.9	16.5	14.7
Revisions in estimated cash flows	33.9	(13.8)	(2.4)	(35.8)	36.3	22.7
Asset retirement obligations, end of year	$ 577.4	$ 520.9	$ 111.1	$ 110.6	$ 451.0	$ 398.7

NATURAL GAS AND PROPANE GAS – For Spire Missouri's eastern region, inventory of natural gas in storage is priced on a last in, first out (LIFO) basis and inventory of propane gas in storage is priced on a first in, first out (FIFO) basis. For the rest of the Gas Utility segment, inventory of natural gas in storage is priced on the weighted average cost basis. The replacement cost of Spire Missouri's natural gas for current use in eastern Missouri at September 30, 2023 was less than the LIFO cost by $21.1. The replacement cost of Spire Missouri's natural gas for current use in eastern Missouri at September 30, 2022 was more than the LIFO cost by $37.3. The carrying value of the Utilities' inventory is never adjusted to a lower net realizable value or market value because, pursuant to Purchased Gas Adjustment (PGA) clauses or a Gas Supply Adjustment (GSA) rider, actual gas costs are recovered in customer rates. Natural gas and propane gas storage inventory in Spire's other operating segments is recorded at the lower of average cost or net realizable value.

BUSINESS COMBINATIONS AND GOODWILL – Spire's acquisitions were accounted for using business combination accounting. Under this method, the purchase price paid by the acquirer is allocated to the assets acquired and liabilities assumed as of the acquisition date based on their fair value. Goodwill is measured as the excess of the acquisition-date fair value of the consideration transferred over the amount of acquisition-date identifiable assets acquired net of assumed liabilities. At September 30, 2023, goodwill included in Spire's Gas Utility, Gas Marketing, and Midstream segments was $210.2, zero, and zero, respectively, with the remainder held at the corporate level. Goodwill amounts have not changed since fiscal 2017, and there are no accumulated impairment losses. Spire and Spire Missouri evaluate goodwill for impairment as of July 1 of each year, or more frequently if events and circumstances indicate that goodwill might be impaired. At each test date, the assessments concluded that goodwill was not impaired. The Company updated the assessments as of September 30, 2023, determining that it remained more likely than not that the fair value of each reporting unit exceeded its carrying value.

A subsidiary of Spire in the Midstream segment acquired a natural gas storage facility in northern Oklahoma, now named Spire Storage Salt Plains LLC, on April 1, 2023. The $37 purchase price was fully allocated to the assets acquired and liabilities assumed based on their fair value at the acquisition date, consisting almost entirely of base gas and other property, plant and equipment, resulting in no goodwill.

IMPAIRMENT OF LONG-LIVED ASSETS – Long-lived assets classified as held and used are evaluated for impairment when events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. Whether impairment has occurred is determined by comparing the estimated undiscounted cash flows attributable to the assets with the carrying value of the assets. If the carrying value exceeds the undiscounted cash flows, the Company recognizes an impairment charge equal to the amount of the carrying value that exceeds the estimated fair value of the assets. In the period in which the Company determines an asset meets held-for-sale criteria, an impairment charge is recorded to the extent the book value exceeds its fair value less cost to sell.

DERIVATIVES – In the course of their business, certain subsidiaries of Spire enter into commitments associated with the purchase or sale of natural gas. Certain of their derivative natural gas contracts are designated as normal purchases or normal sales and, as such, are excluded from the scope of FASB ASC Topic 815, *Derivatives and Hedging*. Those contracts are accounted for as executory contracts and recorded on an accrual basis. Revenues and expenses from such contracts are recorded gross. Contracts not designated as normal purchases or normal sales are recorded as derivatives with changes in fair value recognized in earnings in the periods prior to physical delivery. Certain of Spire Marketing's wholesale purchase and sale transactions are classified as trading activities for financial reporting purposes, with income and expenses presented on a net basis in natural gas expenses in the Consolidated Statements of Income. Spire also enters into cash flow hedges through execution of interest rate swap contracts to protect itself against adverse movements in interest rates. Refer to Note 10, Derivative Instruments and Hedging Activities, for more information about derivatives.

INCOME TAXES – Spire and its subsidiaries account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amount of existing assets and liabilities and the respective tax basis and for tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be realized or settled. The effects on deferred tax assets and liabilities of a change in enacted tax rates is recognized in income or loss for non-regulated operations, and in a regulatory asset or regulatory liability for regulated operations. A valuation allowance is established when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions in accordance with authoritative guidance. The authoritative guidance addresses the determination of whether tax benefits claimed, or expected to be claimed, on a tax return should be recorded in the financial statements. Spire may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the position will be sustained upon examination by the taxing authority, based on the technical merits of the position. Tax-related interest and penalties, if any, are classified as a liability on the balance sheets. For additional information on the accounting for income taxes, refer to Note 12, Income Taxes.

CASH, CASH EQUIVALENTS, AND RESTRICTED CASH – All highly liquid debt instruments purchased with original maturities of three months or less are considered to be cash equivalents. Such instruments are carried at cost, which approximates market value. Outstanding checks on the Company's and Utilities' bank accounts in excess of funds on deposit create book overdrafts (which are funded at the time checks are presented for payment) and are classified as Other in the Current Liabilities section of the balance sheets. Changes in book overdrafts are reflected as Operating Activities in the statements of cash flows. In Spire's statements of cash flows, total Cash, Cash Equivalents, and Restricted Cash included $20.2 and $14.0 of restricted cash reported in "Other Investments" on the Company's balance sheet as of September 30, 2023 and 2022, respectively (in addition to amounts shown as "Cash and cash equivalents"). This restricted cash has been segregated and invested in debt securities in a trust account based on collateral requirements for reinsurance at Spire's risk management company.

NATURAL GAS RECEIVABLE – Spire Marketing enters into natural gas transactions with natural gas pipeline and storage companies known as park and loan arrangements. Under the terms of the arrangements, Spire Marketing purchases natural gas from a third party and delivers that natural gas to the pipeline or storage company for the right to receive the same quantity of natural gas from that company at the same location in a future period. These arrangements are accounted for as non-monetary transactions under GAAP and are recorded at the carrying amount. As such, natural gas receivables are reflected in "Other" current assets on the Consolidated Balance Sheets at cost, which includes related fees associated with the transactions. In the period that the natural gas is returned to Spire Marketing, concurrent with the sale of the natural gas to a third party, the related natural gas receivable is expensed in the Consolidated Statements of Income. In conjunction with these transactions, Spire Marketing usually enters into New York Mercantile Exchange (NYMEX) and Intercontinental Exchange (ICE) natural gas futures, options, and swap contracts or fixed price sales agreements to protect against market changes in future sales prices.

EARNINGS PER COMMON SHARE – GAAP requires dual presentation of basic and diluted earnings per share (EPS). EPS is computed using the two-class method, which is an earnings allocation method for computing EPS that treats a participating security as having rights to earnings that would otherwise have been available to common shareholders. Certain of the Company's stock-based compensation awards pay non-forfeitable dividends to the participants during the vesting period and, as such, are deemed participating securities. Basic EPS is computed by dividing net income available to common shareholders by the weighted average number of common shares outstanding during the period. Diluted EPS is computed by dividing net income available to common shareholders by the weighted average number of common shares outstanding that are increased for additional shares that would be outstanding if potentially dilutive securities were converted to common shares, pursuant to the treasury stock method. Shares attributable to equity units, non-participating performance-contingent restricted stock awards, and time-vested restricted stock/units are excluded from the calculation of diluted earnings per share if the effect would be antidilutive. Shares attributable to non-participating performance-contingent restricted stock awards are only included in the calculation of diluted earnings per share to the extent the underlying performance and/or market conditions are satisfied (a) prior to the end of the reporting period or (b) would be satisfied if the end of the reporting period were the end of the related contingency period and the result would be dilutive. The Company's EPS computations are presented in Note 4, Earnings Per Common Share.

TRANSACTIONS WITH AFFILIATES – Transactions between affiliates of the Company have been eliminated from the consolidated financial statements of Spire. Spire Missouri and Spire Alabama borrowed funds from the Company and incurred related interest, as reflected in their separate financial statements, and they participated in normal intercompany shared services transactions. In addition, Spire Missouri's and Spire Alabama's other transactions with affiliates included:

	Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021
Natural gas purchases from Spire Marketing	$ 57.4	$ 86.3	$ 92.5	$ 4.7	$ 3.2	$ 10.4
Natural gas sales to Spire Marketing	0.4	—	1.1	—	0.5	0.1
Transportation services from Spire STL Pipeline LLC	32.0	32.0	32.0	—	—	—
Natural gas storage services from Spire Storage Salt Plains LLC	0.7	—	—	—	—	—
Transportation services from Spire NGL Inc.	—	—	0.5	—	—	—

ACCOUNTS RECEIVABLE AND ALLOWANCE FOR CREDIT LOSSES – Trade accounts receivable are recorded at the amounts due from customers, including unbilled amounts. Accounts receivable are written off when they are deemed to be uncollectible. An allowance for expected credit losses is estimated and updated based on relevant data and trends such as accounts receivable aging, historical write-off experience, current write-off trends, economic conditions, and the impact of weather and availability of customer payment assistance on collection trends. For the Utilities, net write-offs as a percentage of revenue has historically been the best predictor of base net write-off experience over time. Management judgment is applied in the development of the allowance due to the complexity of variables and subjective nature of certain relevant factors. The accounts receivable of Spire's non-utility businesses are evaluated separately from those of the Utilities. The allowance for credit losses for those other businesses is based on a continuous evaluation of the individual counterparty risk and is not significant for the periods presented. Activity in the allowance for credit losses is shown in the following table.

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Allowance at beginning of year	$ 31.9	$ 30.3	$ 24.9	$ 24.9	$ 22.6	$ 18.1	$ 6.3	$ 6.6	$ 5.5
Provision for expected credit losses	16.6	11.6	14.7	13.3	11.2	11.1	2.6	0.3	3.1
Write-offs, net of recoveries	(16.0)	(10.0)	(9.3)	(12.0)	(8.9)	(6.6)	(3.2)	(0.6)	(2.0)
Allowance at end of year	$ 32.5	$ 31.9	$ 30.3	$ 26.2	$ 24.9	$ 22.6	$ 5.7	$ 6.3	$ 6.6

FINANCE RECEIVABLES – Spire Alabama finances third party contractor sales of merchandise including gas furnaces and appliances. At September 30, 2023 and 2022, Spire Alabama's finance receivable totaled approximately $6.7 and $7.1, respectively. Financing is available only to qualified customers who meet creditworthiness thresholds for customer payment history and external agency credit reports. Spire Alabama relies upon ongoing payments as the primary indicator of credit quality during the term of each contract. The allowance for credit losses is recognized using an estimate of write-off percentages based on historical experience. Delinquent accounts are evaluated on a case-by-case basis and, absent evidence of debt repayment, after 90 days are due in full and assigned to a third-party collection agency. The remaining finance receivable is written off approximately 12 months after being assigned to the third-party collection agency. Spire Alabama had finance receivables past due 90 days or more of $0.3 at September 30, 2023 and 2022.

GROUP MEDICAL AND WORKERS' COMPENSATION RESERVES – The Company self-insures its group medical and workers' compensation costs and carries stop-loss coverage in relation to medical claims and workers' compensation claims. Reserves for amounts incurred but not reported are established based on historical cost levels and lags between occurrences and reporting.

FAIR VALUE MEASUREMENTS – Certain assets and liabilities are recognized or disclosed at fair value, which is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). GAAP establishes a fair value hierarchy that prioritizes the inputs used to measure fair value.

The levels of the hierarchy are described below:

- Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 – Pricing inputs other than quoted prices included within Level 1, which are either directly or indirectly observable for the asset or liability as of the reporting date. These inputs are derived principally from, or corroborated by, observable market data.
- Level 3 – Pricing that is based upon inputs that are generally unobservable that are based on the best information available and reflect management's assumptions about how market participants would price the asset or liability.

Assessment of the significance of a particular input to the fair value measurements may require judgment and may affect the valuation of the asset or liability and its placement within the fair value hierarchy. Additional information about fair value measurements is provided in Note 8, Fair Value of Financial Instruments, Note 9, Fair Value Measurements, and Note 13, Pension Plans and Other Postretirement Benefits.

STOCK-BASED COMPENSATION – The Company accounts for share-based compensation arrangements in accordance with ASC Topic 718, *Compensation - Stock Compensation*. The Company measures stock-based compensation awards at fair value at the date of grant and recognizes the compensation cost of the awards over the requisite service period. Forfeitures are recognized in the period they occur. Refer to Note 3, Stock-Based Compensation, for further discussion of the accounting for the Company's stock-based compensation plans.

2. REVENUE

The following tables show revenue disaggregated by source and customer type.

	2023	2022	2021
Spire			
Gas Utility:			
Residential	$ 1,648.5	$ 1,416.6	$ 1,234.0
Commercial & industrial	606.0	338.9	586.0
Transportation	121.6	118.0	122.9
Off-system & other incentive	30.0	42.0	152.7
Other customer revenue	16.1	19.9	22.2
Total revenue from contracts with customers	2,422.2	1,935.4	2,117.8
Changes in accrued revenue under alternative revenue programs	34.7	10.7	1.5
Total Gas Utility operating revenues	2,456.9	1,946.1	2,119.3
Gas Marketing	179.1	234.9	96.5
Midstream	66.1	53.1	52.6
Other	16.7	16.1	15.1
Total before eliminations	2,718.8	2,250.2	2,283.5
Intersegment eliminations (see Note 14, Information by Operating Segment)	(52.5)	(51.7)	(48.0)
Total Operating Revenues	$ 2,666.3	$ 2,198.5	$ 2,235.5
Spire Missouri			
Residential	$ 1,261.3	$ 1,061.4	$ 882.1
Commercial & industrial	411.9	177.2	436.1
Transportation	33.2	33.3	33.5
Off-system & other incentive	20.1	25.2	145.6
Other customer revenue	12.5	11.1	16.3
Total revenue from contracts with customers	1,739.0	1,308.2	1,513.6
Changes in accrued revenue under alternative revenue programs	23.9	12.8	3.0
Total Operating Revenues	$ 1,762.9	$ 1,321.0	$ 1,516.6
Spire Alabama			
Residential	$ 322.9	$ 291.6	$ 288.0
Commercial & industrial	150.4	119.1	114.9
Transportation	77.6	74.4	78.7
Off-system & other incentive	9.9	16.8	7.1
Other customer revenue	3.6	5.5	1.9
Total revenue from contracts with customers	564.4	507.4	490.6
Changes in accrued revenue under alternative revenue programs	6.7	1.7	3.4
Total Operating Revenues	$ 571.1	$ 509.1	$ 494.0

The Utilities sell natural gas to residential and other customers. The sale of natural gas is governed by the various state utility commissions, which set rates, charges, and terms and conditions of service, collectively included in a "tariff." The performance obligation, which relates to the promise to provide natural gas, is satisfied over time as the customer simultaneously receives and consumes the natural gas, and revenue is recognized accordingly.

The Utilities' transportation revenue relates to the promise to transport the specified quantities of natural gas at tariff rates. This performance obligation is satisfied over time as the gas is transported, and revenue is recognized as invoiced monthly.

The Utilities have alternative revenue programs (ARPs), which represent an agreement between the utility and its regulator, currently consisting of decoupling mechanisms (also known as weather normalization adjustments) and incentive programs (primarily Alabama's Cost Control Measure). When the criteria to recognize additional (or reduced) revenue from ARPs have been met, the Utilities establish a regulatory asset (or liability). When amounts previously recognized for ARPs are billed, the Utilities reduce the regulatory asset (or liability) and increase (or decrease) accounts receivable. Billed amounts, which are part of the overall tariff paid by customers, are included in revenue from contracts with customers, while the change in the related regulatory asset or liability is presented as revenue from ARPs. Depending on whether the beginning accrued ARP balance was a regulatory asset or liability and depending on the size and direction of the current period accrual, the amount presented as revenue from ARPs could be negative.

The Utilities read meters and bill customers on monthly cycles. Spire Missouri, Spire Gulf and Spire Mississippi record their gas utility revenues from gas sales and transportation services on an accrual basis that includes estimated amounts for gas delivered but not yet billed. The accruals for unbilled revenues are reversed in the subsequent accounting period when meters are actually read and customers are billed. Spire Alabama records natural gas distribution revenues in accordance with the tariff established by the APSC. Unbilled revenue is accrued in an amount equal to the related gas cost, as profit margin is not considered earned until billed. Spire's other subsidiaries, including Spire Marketing, record revenues when earned, as the product is delivered or as services are performed.

Gas Marketing's contracts are derivatives. Wholesale contracts (with producers, municipalities, and utility companies) are subject to derivative accounting. Retail contracts (with large commercial and industrial customers) are designated as "normal purchase, normal sale" arrangements and are therefore accounted for as revenue from contracts with customers. The performance obligation is satisfied over time by the transfer of control of natural gas to the customer, and revenue is recognized as invoiced monthly.

Payments are generally required within 30 days of billing, and contracts generally do not have a significant financing component. Spire's revenues are not subject to significant returns, refunds, or warranty obligations.

Spire, Spire Missouri, and Spire Alabama have elected to apply a "right to invoice" practical expedient, recognizing revenue for volumes delivered for which they have a right to invoice, as long as that amount corresponds with the value to the customer. Disclosures about remaining performance obligations are not required because either contracts have an original expected duration of one year or less, or revenue is recognized under the right to invoice practical expedient, or both.

Sales taxes imposed on applicable Spire Alabama and Spire Missouri sales are billed to customers. These amounts are not recorded in the statements of income but are recorded as tax collections payable and included in the "Other" line of the Current Liabilities section of the balance sheets.

Gross receipts taxes associated with the Company's natural gas utility services are imposed on the Company, Spire Missouri, and Spire Alabama and billed to its customers. The expense amounts (shown in the table below) are reported gross in the "Taxes, other than income taxes" line in the statements of income, and corresponding revenues are reported in "Operating Revenues."

	2023	2022	2021
Spire	$ 131.8	$ 109.8	$ 94.0
Spire Missouri	96.7	79.6	64.3
Spire Alabama	29.9	25.5	25.1

3. STOCK-BASED COMPENSATION

The Spire 2015 Equity Incentive Plan (EIP) was approved by shareholders of Spire on January 29, 2015 and amended on November 9, 2018. The purpose of the EIP is to encourage directors, officers, and key employees of the Company and its subsidiaries to contribute to the Company's success and align their interests with that of shareholders. To accomplish this purpose, the Compensation and Human Resources Committee ("Committee") of Spire's Board of Directors (the "Board") may grant awards under the EIP that may be earned by achieving performance objectives and/or other criteria as determined by the Committee. Under the terms of the EIP, officers and employees of the Company and its subsidiaries, as determined by the Committee, are eligible to be selected for awards. The EIP provides for restricted stock, restricted stock units, qualified and non-qualified stock options, stock appreciation rights, and performance shares payable in stock, cash, or a combination of both. The EIP generally provides a minimum vesting period of at least three years for each type of award, with pro rata vesting permitted during the minimum three-year vesting period. The maximum number of shares reserved for issuance under the EIP is 1,000,000.

The Company allows participants in the EIP the ability to defer a portion or all of their award. As of September 30, 2023, a total of 244,618 share equivalents (at target payout) have been deferred by participants. Such units are included in the data presented below. After the required holding period, deferred awards are ultimately paid in cash rather than in shares of stock. Upon vesting, the Company issues new shares to satisfy awards that are not deferred.

Restricted Stock Awards

During fiscal 2023, the Company granted116,390 performance-contingent restricted share units to executive officers and key employees at a weighted average grant date fair value of $79.88 per share. This number represents the target shares that can be earned pursuant to the terms of the awards. The share units have a performance period ending September 30, 2026. While the participants have no interim voting rights on these share units, dividends accrue during the performance period and are paid to the participants upon vesting but are subject to forfeiture if the underlying share units do not vest.

The number of share units that will ultimately vest is dependent upon the attainment of certain levels of earnings, as well as the Company's level of total shareholder return (TSR) during the performance period relative to a comparator group of peer companies. This TSR provision is considered a market condition under GAAP and is discussed further below. The maximum amount of shares or share equivalents that can be earned pursuant to the terms of the awards is 200% of the target units granted.

The weighted average grant date fair value of performance-contingent restricted share units granted during fiscal years 2022 and 2021 was $67.43 and $68.69 per share, respectively.

Fiscal 2023 activity of restricted stock units subject to performance and/or market conditions is presented below:

	Units	Weighted Average Grant Date Fair Value Per Unit
Non-vested at September 30, 2022	343,524	$ 70.14
Granted	116,390	$ 79.88
Adjusted for performance	(13,459)	$ 76.91
Vested	(74,556)	$ 76.91
Forfeited	(23,546)	$ 71.73
Non-vested at September 30, 2023	348,353	$ 71.76

For the year ended September 30, 2023, the total number of shares or share equivalents that could be issued if all outstanding award grants attain maximum performance payout is 696,706.

During fiscal 2023, the Company granted 55,524 shares of time-vested restricted stock to executive officers and key employees at a weighted average grant date fair value of $71.91 per share. Unless forfeited based on terms of the agreements, these shares will vest in fiscal 2025. In the interim, participants receive full voting rights and dividends, which are not subject to forfeiture. The weighted average grant date fair value of time-vested restricted stock and restricted stock units awarded to employees during fiscal years 2022 and 2021 was $63.57 and $64.29 per share, respectively.

During fiscal 2023, the Company granted 12,720 shares of time-vested restricted stock to non-employee directors at a weighted average grant date fair value of $75.59 per share. These shares vested in fiscal 2023, six months after the grant date. The weighted average grant date fair value of restricted stock awarded to non-employee directors during fiscal years 2022 and 2021 was $66.31 and $62.35 per share, respectively.

Time-vested restricted stock and stock unit activity for fiscal 2023 is presented below:

	Shares/ Units	Weighted Average Grant Date Fair Value Per Share
Non-vested at September 30, 2022	122,245	$ 66.60
Granted	68,244	$ 72.60
Vested	(59,040)	$ 75.27
Forfeited	(8,460)	$ 65.36
Non-vested at September 30, 2023	122,989	$ 65.85

For restricted stock and stock units (performance-contingent and time-vested) that vested during fiscal years 2023, 2022, and 2021, the Company withheld 18,428 shares, 28,055 shares, and 16,787 shares, respectively, at weighted average prices of $72.03, $63.97 and $65.99 per share, respectively, pursuant to elections by employees to satisfy tax withholding obligations. The total fair value of restricted stock (performance-contingent and time-vested) that vested during fiscal years 2023, 2022, and 2021 was $8.6, $10.1, and $6.5, respectively, and the related tax benefit was $3.2, $3.8, and $2.5, respectively. None of the tax benefits have been realized.

Equity Compensation Costs

Compensation cost for performance-contingent restricted stock and stock unit awards is based upon the probable outcome of the performance conditions. For shares or units that do not vest or that are not expected to vest due to the outcome of the performance conditions (excluding market conditions), no compensation cost is recognized and any previously recognized compensation cost is reversed.

The fair value of awards of performance-contingent and time-vested restricted stock and restricted stock units, not subject to the TSR provision, are estimated using the closing price of the Company's stock on the grant date. For those awards that do not pay dividends during the vesting period, the estimate of fair value is reduced by the present value of the dividends expected to be paid on the Company's common stock during the performance period, discounted using an appropriate U.S. Treasury yield. For shares subject to the TSR provision, the estimated impact of this market condition is reflected in the grant date fair value per share of the awards. Accordingly, compensation cost is not reversed to reflect any actual reductions in the awards that may result from the TSR provision. However, if the Company's TSR during the performance period ranks below the level specified in the award agreements, relative to a comparator group of companies, and the Committee elects not to reduce the award (or reduce by a lesser amount), this election would be accounted for as a modification of the original award and additional compensation cost would be recognized at that time. The grant date fair value of the awards subject to the TSR provision awarded during fiscal years 2023, 2022 and 2021 was valued by a Monte Carlo simulation model that assessed the probabilities of various TSR outcomes. The significant assumptions used in the Monte Carlo simulations are as follows:

	2023	2022	2021
Risk-free interest rate	4.26%	0.79%	0.22%
Expected dividend yield of stock	—	—	—
Expected volatility of stock	33.8%	32.2%	31.4%
Performance period (in years)	3.0	3.0	3.0

The risk-free interest rate was based on the yield on U.S. Treasury securities matching the vesting period. A zero-percent dividend yield was used, which is mathematically equivalent to the assumption that dividends are reinvested as they are paid. The expected volatility is based on the historical volatility of the Company's stock. Volatility assumptions were also made for each of the companies included in the comparator group. The vesting period is equal to the performance period set forth in the terms of the award.

The amounts of compensation cost recognized for share-based compensation arrangements are presented below:

	2023	2022	2021
Total compensation cost	$ 11.2	$ 7.5	$ 16.6
Compensation cost capitalized	(1.4)	(1.1)	(2.7)
Compensation cost recognized in net income	9.8	6.4	13.9
Income tax benefit recognized in net income	(2.2)	(1.5)	(3.2)
Compensation cost recognized in net income, net of income tax	$ 7.6	$ 4.9	$ 10.7

As of September 30, 2023, there was $12.1 of total unrecognized compensation cost related to non-vested share-based compensation arrangements, which is expected to be recognized over a weighted average period of 1.7 years.

4. EARNINGS PER COMMON SHARE

	2023	2022	2021
Basic Earnings Per Common Share:			
Net Income	$ 217.5	$ 220.8	$ 271.7
Less: Provision for preferred dividends	14.8	14.8	14.8
Income allocated to participating securities	0.3	0.3	0.4
Net Income Available to Common Shareholders	$ 202.4	$ 205.7	$ 256.5
Weighted Average Common Shares Outstanding (in millions)	52.5	52.0	51.6
Basic Earnings Per Share of Common Stock	$ 3.86	$ 3.96	$ 4.97
Diluted Earnings per Common Share:			
Net Income	$ 217.5	$ 220.8	$ 271.7
Less: Provision for preferred dividends	14.8	14.8	14.8
Income allocated to participating securities	0.3	0.3	0.4
Net Income Available to Common Shareholders	$ 202.4	$ 205.7	$ 256.5
Weighted Average Common Shares Outstanding (in millions)	52.5	52.0	51.6
Dilutive Effect of Restricted Stock and Restricted Stock Units (in millions)*	0.1	0.1	0.1
Weighted Average Diluted Common Shares (in millions)	52.6	52.1	51.7
Diluted Earnings Per Share of Common Stock	$ 3.85	$ 3.95	$ 4.96
* Calculation excludes certain outstanding common shares (shown in millions by period at the right) attributable to common stock forward contracts, stock units subject to performance or market conditions, and restricted stock, which could have a dilutive effect in the future	1.9	0.1	0.1

5. SHAREHOLDERS' EQUITY

Spire

Preferred Stock

At September 30, 2023 and 2022, Spire had authorized 5,000,000 shares of preferred stock.

On May 21, 2019, Spire completed the public offering of 10,000,000 depositary shares (the "Depositary Shares"), each representing a 1/1,000th interest in a share of the Company's 5.90% Series A Cumulative Redeemable Perpetual Preferred Stock, par value $25.00 per share, with a liquidation preference of $25,000 per share (the "Preferred Stock"). The transaction resulted in $242.0 of net proceeds, after deducting commissions and sale expenses, which proceeds were used to (i) refinance long-term and short-term Spire debt and (ii) fund capital expenditures at both the Utilities and Spire's gas-related businesses.

Dividends on the Preferred Stock, when declared by the Board, are payable on the liquidation preference amount, on a cumulative basis, quarterly in arrears on the 15th day of February, May, August and November of each year, beginning on August 15, 2019. Dividends are payable out of amounts legally available for the payment of dividends at an annual rate equal to 5.90% of the liquidation preference per share of Preferred Stock (equivalent to $25.00 per Depositary Share). Dividends accumulate daily and are cumulative from May 21, 2019.

Under the terms of the Preferred Stock, the Company's ability to declare or pay dividends on, or purchase or redeem, shares of its common stock or any class or series of capital stock of the Company that rank junior to the Preferred Stock are subject to certain restrictions in the event that the Company does not declare and pay the full cumulative dividends on the Preferred Stock through the most recently completed quarterly dividend period.

Spire may, at its option, redeem the Preferred Stock (i) in whole, but not in part, at any time prior to August 15, 2024, within 120 days after a ratings event where a rating agency amends, clarifies or changes the criteria it uses to assign equity credit for securities such as the Preferred Stock, at a redemption price in cash equal to $25,500 per share, or (ii) in whole or in part, from time to time, on or after August 15, 2024, at a redemption price in cash equal to $25,000 per share, plus, in each case, all accumulated and unpaid dividends (whether declared or not) up to such redemption date.

Shareholders of the Preferred Stock generally have no voting rights with respect to matters that generally require the approval of voting stockholders. The limited voting rights of holders of the Preferred Stock include the right to vote on certain matters that may affect the preference or special rights of the Preferred Stock. In addition, if and whenever dividends on any shares of Preferred Stock have not been declared and paid for at least six dividend periods, whether or not consecutive, the number of directors then constituting the Board shall automatically be increased by two (to be elected by the holders of the Preferred Stock) until all accumulated and unpaid dividends on the Preferred Stock have been paid in full.

Equity Units

In February 2021, Spire issued 3.5 million equity units, initially in the form of Corporate Units, for an aggregate stated amount of $175.0, resulting in net proceeds (after underwriting fees and other issuance costs) of $169.3. Each "Corporate Unit" has a stated amount of fifty dollars and consists of (i) a stock purchase contract and (ii) a 1/20, or 5%, undivided beneficial ownership interest in one thousand dollars principal amount of Spire's 2021 Series A 0.75% Remarketable Senior Notes due March 1, 2026 (RSNs). The RSNs are pledged as collateral to secure the holder's obligation under the related stock purchase contracts. Each stock purchase contract obligates the holder to purchase, and Spire to issue and deliver, on March 1, 2024, for a price of fifty dollars in cash, a variable number of shares of its common stock as follows (subject to anti-dilution adjustments).

If the applicable market value* per share of Spire common stock is:	Number of shares to be purchased per stock purchase contract is:
Equal to or greater than $78.6906 ("threshold appreciation price")	0.6354 ("minimum settlement rate")
Less than $78.6906, but greater than $64.24	$50.00 ÷ applicable market value*
Less than or equal to $64.24 ("reference price")	0.7783 ("maximum settlement rate")

*Based on the volume-weighted average price of Spire common stock during the 20 trading days before settlement.

If a holder elects to settle purchase contracts early, the holder would pay fifty dollars per unit and receive 0.6354 shares per unit.

The Company makes quarterly interest payments on the RSNs at the rate of 0.75% per year and quarterly contract adjustment payments on the stock purchase contracts at the rate of 6.75%. The RSNs and the contract adjustment payments are structurally subordinated to all liabilities of Spire's subsidiaries.

At issuance, the Company recorded the $35.0 present value of the stock purchase contract payments as a liability (reflected in "Other" current and noncurrent liabilities on the balance sheet) offset by a charge to additional paid-in capital in equity. This noncash financing activity has been excluded from the statement of cash flows. Interest payments on the RSNs are recorded as interest expense and stock purchase contract payments are charged against the liability. Accretion of the stock purchase contract liability is recorded as imputed interest expense. In calculating diluted EPS, the Company applies the treasury stock method to the Corporate Units. These securities have not had an effect on diluted EPS.

In order to secure funds necessary for the holders to pay the purchase price of the common stock on the purchase contract settlement date, the remarketing agent will remarket the RSNs on behalf of the current holders to new third-party investors. Following any successful remarketing of the RSNs, the interest rate on the RSNs will be reset, interest will be payable on a semi-annual basis, and Spire will cease to have the option to redeem the RSNs, other than in connection with the occurrence or continuance of certain special events.

ATM Program

On February 6, 2019, Spire entered into an "at-the-market" (ATM) equity distribution agreement, supplemented as of May 14, 2019, pursuant to which the Company may offer and sell, from time to time, shares of its common stock (including shares of common stock that may be sold pursuant to forward sale agreements entered into in connection with the ATM equity distribution agreement). On April 28, 2022, Spire's board approved a new authorization for the sale of additional shares with an aggregate offering price of up to $200.0 through May 2025.

Settled sales under this ATM program are included in "Common stock issued" in the Condensed Consolidated Statements of Shareholders' Equity. Also, in the second and third quarters of fiscal 2023, Spire executed forward sale agreements for 228,690 shares and 2,087,231 shares, respectively, of its common stock. On September 27, 2023, 571,372 of these shares were settled, generating $38.5 of net proceeds. The third quarter forward sales included a block sale of 1,744,549 shares which must be settled on or before December 28, 2023. Had all shares under this forward agreement been settled as of September 30, 2023, it would have generated net proceeds of $111.2.

As of September 30, 2023, under the ATM program, Spire may sell additional shares with an aggregate offering price of up to $17.9.

Other Equity Information

Spire has a shelf registration statement on Form S-3 on file with the U.S. Securities and Exchange Commission (SEC) for the issuance and sale of up to 250,000 shares of common stock under its Dividend Reinvestment and Direct Stock Purchase Plan. There were 244,182 and 237,891 shares at September 30, 2023 and November 10, 2023, respectively, remaining available for issuance under this Form S-3. Spire also has a universal shelf registration statement on Form S-3 on file with the SEC for the issuance of various equity and debt securities, which expires on May 9, 2025.

Spire Missouri

Substantially all of Spire Missouri's plant is subject to the liens of its first mortgage bonds. The mortgage contains several restrictions on Spire Missouri's ability to pay cash dividends on its common stock or to make loans to its parent company. These mortgage restrictions are applicable regardless of whether the stock is publicly held or held solely by Spire Missouri's parent company. Under the most restrictive of these provisions, no cash dividend may be declared or paid if, after the dividend, the aggregate net amount spent for all dividends after September 30, 1953 would exceed a maximum amount determined by a formula set out in the mortgage. Under that formula, the maximum amount is the sum of $8.0 plus earnings applicable to common stock (adjusted for stock repurchases and issuances) for the period from September 30, 1953 to the last day of the quarter before the declaration or payment date for the dividends. As of September 30, 2023 and 2022, the amount under the mortgage's formula that was available to pay dividends was $1,678.5 and $1,579.4, respectively. Thus, all of Spire Missouri's retained earnings were free from such dividend restrictions as of those dates.

Spire Missouri has a universal shelf registration statement on Form S-3 on file with the SEC for the issuance of various equity and debt securities, which expires on May 9, 2025. Effective March 5, 2022, Spire Missouri was authorized by the MoPSC to issue conventional term loans, first mortgage bonds, unsecured debt, preferred stock and common stock in an aggregate amount of up to $800.0 for financings placed any time before December 31, 2024. Under this authorization through September 30, 2023, Spire Missouri has issued $79.1 of common stock and $400.0 of first mortgage bonds.

At September 30, 2023 and 2022, Spire Missouri had authorized 1,480,000 shares of preferred stock, but none were issued and outstanding.

Spire Alabama

At September 30, 2023 and 2022, Spire Alabama had authorized 120,000 shares of preferred stock, but none were issued and outstanding.

Accumulated Other Comprehensive Income

The components of accumulated other comprehensive income (AOCI), net of income taxes, recognized in the balance sheets at September 30 were as follows:

	Net Unrealized Gain (Loss) on Cash Flow Hedges	Defined Benefit Pension and Other Postretirement Benefit Plans	Net Unrealized Gain (Loss) on Available-for-Sale Debt Securities	Total
Spire				
Balance at September 30, 2021	$ 7.9	$ (4.2)	$ (0.1)	$ 3.6
Other comprehensive income (loss)	42.5	1.5	(0.4)	43.6
Balance at September 30, 2022	50.4	(2.7)	(0.5)	47.2
Other comprehensive income	0.1	0.2	0.1	0.4
Balance at September 30, 2023	$ 50.5	$ (2.5)	$ (0.4)	$ 47.6
Spire Missouri				
Balance at September 30, 2021	$ —	$ (4.2)	$ —	$ (4.2)
Other comprehensive income	—	1.5	—	1.5
Balance at September 30, 2022	—	(2.7)	—	(2.7)
Other comprehensive income	—	0.2	—	0.2
Balance at September 30, 2023	$ —	$ (2.5)	$ —	$ (2.5)

Income tax expense (benefit) recorded for items of other comprehensive income (loss) reported in the statements of comprehensive income is calculated by applying statutory federal, state, and local income tax rates applicable to ordinary income. The tax rates applied to individual items of other comprehensive income (loss) are similar within each reporting period. For the periods presented, Spire Alabama had no AOCI balances.

6. LONG-TERM DEBT

The composition of long-term debt as of September 30 is shown in the following tables.

	2023	2022
Spire		
3.31% Notes Payable, due December 15, 2022	$ —	$ 25.0
3.54% Senior Notes, due February 27, 2024	150.0	150.0
0.75% Remarketable Senior Notes, due March 1, 2026	175.0	175.0
3.13% Senior Notes, due September 1, 2026	130.0	130.0
3.93% Senior Notes, due March 15, 2027	100.0	100.0
5.80% Senior Notes, due March 15, 2033	150.0	—
4.70% Senior Notes, due August 15, 2044	250.0	250.0
Total principal of Spire Missouri long-term debt (see below)	1,798.0	1,648.0
Total principal of Spire Alabama long-term debt (see below)	750.0	575.0
Other subsidiaries' long-term debt:		
5.00% First Mortgage Bonds, due September 30, 2031	42.0	42.0
2.95% Notes, with annual principal payments through December 2034	117.7	123.9
5.61% First Mortgage Bonds, due October 15, 2037	30.0	—
3.52% First Mortgage Bonds, due September 30, 2049	40.0	40.0
Total principal of long-term debt	3,732.7	3,258.9
Less: Unamortized discounts and debt issuance costs	(22.1)	(19.2)
Less: Current portion	(156.6)	(281.2)
Long-term debt, excluding current portion	$ 3,554.0	$ 2,958.5
Spire Missouri		
First Mortgage Bonds:		
3.40% Series, due August 15, 2023	$ —	$ 250.0
Floating Rate Series, due December 2, 2024	300.0	300.0
3.40% Series, due March 15, 2028	45.0	45.0
7.00% Series, due June 1, 2029	19.3	19.3
2.84% Series, due November 15, 2029	275.0	275.0
7.90% Series, due September 15, 2030	30.0	30.0
3.68% Series, due September 15, 2032	50.0	50.0
4.80% Series, due February 15, 2033	400.0	—
6.00% Series, due May 1, 2034	99.3	99.3
6.15% Series, due June 1, 2036	54.5	54.5
4.63% Series, due August 15, 2043	99.9	99.9
4.23% Series, due September 15, 2047	70.0	70.0
3.30% Series, due June 1, 2051	305.0	305.0
4.38% Series, due September 15, 2057	50.0	50.0
Total principal of Spire Missouri long-term debt	1,798.0	1,648.0
Less: Unamortized discounts and debt issuance costs	(12.6)	(10.3)
Less: Current portion	—	(250.0)
Spire Missouri long-term debt, excluding current portion	$ 1,785.4	$ 1,387.7
Spire Alabama		
3.21% Notes, due September 15, 2025	$ 35.0	$ 35.0
5.32% Notes, due October 15, 2029	90.0	—
2.88% Notes, due December 1, 2029	100.0	100.0
2.04% Notes, due December 15, 2030	150.0	150.0
5.41% Notes, due October 15, 2032	85.0	—
5.90% Notes, due January 15, 2037	45.0	45.0
4.31% Notes, due December 1, 2045	80.0	80.0
3.92% Notes, due January 15, 2048	45.0	45.0
4.64% Notes, due January 15, 2049	90.0	90.0
4.02% Notes, due January 15, 2058	30.0	30.0
Total principal of Spire Alabama long-term debt	750.0	575.0
Less: Unamortized discounts and debt issuance costs	(4.1)	(3.5)
Spire Alabama long-term debt, excluding current portion	$ 745.9	$ 571.5

Spire Missouri's $300.0 of first mortgage bonds due December 2, 2024 are secured equally with all its other first mortgage bonds. Interest is payable quarterly in arrears at a floating rate based on the compounded secured overnight financing rate plus 50 basis points, with a maximum rate of the lesser of 8% or the maximum rate then permitted by applicable law.

Maturities of long-term debt for Spire on a consolidated basis, Spire Missouri and Spire Alabama for the five fiscal years after September 30, 2023 are as follows:

	2024	2025	2026	2027	2028
Spire	$ 156.6	$ 342.0	$ 312.5	$ 108.1	$ 53.6
Spire Missouri	—	300.0	—	—	45.0
Spire Alabama	—	35.0	—	—	—

The long-term debt agreements of Spire, Spire Missouri and Spire Alabama contain customary financial covenants and default provisions. As of September 30, 2023, there were no events of default under these financial covenants.

Spire

At September 30, 2023, Spire had outstanding principal of long-term debt totaling $3,732.7, of which $1,798.0 was issued by Spire Missouri, $750.0 was issued by Spire Alabama and $229.7 was issued by other subsidiaries. Except for $300.0 of Spire Missouri floating-rate bonds, all long-term debt bears fixed rates and is subject to changes in fair value as market interest rates change. However, increases and decreases in fair value would impact earnings and cash flows only if the Company were to reacquire any of these issues in the open market prior to maturity. Under GAAP applicable to the Utilities' regulated operations, losses or gains on early redemption of long-term debt would typically be deferred as regulatory assets or regulatory liabilities and amortized over a future period. Interest expense shown on Spire's consolidated statement of income is net of capitalized interest totaling $8.6, $4.5 and $4.4 for the years ended September 30, 2023, 2022 and 2021, respectively.

As indicated in Note 5, Shareholders' Equity, Spire has a shelf registration statement on Form S-3 on file with the SEC for the issuance of equity and debt securities.

Spire Missouri

At September 30, 2023, Spire Missouri had outstanding principal of long-term debt totaling $1,798.0. Except for $300.0 of floating-rate bonds, all long-term debt bears fixed rates and is subject to changes in fair value as market interest rates change. Interest expense shown on Spire Missouri's statement of comprehensive income is net of capitalized interest totaling $3.1, $0.6 and $0.2 for the years ended September 30, 2023, 2022 and 2021, respectively.

As indicated in Note 5, Shareholders' Equity, Spire Missouri has a shelf registration on Form S-3 on file with the SEC for issuance of equity and debt securities, which expires on May 9, 2025. Effective March 5, 2022, Spire Missouri was authorized by the MoPSC to issue conventional term loans, first mortgage bonds, unsecured debt, preferred stock and common stock in an aggregate amount of up to $800.0 for financings placed any time before December 31, 2024. Under this authorization through September 30, 2023, Spire Missouri has issued $79.1 of common stock and $400.0 of first mortgage bonds.

Substantially all of Spire Missouri's plant is subject to the liens of its first mortgage bonds. The mortgage contains several restrictions on Spire Missouri's ability to pay cash dividends on its common stock, which are described in Note 5, Shareholders' Equity.

Spire Alabama

At September 30, 2023, Spire Alabama had outstanding principal of fixed-rate long-term debt totaling $750.0. While these long-term debt issues are fixed-rate, they are subject to changes in fair value as market interest rates change. Interest expense shown on Spire Alabama's statement of income is net of capitalized interest totaling $2.3, $3.2 and $3.2 for the years ended September 30, 2023, 2022 and 2021, respectively.

Spire Alabama has no standing authority to issue long-term debt and must petition the APSC for each planned issuance.

7. NOTES PAYABLE AND CREDIT AGREEMENTS

Spire, Spire Missouri and Spire Alabama have a syndicated revolving credit facility pursuant to a loan agreement with 12 banks through July 22, 2027. The loan agreement has an aggregate credit commitment of $1,300.0, including sublimits of $450.0 for the Spire holding company, $575.0 for Spire Missouri and $275.0 for Spire Alabama. These sublimits may be reallocated from time to time among the three borrowers within the $1,300.0 aggregate commitment, with commitment fees and interest margins applied for each borrower relative to its credit rating, as well as sustainability rate adjustments based on Spire's DART ("Days Away Restricted or Transferred") rate and methane emissions reductions. The Spire holding company may use its line to provide for the funding needs of various subsidiaries. The agreement also contains financial covenants limiting each borrower's consolidated total debt, including short-term debt, to no more than 70% of its total capitalization. As defined in the line of credit, on September 30, 2023, total debt was less than 65% of total capitalization for each borrower. There were no borrowings against this credit facility as of September 30, 2023 and 2022.

Spire has a commercial paper program ("CP Program") pursuant to which it may issue short-term, unsecured commercial paper notes. Amounts available under the CP Program may be borrowed, repaid and re-borrowed from time to time, with the aggregate face or principal amount of the notes outstanding under the CP Program at any time not to exceed $1,300.0. The notes may have maturities of up to 365 days from date of issue.

On January 5, 2023, Spire Missouri entered into a loan agreement with several banks for a $250.0 unsecured term loan due October 5, 2023. Interest was based on the secured overnight financing rate ("SOFR") plus an adjustment of 0.10% per annum plus a margin of 0.80% per annum. The loan was repaid on May 8, 2023.

Information about short-term borrowings, including Spire Missouri's and Spire Alabama's borrowings from Spire, is presented in the following table. As of September 30, 2023, $706.9 of Spire's short-term borrowings were used to support lending to the Utilities.

	Spire (Parent Only)	Spire Missouri		Spire Alabama	Spire
	CP Program	Term Loan	Spire Note	Spire Note	Consol-idated
Year Ended September 30, 2023					
Highest borrowings outstanding	$ 1,282.0	$ 250.0	$ 656.9	$ 274.0	$ 1,482.0
Lowest borrowings outstanding	354.4	—	3.8	76.7	489.0
Weighted average borrowings	776.3	66.8	327.9	119.1	843.1
Weighted average interest rate	5.0%	5.5%	4.9%	4.9%	5.0%
As of September 30, 2023					
Borrowings outstanding	$ 955.5	$ —	$ 540.6	$ 124.1	$ 955.5
Weighted average interest rate	5.6%	0.0%	5.6%	5.6%	5.6%
As of September 30, 2022					
Borrowings outstanding	$ 1,037.5	$ —	$ 445.3	$ 260.9	$ 1,037.5
Weighted average interest rate	3.3%	0.0%	3.3%	3.3%	3.3%

8. FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying amounts and estimated fair values of financial instruments not measured at fair value on a recurring basis were as follows:

	Carrying Amount	Fair Value	Classification of Estimated Fair Value: Quoted Prices in Active Markets (Level 1)	Classification of Estimated Fair Value: Significant Observable Inputs (Level 2)
Spire				
As of September 30, 2023				
Cash and cash equivalents	$ 5.6	$ 5.6	$ 5.6	$ —
Notes payable	955.5	955.5	—	955.5
Long-term debt, including current portion	3,710.6	3,270.2	—	3,270.2
As of September 30, 2022				
Cash and cash equivalents	$ 6.5	$ 6.5	$ 6.5	$ —
Notes payable	1,037.5	1,037.5	—	1,037.5
Long-term debt, including current portion	3,239.7	2,851.8	—	2,851.8
Spire Missouri				
As of September 30, 2023				
Cash and cash equivalents	$ 0.8	$ 0.8	$ 0.8	$ —
Notes payable - associated companies	540.6	540.6	—	540.6
Long-term debt	1,785.4	1,592.4	—	1,592.4
As of September 30, 2022				
Notes payable - associated companies	$ 445.3	$ 445.3	$ —	$ 445.3
Long-term debt, including current portion	1,637.7	1,473.9	—	1,473.9
Spire Alabama				
As of September 30, 2023				
Cash and cash equivalents	$ 1.2	$ 1.2	$ 1.2	$ —
Notes payable - associated companies	124.1	124.1	—	124.1
Long-term debt	745.9	648.0	—	648.0
As of September 30, 2022				
Cash and cash equivalents	$ 2.4	$ 2.4	$ 2.4	$ —
Notes payable - associated companies	260.9	260.9	—	260.9
Long-term debt	571.5	485.0	—	485.0

9. FAIR VALUE MEASUREMENTS

The information presented below categorizes the assets and liabilities in the balance sheets that are accounted for at fair value on a recurring basis in periods subsequent to initial recognition.

The mutual funds included in Level 1 are valued based on exchange-quoted market prices of individual securities. The mutual funds included in Level 2 are valued based on the closing net asset value per unit.

Derivative instruments included in Level 1 are valued using quoted market prices on the NYMEX or the Intercontinental Exchange (ICE). Derivative instruments classified in Level 2 include physical commodity derivatives and interest rate swaps that are valued using broker or dealer quotation services whose prices are derived principally from, or are corroborated by, observable market inputs. Also included in Level 2 are certain derivative instruments that have values that are similar to, and correlate with, quoted prices for exchange-traded instruments in active markets. Derivative instruments included in Level 3 are valued using generally unobservable inputs that are based upon the best information available and reflect management's assumptions about how market participants would price the asset or liability. There were no Level 3 balances as of September 30, 2023 or 2022. The Company's and the Utilities' policy is to recognize transfers between the levels of the fair value hierarchy, if any, as of the beginning of the interim reporting period in which circumstances change or events occur to cause the transfer.

The mutual funds are included in "Other investments" on the Company's balance sheets and in "Other Property and Investments" on Spire Missouri's balance sheets. Changes in their recurring valuations are recorded as unrealized investment gains or losses in the corresponding periodic income statement. Derivative assets and liabilities, including receivables and payables associated with cash margin requirements, are presented net on the balance sheets when a legally enforceable netting agreement exist between the Company, Spire Missouri or Spire Alabama and the counterparty to the derivative contract. For additional information on derivative instruments, see Note 10, Derivative Instruments and Hedging Activities.

Spire

	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Effects of Netting and Cash Margin Receivables /Payables	Total
As of September 30, 2023					
ASSETS					
Gas Utility:					
U.S. stock/bond mutual funds	$ 20.4	$ —	$ —	$ —	$ 20.4
Gasoline and heating oil contracts	—	0.1	—	(0.1)	—
NYMEX/ICE natural gas contracts	6.3	—	—	(6.3)	—
Gas Marketing:					
NYMEX/ICE natural gas contracts	10.1	—	—	(10.1)	—
Natural gas commodity contracts	—	36.7	—	(3.6)	33.1
Other:					
U.S. stock/bond mutual funds	37.6	—	—	—	37.6
Interest rate swaps	—	44.2	—	—	44.2
Total	$ 74.4	$ 81.0	$ —	$ (20.1)	$ 135.3
LIABILITIES					
Gas Utility:					
NYMEX/ICE natural gas contracts	$ 50.8	$ —	$ —	$ (44.0)	$ 6.8
Gas Marketing:					
NYMEX/ICE natural gas contracts	21.8	—	—	(21.8)	—
Natural gas commodity contracts	—	27.6	—	(3.6)	24.0
Total	$ 72.6	$ 27.6	$ —	$ (69.4)	$ 30.8
As of September 30, 2022					
ASSETS					
Gas Utility:					
U.S. stock/bond mutual funds	$ 19.1	$ —	$ —	$ —	$ 19.1
NYMEX/ICE natural gas contracts	57.8	—	—	(57.8)	—
Gas Marketing:					
NYMEX/ICE natural gas contracts	91.8	—	—	(91.8)	—
Natural gas commodity contracts *	—	56.6	—	(4.0)	52.6
Other:					
U.S. stock/bond mutual funds	29.3	—	—	—	29.3
Interest rate swaps *	—	63.6	—	—	63.6
Total	$ 198.0	$ 120.2	$ —	$ (153.6)	$ 164.6
LIABILITIES					
Gas Utility:					
NYMEX/ICE natural gas contracts	$ 30.7	$ —	$ —	$ (30.7)	$ —
Gas Marketing:					
NYMEX/ICE natural gas contracts	82.3	—	—	(82.3)	—
Natural gas commodity contracts *	—	65.5	—	(4.0)	61.5
Total	$ 113.0	$ 65.5	$ —	$ (117.0)	$ 61.5

* Subsequent to the issuance of its consolidated financial statements for the year ended September 30, 2022, during the fourth quarter of fiscal 2023, the Company identified an error in the fair value level presentation for certain line items in the Fair Value Measurements table. The presentation has been corrected to reflect the impacted line items in Level 2 rather than Level 1 as of September 30, 2022. This immaterial correction did not impact the reported fair values or the consolidated financial statements.

Spire Missouri

	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Effects of Netting and Cash Margin Receivables /Payables	Total
As of September 30, 2023					
ASSETS					
U.S. stock/bond mutual funds	$ 20.4	$ —	$ —	$ —	$ 20.4
Gasoline and heating oil contracts	—	0.1	—	(0.1)	—
NYMEX/ICE natural gas contracts	6.3	—	—	(6.3)	—
Total	$ 26.7	$ 0.1	$ —	$ (6.4)	$ 20.4
LIABILITIES					
NYMEX/ICE natural gas contracts	$ 50.8	$ —	$ —	$ (44.0)	$ 6.8
As of September 30, 2022					
ASSETS					
U.S. stock/bond mutual funds	$ 19.1	$ —	$ —	$ —	$ 19.1
NYMEX/ICE natural gas contracts	57.8	—	—	(57.8)	—
Total	$ 76.9	$ —	$ —	$ (57.8)	$ 19.1
LIABILITIES					
NYMEX/ICE natural gas contracts	$ 30.7	$ —	$ —	$ (30.7)	$ —

Spire Alabama

Spire Alabama occasionally utilizes a gasoline derivative program to stabilize the cost of fuel used in operations. As of September 30, 2023 and September 30, 2022, there were no gasoline derivatives outstanding.

10. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

Spire

Spire Missouri has a risk management policy to utilize various derivatives, including futures contracts, exchange-traded options and swaps for the explicit purpose of managing price risk associated with purchasing and delivering natural gas on a regular basis to customers in accordance with its tariffs. The objective of this policy is to limit Spire Missouri's exposure to natural gas price volatility and to manage, hedge and mitigate substantial price risk. Further discussion of this policy can be found in the Spire Missouri section.

From time to time Spire Missouri and Spire Alabama purchase NYMEX futures and options contracts to help stabilize operating costs associated with forecasted purchases of gasoline and diesel fuels used to power vehicles and equipment. Further information on these derivatives can be found in the Spire Missouri and Spire Alabama sections, respectively.

In the course of its business, Spire's gas marketing subsidiary, Spire Marketing enters into commitments associated with the purchase or sale of natural gas. Certain of Spire Marketing's derivative natural gas contracts are designated as normal purchases or normal sales and, as such, are excluded from the scope of ASC Topic 815 and are accounted for as executory contracts on an accrual basis. Any of Spire Marketing's derivative natural gas contracts that are not designated as normal purchases or normal sales are accounted for at fair value. At September 30, 2023, the fair values of 567.0 million MMBtu of non-exchange-traded natural gas commodity contracts were reflected in the Consolidated Balance Sheet. Of these contracts, 379.1 million MMBtu will settle during fiscal 2024, and 151.1 million MMBtu, 26.4 million MMBtu, and 3.8 million MMBtu, will settle during fiscal years 2025, 2026, and 2027, respectively. A total of 6.6 million MMBtu will settle in the years 2028-2030. These

contracts have not been designated as hedges; therefore, changes in the fair value of these contracts are reported in earnings each period.

Furthermore, Spire Marketing manages the price risk associated with its fixed-priced commitments by either closely matching the offsetting physical purchase or sale of natural gas at fixed prices or through the use of NYMEX or ICE futures, swap, and option contracts to lock in margins.

At September 30, 2023, Spire Marketing's unmatched fixed-price positions were not material to Spire's financial position or results of operations. Spire Marketing's NYMEX and ICE natural gas futures, swap and option contracts used to lock in margins may be designated as cash flow hedges of forecasted transactions for financial reporting purposes.

Spire enters into cash flow hedges through the execution of interest rate swap contracts to protect itself against adverse movements in interest rates. At September 30, 2023, the following swaps were outstanding:

Period Originated	Contract Hedge Term (Years)	Notional Amount	Fixed Interest Rate	Fiscal 2023 Mark-to-Market Gain
Quarter 1, fiscal 2022	10	$ 50.0	1.4918%	$ 2.7
Quarter 2, fiscal 2022	10	75.0	1.6475%	4.0
Quarter 2, fiscal 2022	10	25.0	1.7460%	1.5
Quarter 1, fiscal 2023	10	50.0	3.4480%	2.4
Quarter 2, fiscal 2023	10	50.0	3.6850%	0.9
Quarter 2, fiscal 2023	10	25.0	3.5350%	0.5
Quarter 2, fiscal 2023	10	25.0	3.3850%	0.6
Quarter 3, fiscal 2023	30	50.0	2.7470%	7.8
Quarter 3, fiscal 2023	10	25.0	2.9020%	2.2
Quarter 3, fiscal 2023	10	25.0	3.0180%	2.0
		$ 400.0		$ 24.6

As of September 30, 2023, the Company has recorded through other comprehensive income a cumulative mark-to-market net asset of $44.2 on open swaps.

The Company's and Spire Missouri's exchange-traded/cleared derivative instruments consist primarily of NYMEX and ICE positions. The NYMEX is the primary national commodities exchange on which natural gas derivatives are traded. Open NYMEX and ICE natural gas futures and swap positions at September 30, 2023 and 2022 were as follows:

	September 30, 2023		September 30, 2022	
Gas Marketing	Notional (MMBtu millions)	Maximum Term (Months)	Notional (MMBtu millions)	Maximum Term (Months)
Natural gas futures purchased	61.3	51	76.3	54
Natural gas options purchased, net	4.9	15	3.7	12
Natural gas basis swaps purchased	44.1	51	61.7	39
Gas Utility				
Natural gas futures purchased	66.5	24	13.0	12

At September 30, 2023, Spire Missouri also had 16.3 million MMBtu of other price mitigation in place through the use of NYMEX natural gas option-based strategies.

Derivative instruments designated as cash flow hedges of forecasted transactions are recognized on the balance sheets of the Company at fair value, and the change in fair value of the effective portion of these hedge instruments is recorded, net of income tax, in other comprehensive income or loss (OCI). Accumulated other comprehensive income or loss (AOCI) is a component of Total Common Stock Equity. Amounts are reclassified from AOCI into earnings when the hedged items affect net income, using the same revenue or expense category that the hedged item impacts. Based on market prices at September 30, 2023, it is expected that $2.8 of net gains will be reclassified into the Consolidated Statements of Income of the Company during the next twelve months. Cash flows from hedging transactions are classified in the same category as the cash flows from the items that are being hedged in the Consolidated Statements of Cash Flows.

Effect of Derivative Instruments on the Consolidated Statements of Income and Comprehensive Income

	Location of Gain (Loss) Recorded in Income	2023	2022	2021
Derivatives in Cash Flow Hedging Relationships				
Effective portion of gain recognized in OCI on derivatives:				
Interest rate swaps		$ 20.1	$ 56.7	$ 61.2
Effective portion of gain reclassified from AOCI to income:				
Interest rate swaps	Interest Expense	$ (2.4)	$ (1.2)	$ (1.3)
Derivatives Not Designated as Hedging Instruments*				
Gain (Loss) recognized in income on derivatives:				
Gas / diesel futures	Non-Operating Expense: Other Income	$ 0.3	$ —	$ —
Natural gas commodity contracts	Operating Expenses: Natural Gas	18.0	52.6	54.1
NYMEX / ICE natural gas contracts	Operating Expenses: Natural Gas	(35.0)	43.3	(77.5)
Total		$ (16.7)	$ 95.9	$ (23.4)

* Gains and losses on Spire Missouri's natural gas derivative instruments, which are not designated as hedging instruments for financial reporting purposes, are deferred pursuant to the Missouri Utilities' PGA clauses and initially recorded as regulatory assets or regulatory liabilities. These gains and losses are excluded from the table above because they have no direct impact on the statements of income. Such amounts are recognized in the statements of income as a component of natural gas operating expenses when they are recovered through the PGA clause and reflected in customer billings.

Fair Value of Derivative Instruments in the Consolidated Balance Sheets

	Derivative Assets*		Derivative Liabilities*	
September 30, 2023	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**
Derivatives designated as hedging instruments				
Other: Interest rate swaps	Current Assets: Other	$ 44.2	Current Liabilities: Other	$ —
Subtotal		44.2		—
Derivatives not designated as hedging instruments				
Gas Utility:				
Natural gas contracts	Current Assets: Other	6.3	Current Liabilities: Other	50.8
Gasoline and heating oil contracts	Current Assets: Other	0.1		—
Gas Marketing:				
NYMEX / ICE natural gas contracts	Current Assets: Other	8.0	Current Liabilities: Other	16.0
	Deferred Charges and Other Assets: Other	2.1	Deferred Credits and Other Liabilities: Other	5.7
Natural gas commodity	Current Assets: Other	31.2	Current Liabilities: Other	20.1
	Deferred Charges and Other Assets: Other	5.5	Deferred Credits and Other Liabilities: Other	7.6
Subtotal		53.2		100.2
Total derivatives		$ 97.4		$ 100.2
September 30, 2022				
Derivatives designated as hedging instruments				
Other: Interest rate swaps	Current Assets: Other	$ 63.6	Current Liabilities: Other	$ —
Subtotal		63.6		—
Derivatives not designated as hedging instruments				
Gas Utility:				
Natural gas contracts	Current Assets: Other	57.8	Current Liabilities: Other	30.7
Gas Marketing:				
NYMEX / ICE natural gas contracts	Current Assets: Other	79.2	Current Liabilities: Other	71.5
	Deferred Charges and Other Assets: Other	12.7	Deferred Credits and Other Liabilities: Other	10.8
Natural gas commodity	Current Assets: Other	53.4	Current Liabilities: Other	55.1
	Deferred Charges and Other Assets: Other	3.1	Deferred Credits and Other Liabilities: Other	10.4
Subtotal		206.2		178.5
Total derivatives		$ 269.8		$ 178.5

* The fair values of Derivative Assets and Derivative Liabilities exclude the fair value of cash margin receivables or payables with counterparties subject to netting arrangements. Fair value amounts of derivative contracts (including the fair value amounts of cash margin receivables and payables) for which there is a legal right to set off are presented net on the balance sheets. As such, the gross balances presented in the table above are not indicative of the Company's net economic exposure. Refer to Note 9, Fair Value Measurements, for information on the valuation of derivative instruments.

Following is a reconciliation of the amounts in the tables above to the amounts presented in the consolidated balance sheets:

	2023	2022
Fair value of derivative assets presented above	$ 97.4	$ 269.8
Fair value of cash margin receivable offset with derivatives	49.3	(36.6)
Netting of assets and liabilities with the same counterparty	(69.4)	(117.0)
Total	$ 77.3	$ 116.2
Derivative Instrument Assets, per Consolidated Balance Sheets:		
Current Assets: Other	$ 71.8	$ 113.1
Deferred Charges and Other Assets: Other	5.5	3.1
Total	$ 77.3	$ 116.2
Fair value of derivative liabilities presented above	$ 100.2	$ 178.5
Netting of assets and liabilities with the same counterparty	(69.4)	(117.0)
Total	$ 30.8	$ 61.5
Derivative Instrument Liabilities, per Consolidated Balance Sheets:		
Current Liabilities: Other	$ 23.2	$ 51.1
Deferred Credits and Other Liabilities: Other	7.6	10.4
Total	$ 30.8	$ 61.5

Additionally, at September 30, 2023 2022, the Company had zero and $49.8, respectively, in cash margin receivables not offset with derivatives, which are presented in Accounts Receivable – Other.

Spire Missouri

Spire Missouri has a risk management policy to utilize various derivatives, including futures contracts, exchange-traded options, swaps and over-the-counter instruments for the explicit purpose of managing price risk associated with purchasing and delivering natural gas on a regular basis to customers in accordance with its tariffs. The objective of this policy is to limit Spire Missouri's exposure to natural gas price volatility and to manage, hedge and mitigate substantial price risk. This policy strictly prohibits speculation and permits Spire Missouri to hedge current physical natural gas purchase commitments or forecasted or anticipated future peak (maximum) physical need for natural gas delivered. Costs and cost reductions, including carrying costs, associated with Spire Missouri's use of natural gas derivative instruments are allowed to be passed on to Spire Missouri customers through the operation of its PGA clause, through which the MoPSC allows Spire Missouri to recover gas supply costs, subject to prudence review by the MoPSC. Accordingly, Spire Missouri does not expect any adverse earnings impact as a result of the use of these derivative instruments.

Spire Missouri does not designate these instruments as hedging instruments for financial reporting purposes because gains or losses associated with the use of these derivative instruments are deferred and recorded as regulatory assets or regulatory liabilities pursuant to ASC Topic 980, *Regulated Operations*, and, as a result, have no direct impact on the statements of income.

The timing of the operation of the PGA clause may cause interim variations in short-term cash flows, because Spire Missouri is subject to cash margin requirements associated with changes in the values of these instruments. Nevertheless, carrying costs associated with such requirements are recovered through the PGA clause.

From time to time, Spire Missouri purchases NYMEX futures and options contracts to help stabilize operating costs associated with forecasted purchases of gasoline and diesel fuels used to power vehicles and equipment used in the course of its business. The gains and losses on these contracts are not subject to Spire Missouri's PGA clause. At September 30, 2023, Spire Missouri did not have a material amount of gasoline futures contracts outstanding.

Derivative instruments designated as cash flow hedges of forecasted transactions are recognized on the balance sheets at fair value and the change in the fair value of the effective portion of these hedge instruments is recorded, net of income tax, in OCI. AOCI is a component of Total Common Stock Equity. Amounts are reclassified from AOCI into earnings when the hedged items affect net income, using the same revenue or expense category that the hedged item impacts. As in both 2022 and 2021, there will be no reclassifications into the statements of income during fiscal 2024. Cash flows from hedging transactions are classified in the same category as the cash flows from the items that are being hedged in the statements of cash flows.

Spire Missouri's derivative instruments consist primarily of NYMEX positions. The NYMEX is the primary national commodities exchange on which natural gas derivatives are traded. Open NYMEX natural gas futures positions at September 30, 2023 and 2022 were as follows:

	September 30, 2023		September 30, 2022	
	Notional (MMBtu millions)	Maximum Term (Months)	Notional (MMBtu millions)	Maximum Term (Months)
Natural gas futures purchased	66.5	24	13.0	12

At September 30, 2023, Spire Missouri had also had 16.3 million MMBtu of other price mitigation in place through the use of NYMEX natural gas option-based strategies.

Gains and losses on Spire Missouri's natural gas derivative instruments, which are not designated as hedging instruments for financial reporting purposes, are deferred pursuant to the Spire Missouri's PGA clauses and initially recorded as regulatory assets or regulatory liabilities. Such amounts are recognized in the statements of income as a component of natural gas operating expenses when they are recovered through the PGA clause and reflected in customer billings.

Fair Value of Derivative Instruments in the Balance Sheets

	Derivative Assets*		Derivative Liabilities*	
September 30, 2023	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**
Derivatives not designated as hedging instruments				
Natural gas contracts	Current Assets: Other	$ 6.3	Current Liabilities: Other	$ 50.8
Gasoline and heating oil contracts	Current Assets: Other	0.1		
Total derivatives		$ 6.4		$ 50.8
September 30, 2022				
Derivatives not designated as hedging instruments				
Natural gas contracts	Current Assets: Other	$ 57.8	Current Liabilities: Other	$ 30.7

* The fair values of Derivative Assets and Derivative Liabilities exclude the fair value of cash margin receivables or payables with counterparties subject to netting arrangements. Fair value amounts of derivative contracts (including the fair value amounts of cash margin receivables and payables) for which there is a legal right to set off are presented net on the balance sheets. As such, the gross balances presented in the table above are not indicative of Spire Missouri's net economic exposure. Refer to Note 9, Fair Value Measurements, for information on the valuation of derivative instruments.

Following is a reconciliation of the amounts in the tables above to the amounts presented in Spire Missouri's balance sheets:

	2023	2022
Fair value of derivative assets presented above	$ 6.4	$ 57.8
Fair value of cash margin (payable) receivable offset with derivatives	37.6	(27.1)
Netting of assets and liabilities with the same counterparty	(44.0)	(30.7)
Total	$ —	$ —
Fair value of derivative liabilities presented above	$ 50.8	$ 30.7
Netting of assets and liabilities with the same counterparty	(44.0)	(30.7)
Total	$ 6.8	$ —
Derivative Instrument Liabilities, per Balance Sheets:		
Derivative instrument liabilities	$ 6.8	$ —
Total	$ 6.8	$ —

Additionally, at September 30, 2023 and 2022, Spire Missouri had zero and $24.0, respectively, in cash margin receivables not offset with derivatives, which are presented in Accounts Receivable – Other.

Spire Alabama

Spire Alabama periodically employs a gasoline derivative program to help stabilize operating costs associated with forecasted purchases of gasoline and diesel fuels used to power vehicles and equipment used in the course of its business. The gains or losses on these derivative instruments are not subject to Spire Alabama's GSA rider. There were no such contracts outstanding as of September 30, 2023 and 2022.

11. CONCENTRATIONS OF CREDIT RISK

Spire's Gas Utility segment serves 1.7 million customers in three states across multiple rate classes resulting in a significant amount of revenue diversity. Credit risk is mitigated by the high percentage of residential customers as well as the geographic diversity of the Utilities, though customers for each of the Utilities are concentrated in a single state.

Spire Marketing's accounts receivable attributable to utility companies and their marketing affiliates totaled $53.4 at September 30, 2023. The concentration of transactions with these counterparties has the potential to affect the Company's overall exposure to credit risk, either positively or negatively, in that customers in this group may be affected similarly by changes in economic, industry, or other conditions. Spire Marketing also has concentrations of credit risk with certain individually significant counterparties. At September 30, 2023, the amounts included in accounts receivable from its five largest counterparties (in terms of net accounts receivable exposure) totaled $26.7. Three of these five counterparties are investment-grade-rated integrated utilities, one is a liquefied natural gas project facility with a senior debt issue rating one notch below investment-grade with a positive outlook, and one is a utility marketing affiliate which is not rated but whose owners are all investment-grade public power companies.

To manage these risks, Spire Marketing has established procedures to determine the creditworthiness of its counterparties. These procedures include obtaining credit ratings and credit reports, analyzing counterparty financial statements to assess financial condition, and considering the industry environment in which the counterparty operates. This information is monitored on an ongoing basis. In some instances, Spire Marketing may require credit assurances such as prepayments, letters of credit, or parental guaranties. In addition, Spire Marketing may enter into netting arrangements to mitigate credit risk with counterparties in the energy industry with whom it conducts both sales and purchases of natural gas. Where there is no netting arrangement, Spire Marketing records accounts receivable, accounts payable, and prepayments for physical sales and purchases of natural gas on a gross basis. Sales are typically made on an unsecured credit basis with payment due the month following delivery. Accounts receivable amounts are closely monitored and provisions for uncollectible amounts are accrued when losses are probable.

12. INCOME TAXES

The Company, Spire Missouri, and Spire Alabama are subject to federal income tax as well as income tax in various state and local jurisdictions. Spire files a consolidated federal income tax return and various state income tax returns and allocates income taxes to Spire Missouri, Spire Alabama and its other subsidiaries as if each entity were a separate taxpayer.

The provision for income taxes during the fiscal years ended September 30, 2023, 2022, and 2021 was as follows:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Federal:									
Current	$ 0.7	$ 0.5	$ 0.2	$ —	$ —	$ —	$ —	$ —	$ —
Deferred	30.4	47.0	49.5	10.1	18.2	22.0	15.8	18.1	19.8
Investment tax credits	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	—	—	—
State and local:									
Current	1.2	0.5	1.3	—	—	—	—	—	—
Deferred	6.7	11.1	17.7	1.7	3.3	3.5	4.5	5.1	5.2
Total income tax expense	$ 38.8	$ 58.9	$ 68.5	$ 11.6	$ 21.3	$ 25.3	$ 20.3	$ 23.2	$ 25.0

The effective income tax rate varied from the federal statutory income tax rate for each year due to the following:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Federal income tax statutory rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
State and local income taxes, net of federal income tax benefits	3.7	3.6	3.6	2.6	2.6	2.6	4.1	4.1	4.1
Certain expenses capitalized on books and deducted on tax return	(1.4)	(1.6)	(1.6)	(2.7)	(3.2)	(3.3)	—	—	—
Taxes related to prior years	—	(0.3)	(0.5)		(0.6)	(0.2)	—	—	—
Tax credits *	(3.3)	—	—	(4.2)	—	—	(1.9)	—	—
Amortization of excess deferred taxes	(5.1)	(3.5)	(2.5)	(7.7)	(7.3)	(5.0)	0.2	—	—
Other items – net **	0.2	1.9	0.1	—	3.1	(0.2)	0.1	0.2	0.2
Effective income tax rate	15.1%	21.1%	20.1%	9.0%	15.6%	14.9%	23.5%	25.3%	25.3%

* In 2023, the Company completed a research and development study which encompassed fiscal years 2014 to 2022.

** Other consists primarily of property adjustments.

The significant items comprising the net deferred tax liability or asset as of September 30 were as follows:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Deferred tax assets:						
Reserves not currently deductible	$ 27.7	$ 33.5	$ —	$ 4.0	$ 3.9	$ 7.4
Pension and other postretirement benefits	64.4	72.6	44.7	52.6	17.0	—
Goodwill	—	—	—	—	58.8	73.0
Operating losses	239.2	255.1	89.2	116.9	159.8	140.3
Regulatory amount due to customers, net	30.4	34.5	27.6	30.7	—	—
Other	35.8	24.9	10.5	—	3.0	—
Total deferred tax assets	397.5	420.6	172.0	204.2	242.5	220.7
Deferred tax liabilities:						
Relating to property	(788.0)	(740.0)	(507.7)	(489.3)	(218.7)	(201.6)
Regulatory pension and other postretirement benefits	(80.6)	(92.8)	(53.0)	(72.3)	(25.9)	(1.6)
Deferred gas costs	(67.0)	(75.8)	(64.1)	(74.0)	—	—
Other ***	(205.6)	(187.1)	(79.0)	(68.7)	(7.0)	(6.5)
Total deferred tax liabilities	(1,141.2)	(1,095.7)	(703.8)	(704.3)	(251.6)	(209.7)
Net deferred tax (liability) asset	$ (743.7)	$ (675.1)	$ (531.8)	$ (500.1)	$ (9.1)	$ 11.0

*** For Spire, Other consists primarily of goodwill-related liabilities.

As indicated in Note 1, Summary of Significant Accounting Policies, the Company's regulated operations accounting for income taxes is impacted by ASC Topic 980, *Regulated Operations*. The Tax Cuts and Jobs Act of 2017 (TCJA) reduced the corporate federal income tax rate, and the corresponding reductions in deferred income tax balances resulted in amounts previously collected from utility customers for these deferred taxes becoming refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes are to be passed back to customers for certain accelerated tax depreciation benefits. In fiscal 2018, the MoPSC Amended Report and Order took effect and the estimated excess accumulated deferred income tax began to be returned to Spire Missouri customers in rates. During the prior fiscal year, the amount of excess accumulated deferred income taxes was trued up as part of the rate proceeding. The amount being returned related to the TCJA has been updated and in addition the excess accumulated deferred income taxes related to the Missouri tax rate change began to be returned in fiscal 2022. For Spire Missouri, excess accumulated deferred taxes of $10.0, $9.9, and $8.4, respectively, were returned in fiscal year 2023, 2022, and 2021. The treatment for accumulated deferred income tax balances for Spire Alabama, Spire Gulf and Spire Mississippi started to be accounted for during fiscal 2023. For Spire Gulf, $3.1 was returned to ratepayers. Spire Mississippi returned less than $0.1. For Spire Alabama, the deferred tax position resulted in a collection from customers of $0.2 for fiscal 2023.

On April 14, 2023, the IRS issued Revenue Procedure 2023-15 that provides a safe harbor method of accounting that taxpayers may use to determine whether to deduct or capitalize expenditures to repair, maintain, replace, or improve natural gas transmission and distribution property. Under the revenue procedure, the method of accounting will depend on the property's classification as linear transmission property, linear distribution property, or non-linear property. The revenue procedure may be adopted in tax years ending after May 1, 2023. The Company is evaluating the revenue procedure and the impact adopting the safe harbor would have on its property that is subject to this guidance.

In assessing whether deferred tax assets are realizable, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. Management considers all significant available positive and negative evidence, including the existence of losses in recent years, the timing of deferred tax liability reversals, projected future taxable income, taxable income in carryback years, and tax planning strategies to assess the need for a valuation allowance. Based upon this evidence, management believes it is more likely than not the Company, Spire Missouri and Spire Alabama will realize the benefits of these deferred tax assets.

As of September 30, 2023, Spire, and on a separate company basis, Spire Missouri and Spire Alabama, had federal and state loss carryforwards, contribution carryforwards, and various tax credit carryforwards as shown below.

	Spire	Spire Missouri	Spire Alabama
Federal and state loss carryforwards	$ 1,000.3	$ 352.4	$ 624.1
Contribution carryforwards	6.1	5.6	-
Tax credit carryforwards	13.1	8.5	1.6

For federal tax purposes, Spire Missouri's and Spire Alabama's loss carryforwards may be utilized against income from another member of the consolidated group. The loss carryforwards begin to expire in fiscal 2030 for certain state purposes and fiscal 2035 for federal and other state purposes. Contribution carryforwards and tax credit carryforwards are expected to be utilized prior to their expiration.

The Company, Spire Missouri and Spire Alabama recognize the tax benefit from a tax position only if it is at least more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. Unrecognized tax benefits are reported as a reduction of a deferred tax asset for an operating loss carryforward to the extent the recognition of the benefit would impact the operating loss carryforward, pursuant to ASU 2013-11. The following table presents a reconciliation of the beginning and ending balances of unrecognized tax benefits:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Unrecognized tax benefits, beginning of year	$ 19.6	$ 16.4	$ 13.2	$ 19.3	$ 16.1	$ 13.0	$ —	$ —	$ —
Increases related to tax positions taken in current year	4.2	3.3	3.2	3.6	3.2	3.1	0.3	—	—
Reductions due to lapse of applicable statute of limitations	—	(0.1)	—	—	—	—	—	—	—
Unrecognized tax benefits, end of year	$ 23.8	$ 19.6	$ 16.4	$ 22.9	$ 19.3	$ 16.1	$ 0.3	$ —	$ —

As of September 30, 2023 and 2022, the amounts of unrecognized tax benefits which, if recognized, would affect the effective tax rate were $5.9 and $4.0, respectively, for the Company, $5.1 and $3.7, respectively, for Spire Missouri, and $0.3 and $0.0, respectively, for Spire Alabama. It is reasonably possible that events will occur in the next 12 months that could increase or decrease the amount of the unrecognized tax benefits. The Company, Spire Missouri, and Spire Alabama do not expect that any such change will be significant to the balance sheets. Spire Alabama reported no unrecognized tax benefits for fiscal years 2022 and 2021.

The Company, Spire Missouri, and Spire Alabama record potential interest and penalties related to uncertain tax positions as interest expense and other income deductions, respectively. As of September 30, 2023 and 2022, interest accrued associated with uncertain tax positions was de minimis, and no penalties were accrued.

The Company, Spire Missouri, and Spire Alabama are no longer subject to examination for fiscal years prior to 2020, except to the extent the net operating losses from prior years are reviewed.

13. PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS

Pension Plans

Spire and the Utilities maintain pension plans for their employees. Spire Missouri and Spire Alabama have non-contributory, defined benefit, trusteed forms of pension plans covering the majority of their employees. Qualified plan assets are comprised of mutual and commingled funds consisting of U.S. equities with varying strategies, global equities, alternative investments, and fixed income investments.

The net periodic pension cost includes components shown in the following table. The components other than the service costs and regulatory adjustment are presented in "Other Income, Net" in the income statement, except for Spire Alabama's losses on lump-sum settlements. Such losses are capitalized in regulatory balances and amortized over the remaining actuarial life of individuals in the plan, and that amortization is presented in "Other Income, Net."

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Service cost – benefits earned during the period	$ 16.3	$ 20.0	$ 21.7	$ 11.4	$ 14.4	$ 15.4	$ 4.2	$ 4.8	$ 5.5
Interest cost on projected benefit obligation	25.1	21.5	20.7	17.8	14.7	14.2	4.8	4.7	4.6
Expected return on plan assets	(24.5)	(31.3)	(31.6)	(18.0)	(22.7)	(22.5)	(3.5)	(5.2)	(5.8)
Amortization of prior service credit	(4.5)	(4.5)	(3.1)	(1.9)	(1.9)	(0.6)	(2.4)	(2.4)	(2.3)
Amortization of actuarial loss	6.6	11.9	14.9	6.1	9.6	11.0	0.9	2.4	3.9
Loss on lump-sum settlements and curtailments	9.7	33.6	18.2	0.6	27.3	11.6	9.1	6.3	6.6
Subtotal	28.7	51.2	40.8	16.0	41.4	29.1	13.1	10.6	12.5
Regulatory adjustment	26.3	12.5	20.6	27.1	9.9	19.0	(1.7)	1.7	0.7
Net pension cost	$ 55.0	$ 63.7	$ 61.4	$ 43.1	$ 51.3	$ 48.1	$ 11.4	$ 12.3	$ 13.2

Other changes in plan assets and pension benefit obligations recognized in other comprehensive income or loss include the following:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Current year actuarial loss (gain)	$ 14.5	$(16.9)	$ (8.1)	$ 5.7	$ 0.9	$ (0.9)	$ 9.0	$(16.0)	$ (1.5)
Amortization of actuarial loss	(6.6)	(11.9)	(14.9)	(6.1)	(9.6)	(11.0)	(0.9)	(2.4)	(3.9)
Acceleration of loss recognized due to settlement	(9.7)	(33.6)	(18.2)	(0.6)	(27.3)	(11.6)	(9.1)	(6.3)	(6.6)
Current year service credit	—	—	(17.9)	—	—	(17.9)	—	—	—
Amortization of prior service credit	4.5	4.5	3.1	1.9	1.9	0.6	2.4	2.4	2.3
Subtotal	2.7	(57.9)	(56.0)	0.9	(34.1)	(40.8)	1.4	(22.3)	(9.7)
Regulatory adjustment	(2.8)	56.3	57.3	(1.0)	32.5	42.1	(1.4)	22.3	9.7
Total recognized in OCI	$ (0.1)	$ (1.6)	$ 1.3	$ (0.1)	$ (1.6)	$ 1.3	$ —	$ —	$ —

Spire pension obligations are driven by separate plan and regulatory provisions governing Spire Missouri, Spire Alabama and Spire EnergySouth pension plans.

Pursuant to the provisions of Spire Missouri's and Spire Alabama's pension plans, pension obligations may be satisfied by monthly annuities, lump-sum cash payments, or special termination benefits. Lump-sum payments are recognized as settlements (which can result in gains or losses) only if the total of such payments exceeds the sum of service and interest costs in a specific year. Special termination benefits, when offered, are also recognized as settlements which can result in gains or losses.

In the fiscal year ended September 30, 2023, one Spire Missouri plan and two Spire Alabama plans met the criteria for settlement recognition, requiring re-measurement of the obligation under those plans using updated census data and assumptions for discount rate and mortality. For the remeasurements, the discount rate for the Missouri plan was updated to 6.3% at September 30, 2023 (from 5.8% at September 30, 2022), and the discount rate for the Alabama plans were updated to 6.2% and 6.25%, respectively, (from 5.7% and 5.65%, respectively). Lump-sum payments recognized as settlements during fiscal 2023 was $48.7 ($9.9 attributable to Spire Missouri and $38.8 to Spire Alabama). The Alabama regulatory tariff requires that settlement losses be amortized over the remaining actuarial life of the individuals in the plan, and in fiscal 2023 the amortization periods range from 11.8 years to 13.4 years. Therefore, no lump sum settlement expenses were recorded in the fiscal year ended September 30, 2023.

In the fiscal year ended September 30, 2022, two Spire Missouri plans and two Spire Alabama plans met the criteria for settlement recognition, requiring re-measurement of the obligation under those plans using updated census data and assumptions for discount rate and mortality. For the remeasurements, the discount rates for the Missouri plans were updated to 5.7% and 5.8%, respectively, for each plan at September 30, 2022 (from 3.0%, at September 30, 2021), and the discount rate for the Alabama plans were updated to 5.7% and 5.65%, respectively, (from 3.1% and 3.0%, respectively). Lump-sum payments recognized as settlements during fiscal 2022 was $109.3 ($87.0 attributable to Spire Missouri and $22.3 to Spire Alabama). The Alabama regulatory tariff requires that settlement losses be amortized over the remaining actuarial life of the individuals in the plan, and in fiscal 2022 the amortization periods range from 11.4 years to 12.3 years. Therefore, no lump sum settlement expenses were recorded in the fiscal year ended September 30, 2022.

Effective December 23, 2021, the pension cost for Spire Missouri's western territory (Missouri West) included in customer rates was reduced from $5.5 to $4.4 per year, the pension cost included in Spire Missouri's eastern territory (Missouri East) customer rates was increased from $29.0 to $32.4 per year. Subsequently, on December 26, 2022, the amount in Missouri East was lowered to $29.9. The difference between these amounts and pension expense as calculated pursuant to the above and that otherwise would be included in the statements of income and statements of comprehensive income is deferred as a regulatory asset or regulatory liability.

Also effective December 23, 2021, Missouri East prepaid pension assets and other postretirement benefits that were previously being included in rates at $21.6 per year for eight years were reduced to $11.0 per year, with the amortization period being reset for another eight years. Missouri West net liability for pension and other postretirement benefits that were previously reducing rates by $3.3 per year for eight years were reduced to a $1.1 reduction in rates per year, with the amortization period being reset for another eight years. Subsequently, on December 26, 2022, Missouri East amortization was lowered to $6.9 and Missouri West to a reduction of $0.8.

The following table shows the reconciliation of the beginning and ending balances of the pension benefit obligation at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Benefit obligation, beginning of year	$ 464.4	$ 689.6	$ 320.6	$ 479.0	$ 97.8	$ 149.4
Service cost	16.3	20.0	11.4	14.4	4.2	4.8
Interest cost	25.1	21.5	17.8	14.7	4.8	4.7
Actuarial (gain) loss	(1.1)	(173.9)	(4.9)	(116.2)	5.4	(42.4)
Settlement loss	9.7	33.4	0.6	27.9	9.1	5.6
Settlement benefits paid	(48.8)	(109.3)	(9.9)	(87.0)	(38.8)	(22.3)
Regular benefits paid	(26.9)	(16.9)	(22.4)	(12.2)	(1.9)	(2.0)
Benefit obligation, end of year	$ 438.7	$ 464.4	$ 313.2	$ 320.6	$ 80.6	$ 97.8
Accumulated benefit obligation, end of year	$ 433.1	$ 457.1	$ 309.5	$ 315.0	$ 78.8	$ 96.2

In 2023, qualified plans except Spire Alabama's experienced actuarial gains. These gains were driven by the discount rates increasing by between 50 and 55 basis points, and were only partly offset by actuarial asset losses, as the trusts experienced actual returns below the actuarial expected returns. However, Spire Alabama had actuarial losses relating to larger than projected settlements, which, when combined with the actuarial asset losses, more than offset the gains relating to the increase in the discount rate.

The following table sets forth the reconciliation of the beginning and ending balances of the fair value of plan assets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Fair value of plan assets, beginning of year	$ 332.7	$ 498.9	$ 235.9	$ 364.0	$ 57.3	$ 82.8
Actual return on plan assets	9.1	(92.5)	7.5	(66.7)	—	(15.6)
Employer contributions	58.9	52.4	30.3	37.8	27.9	14.4
Settlement benefits paid	(39.1)	(109.3)	(9.3)	(87.0)	(29.7)	(22.3)
Regular benefits paid	(26.9)	(16.8)	(22.4)	(12.2)	(1.9)	(2.0)
Fair value of plan assets, end of year	$ 334.7	$ 332.7	$ 242.0	$ 235.9	$ 53.6	$ 57.3
Funded status of plans, end of year	$ (104.0)	$ (131.7)	$ (71.2)	$ (84.7)	$ (27.0)	$ (40.5)

The following table sets forth the amounts recognized in the balance sheets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Current liabilities	$ (1.6)	$ (1.1)	$ (1.6)	$ (1.1)	$ —	$ —
Noncurrent liabilities	(102.4)	(130.6)	(69.6)	(83.6)	(27.0)	(40.5)
Total	$ (104.0)	$ (131.7)	$ (71.2)	$ (84.7)	$ (27.0)	$ (40.5)

Pre-tax amounts recognized in accumulated other comprehensive loss not yet recognized as components of net periodic pension cost consist of:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Net actuarial loss	$ 130.1	$ 132.0	$ 92.5	$ 93.6	$ 40.2	$ 41.2
Prior service credit	(31.2)	(35.7)	(16.2)	(18.1)	(13.9)	(16.3)
Subtotal	98.9	96.3	76.3	75.5	26.3	24.9
Adjustments for amounts included in regulatory assets	(95.9)	(93.1)	(73.3)	(72.3)	(26.3)	(24.9)
Total	$ 3.0	$ 3.2	$ 3.0	$ 3.2	$ —	$ —

The assumptions used to calculate net periodic pension costs for Spire Missouri are as follows:

	2023	2022	2021
Weighted average discount rate - Spire Missouri East plan	5.70%	3.00%	2.85%
Weighted average discount rate - Spire Missouri West plan	5.80%	3.00%	2.75%
Weighted average rate of future compensation increase	3.00%	3.00%	3.00%
Expected long-term rate of return on plan assets	6.50%	6.75%	6.75%

The assumptions used to calculate net periodic pension costs for Spire Alabama are as follows:

	2023	2022	2021
Weighted average discount rate	5.65%/5.7%	3.10%/3.0%	2.95%/2.80%
Weighted average rate of future compensation increase	3.00%	3.00%	3.00%
Expected long-term rate of return on plan assets	6.50%	6.75%	6.75%

The discount rate is based on long-term, high quality bond indices at the measurement date. The expected long-term rate of return on plan assets is based on historical and projected rates of return for current and planned asset classes in the investment portfolio. Assumed projected rates of return for each asset class were selected after analyzing historical experience and future expectations of the returns. The overall expected rate of return for the portfolio was developed based on the target allocation for each class.

The assumptions used to calculate the benefit obligations are as follows:

	2023	2022
Weighted average discount rate - Spire Missouri East plan	6.25%	5.70%
Weighted average discount rate - Spire Missouri West plan	6.30%	5.80%
Weighted average discount rate - Spire Alabama plans	6.2%/6.25%	5.70%/5.65%
Weighted average rate of future compensation increase	3.00%	3.00%
Cash balance interest crediting rate - Spire Alabama / Spire Missouri	4.25%	4.25%

The following table sets forth the year-end projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for plans that have a projected benefit obligation and an accumulated benefit obligation in excess of plan assets:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Projected benefit obligation	$ 438.7	$ 464.4	$ 313.2	$ 320.6	$ 80.6	$ 97.8
Accumulated benefit obligation	433.1	457.1	309.5	315.0	78.8	96.2
Fair value of plan assets	334.7	332.7	242.0	235.9	53.6	57.3

The following tables set forth the targeted and actual plan assets by category as of September 30 of each year for Spire Missouri and Spire Alabama:

Spire Missouri	2023 Target	2023 Actual	2022 Target	2022 Actual
Return seeking assets	70.0%	77.0%	70.0%	74.3%
Liability hedging assets	30.0%	20.0%	30.0%	22.8%
Cash and cash equivalents	—%	3.0%	—%	2.9%
Total	100.0%	100.0%	100.0%	100.0%

Spire Alabama	2023 Target	2023 Actual	2022 Target	2022 Actual
Return seeking assets	75.0%	76.0%	70.0%	68.7%
Liability hedging assets	25.0%	15.0%	30.0%	25.3%
Cash and cash equivalents	—%	9.0%	—%	6.0%
Total	100.0%	100.0%	100.0%	100.0%

The Spire Inc. Retirement Plans Committee is responsible for the administration of the various plans, and all payments under the plans require direction of that committee. The Spire Inc. Defined Benefit Plan Investment Review Committee utilizes an Outsourced Chief Investment Officer (OCIO) model where investment decisions are outsourced to investment consultants (Willis Towers Watson), who in turn become co-fiduciaries with the committee.

For all plans, the Company employs a total return investment approach whereby a mix of equities and fixed income investments are used to maximize the long-term return of plan assets with a prudent level of risk. Risk tolerance is established through consideration of plan liabilities, plan funded status, corporate financial condition and market conditions. The Company has developed an investment strategy that focuses on asset allocation, diversification and quality guidelines. The investment goals are to obtain an adequate level of return to meet future obligations of the plan by providing above average risk-adjusted returns with a risk exposure in the mid-range of comparable funds. Comparative market and peer group benchmarks are utilized to ensure that investment managers are performing satisfactorily. The Company seeks to maintain an appropriate level of diversification to minimize the risk of large losses in a single asset class. Accordingly, plan assets for the pension plans do not have a concentration of assets in a single entity, industry, country, commodity or class of investment fund.

The following table sets forth expected pension benefit payments for the succeeding five fiscal years, and in aggregate for the five fiscal years thereafter, for Spire, Spire Missouri, and Spire Alabama:

	2024	2025	2026	2027	2028	2029 – 2032
Spire	$ 52.4	$ 45.3	$ 41.8	$ 41.8	$ 43.3	$ 202.8
Spire Missouri	41.0	34.1	30.4	29.4	30.5	139.1
Spire Alabama	8.0	7.7	7.8	8.7	8.9	44.1

The funding policy of Spire Missouri and Spire Alabama is to contribute an amount not less than the minimum required by government funding standards nor more than the maximum deductible amount for federal income tax purposes. Spire Missouri's contributions to the pension plans in fiscal 2024 are anticipated to be $21.6 into the qualified trusts, and $0 into the non-qualified plans. Spire Alabama's contributions to the pension plans in fiscal 2024 are anticipated to be $16.4 into the qualified trusts.

Other Postretirement Benefits

Spire and the Utilities provide certain life insurance benefits at retirement. Spire Missouri plans provide for medical insurance after early retirement until age 65. For retirements prior to January 1, 2015, the Missouri West plans provided medical insurance after retirement until death. The Spire Alabama plans provide medical insurance upon retirement until death for certain retirees depending on the type of employee and the date the employee was originally hired.

Net periodic postretirement benefit costs consist of the following components:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Service cost – benefits earned during the period	$ 4.8	$ 7.5	$ 7.3	$ 4.0	$ 6.3	$ 6.2	$ 0.7	$ 1.1	$ 0.9
Interest cost on accumulated postretirement benefit obligation	8.5	6.0	6.0	6.5	4.5	4.5	1.8	1.4	1.3
Expected return on plan assets	(15.8)	(16.8)	(16.1)	(10.5)	(11.3)	(10.9)	(5.0)	(5.2)	(4.9)
Amortization of prior service cost (credit)	0.3	1.0	1.0	0.6	0.7	0.7	(0.3)	0.3	0.3
Amortization of actuarial gain	(4.0)	(2.2)	(1.6)	(3.2)	(1.9)	(1.5)	(0.5)	—	—
Subtotal	(6.2)	(4.5)	(3.4)	(2.6)	(1.7)	(1.0)	(3.3)	(2.4)	(2.4)
Regulatory adjustment	0.6	3.3	13.2	1.8	5.0	15.0	(1.3)	(1.8)	(1.8)
Net postretirement benefit (income) cost	$ (5.6)	$ (1.2)	$ 9.8	$ (0.8)	$ 3.3	$ 14.0	$ (4.6)	$ (4.2)	$ (4.2)

Other changes in plan assets and postretirement benefit obligations recognized in OCI include the following:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Current year actuarial (gain) loss	$(24.4)	$ 15.8	$(41.0)	$(21.5)	$ 9.8	$(29.0)	$ (1.1)	$ 5.9	$ (9.9)
Amortization of actuarial gain	4.0	2.2	1.6	3.2	1.9	1.5	0.5	—	—
Current year prior service cost	—	(6.3)	—		(1.1)	—	—	(5.2)	—
Amortization of prior service (cost) credit	(0.3)	(1.0)	(1.0)	(0.6)	(0.7)	(0.7)	0.3	(0.3)	(0.3)
Subtotal	(20.7)	10.7	(40.4)	(18.9)	9.9	(28.2)	(0.3)	0.4	(10.2)
Regulatory adjustment	20.7	(10.7)	40.4	18.9	(9.9)	28.2	0.3	(0.4)	10.2
Total recognized in OCI	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

Pursuant to a MoPSC Order, the return on plan assets is based on the market-related value of plan assets implemented prospectively over a four-year period. Gains and losses not yet includible in postretirement benefit cost are amortized only to the extent that such gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market-related value of plan assets. Such excess is amortized over the average remaining service life of active participants. Effective December 23, 2021, the $8.6 allowance for recovery in rates for Spire Missouri's postretirement benefit plans was discontinued. The difference between no recovery in rates and postretirement expense as calculated pursuant to the above and that otherwise would be included in the statements of income and statements of comprehensive income is deferred as a regulatory asset or regulatory liability. Effective with the resolution of the 2022 Missouri rate case in December 2022, net liabilities

for postretirement benefits reduced rates $0.9 and $0.1 per year for Missouri East and Missouri West, respectively.

The following table sets forth the reconciliation of the beginning and ending balances of the postretirement benefit obligation at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Benefit obligation, beginning of year	$ 148.1	$ 204.2	$ 114.8	$ 151.7	$ 29.9	$ 48.0
Service cost	4.8	7.5	4.0	6.3	0.7	1.1
Interest cost	8.5	6.0	6.5	4.5	1.8	1.4
Actuarial (gain) loss	(10.6)	(52.6)	(13.4)	(37.7)	4.2	(13.6)
Plan amendments	—	(6.2)	—	(1.0)	—	(5.2)
Retiree drug subsidy program	0.2	0.2	0.2	0.2	—	—
Benefits paid	(8.4)	(11.0)	(6.8)	(9.2)	(1.5)	(1.8)
Benefit obligation, end of year	$ 142.6	$ 148.1	$ 105.3	$ 114.8	$ 35.1	$ 29.9

In fiscal 2023, the actuarial gains for all qualified Spire plans were driven by the increase in the discount rate used to calculate the benefit obligation, combined with actuarial asset gains resulting from actual trust returns exceeding the expected returns. For Spire Alabama, these gains were more than offset by the loss associated with the difference between actual and assumed enrollment in Health Retirement Accounts.

The following table sets forth the reconciliation of the beginning and ending balances of the fair value of plan assets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Fair value of plan assets at beginning of year	$ 264.7	$ 326.9	$ 176.7	$ 221.7	$ 83.3	$ 99.4
Actual return on plan assets	29.9	(51.6)	18.8	(36.2)	10.2	(14.3)
Employer contributions	0.1	0.4	0.1	0.4	—	—
Benefits paid	(8.4)	(11.0)	(6.8)	(9.2)	(1.5)	(1.8)
Fair value of plan assets, end of year	$ 286.3	$ 264.7	$ 188.8	$ 176.7	$ 92.0	$ 83.3
Funded status of plans, end of year	$ 143.7	$ 116.6	$ 83.5	$ 61.9	$ 56.9	$ 53.4

The following table sets forth the amounts recognized in the balance sheets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Noncurrent assets	$ 180.7	$ 151.6	$ 120.5	$ 96.9	$ 56.9	$ 53.4
Current liabilities	(0.4)	(0.3)	(0.4)	(0.3)	—	—
Noncurrent liabilities	(36.6)	(34.7)	(36.6)	(34.7)	—	—
Total	$ 143.7	$ 116.6	$ 83.5	$ 61.9	$ 56.9	$ 53.4

Pre-tax amounts recognized in accumulated other comprehensive loss not yet recognized as components of net periodic postretirement benefit cost consist of:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Net actuarial gain	$ (103.3)	$ (83.3)	$ (92.3)	$ (74.2)	$ (6.1)	$ (5.6)
Prior service cost (credit)	7.0	7.1	7.4	7.9	(0.4)	(0.8)
Subtotal	(96.3)	(76.2)	(84.9)	(66.3)	(6.5)	(6.4)
Adjustments for amounts included in regulatory assets	96.3	76.2	84.9	66.3	6.5	6.4
Total	$ —	$ —	$ —	$ —	$ —	$ —

The assumptions used to calculate net periodic postretirement benefit costs for Spire Missouri are as follows:

	2023	2022	2021
Weighted average discount rate - Spire Missouri plans	5.80%	2.95%	2.75%
Weighted average rate of future compensation increase	3.00%	3.00%	3.00%
Expected long-term rate of return on plan assets - Spire Missouri plans	5.50%	5.75%	5.75%

The assumptions used to calculate net periodic postretirement benefit costs for Spire Alabama are as follows:

	2023	2022	2021
Weighted average discount rate	5.80%	2.95%	2.75%
Expected long-term rate of return on plan assets	4.75%/6.0%	5.00%/6.25%	5.00%/6.25%

The discount rate is based on long-term, high quality bond indices at the measurement date. The expected long-term rate of return on plan assets is based on historical and projected rates of return for current and planned asset classes in the investment portfolio. Assumed projected rates of return for each asset class were selected after analyzing historical experience and future expectations of the returns. The overall expected rate of return for the portfolio was developed based on the target allocation for each class.

The assumptions used to calculate the accumulated postretirement benefit obligations are as follows:

	2023	2022
Weighted average discount rate - Spire Alabama plans and Spire Missouri Plans	6.30%	5.80%
Weighted average rate of future compensation increase - Spire Missouri East plans	3.00%	3.00%

The assumed medical cost trend rates at September 30 are as follows:

	2023	2022
Medical cost trend assumed for next year - Spire Alabama and Spire Missouri	6.50%	6.75%
Rate to which the medical cost trend rate is assumed to decline (the ultimate medical cost trend rate)	5.00%	5.00%
Year the rate reaches the ultimate trend	2030	2028

The following tables set forth the targeted and actual plan assets by category as of September 30 of each year for Spire Missouri and Spire Alabama:

Spire Missouri	Target	2023 Actual	2022 Actual
Equity securities	60.0%	58.9%	58.7%
Debt securities	40.0%	38.1%	40.5%
Cash and cash equivalents	—%	3.0%	0.8%
Total	100.0%	100.0%	100.0%

Spire Alabama	Target	2023 Actual	2022 Actual
Equity securities	60.5%	59.9%	57.7%
Debt securities	39.5%	40.1%	42.3%
Total	100.0%	100.0%	100.0%

Missouri and Alabama state laws provide for the recovery in rates of costs accrued pursuant to GAAP provided that such costs are funded through an independent, external funding mechanism. The Utilities have established Voluntary Employees' Beneficiary Association and Rabbi Trusts as external funding mechanisms. Their investment policies seek to maximize investment returns consistent with their tolerance for risk. Outside investment management specialists are utilized in each asset class. Such specialists are provided with guidelines, where appropriate, designed to ensure that the investment portfolio is managed in accordance with policy. Performance and compliance with the guidelines is regularly monitored. Spire Missouri and Spire Alabama currently invest in mutual funds which are rebalanced periodically to the target allocation. The mutual funds are diversified across U.S. stock and bond markets, and for Spire Alabama, international stock markets.

The following table sets forth expected postretirement benefit payments for the succeeding five fiscal years, and in aggregate for the five fiscal years thereafter for Spire, Spire Missouri, and Spire Alabama:

	2024	2025	2026	2027	2028	2029 – 2032
Spire	$ 14.6	$ 14.8	$ 14.9	$ 14.8	$ 14.5	$ 68.6
Spire Missouri	11.6	11.8	11.8	11.7	11.4	52.2
Spire Alabama	2.9	2.9	2.9	2.9	2.9	15.0

The Utilities' funding policy is to contribute amounts to the trusts equal to the periodic benefit cost calculated pursuant to GAAP as recovered in rates. For both Spire Missouri and Spire Alabama there are no anticipated contributions to the postretirement plans in fiscal 2024.

Other Plans

Spire Services Inc. sponsors a 401(k) plan that cover substantially all employees of Spire Inc. and its subsidiaries. The plan allows employees to contribute a portion of their base pay in accordance with specific guidelines. The cost of the defined contribution plan for Spire Inc. totaled $15.5, for fiscal years 2023, 2022, and 2021, respectively. Spire Missouri provides a match of such contributions within specific limits. The cost of the defined contribution plan for Spire Missouri amounted to $9.1, $10.9, and $10.9 for fiscal years 2023, 2022, and 2021, respectively. Spire Alabama also provides a match of employee contributions within specific limits. The cost of the defined contribution plan for Spire Alabama amounted to $3.1, $3.6, and $2.9 for fiscal years 2023, 2022, and 2021, respectively.

Fair Value Measurements of Pension and Other Postretirement Plan Assets

Spire

The table below categorizes the fair value measurements of the Spire pension plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 14.8	$ —	$ 14.8	$ 11.5	$ —	$ 11.5
Equity funds - global (including U.S.)	—	139.0	139.0	—	122.2	122.2
Real asset funds	—	55.2	55.2	—	61.0	61.0
Debt securities:						
U.S. bond funds	27.8	—	27.8	42.3	—	42.3
U.S. government index funds	36.2	—	36.2	36.1	—	36.1
Global funds (including U.S.)	—	61.7	61.7	—	59.6	59.6
Total	$ 78.8	$ 255.9	$ 334.7	$ 89.9	$ 242.8	$ 332.7

The table below categorizes the fair value measurements of Spire's postretirement plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 5.1	$ —	$ 5.1	$ 3.5	$ —	$ 3.5
U.S. stock/bond mutual funds	188.2	76.5	264.7	177.1	69.4	246.5
International fund	—	16.5	16.5	0.8	13.9	14.7
Total	$ 193.3	$ 93.0	$ 286.3	$ 181.4	$ 83.3	$ 264.7

Cash and cash equivalents include money market mutual funds valued based on quoted market prices. Debt securities are valued based on broker/dealer quotations or by using observable market inputs. The stock and bond mutual funds are valued at the quoted market price of the identical securities.

Spire Missouri

The table below categorizes the fair value measurements of Spire Missouri's pension plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 6.8	$ —	$ 6.8	$ 5.7	$ —	$ 5.7
Equity funds - global (including U.S.)	—	99.4	99.4	—	85.7	85.7
Real asset funds	—	40.2	40.2	—	47.2	47.2
Debt securities:						
U.S. bond funds	20.9	—	20.9	29.4	—	29.4
U.S. government index funds	28.7	—	28.7	24.6	—	24.6
Global funds (including U.S.)	—	46.0	46.0	—	43.3	43.3
Total	$ 56.4	$ 185.6	$ 242.0	$ 59.7	$ 176.2	$ 235.9

The table below categorizes the fair value measurements of Spire Missouri's postretirement plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 4.3	$ —	$ 4.3	$ 2.7	$ —	$ 2.7
U.S. stock/bond mutual funds	184.5	—	184.5	174.0	—	174.0
Total	$ 188.8	$ —	$ 188.8	$ 176.7	$ —	$ 176.7

Cash and cash equivalents include money market mutual funds valued based on quoted market prices. Debt securities are valued based on broker/dealer quotations or by using observable market inputs. The stock and bond mutual funds are valued at the quoted market price of the identical securities.

Spire Alabama

The table below categorizes the fair value measurements of Spire Alabama's pension plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 4.6	$ —	$ 4.6	$ 3.5	$ —	$ 3.5
Equity funds - global (including U.S.)	—	22.9	22.9	—	21.6	21.6
Real asset funds	—	8.7	8.7	—	8.1	8.1
Debt securities:						
U.S. bond funds	4.0	—	4.0	7.7	—	7.7
U.S. government index funds	4.3	—	4.3	6.8	—	6.8
Global funds (including U.S.)	—	9.1	9.1	—	9.6	9.6
Total	$ 12.9	$ 40.7	$ 53.6	$ 18.0	$ 39.3	$ 57.3

The table below categorizes the fair value measurements of Spire Alabama's postretirement plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
U.S. stock/bond mutual funds	$ —	$ 76.5	$ 76.5	$ —	$ 69.4	$ 69.4
International fund	—	15.5	15.5	—	13.9	13.9
Total	$ —	$ 92.0	$ 92.0	$ —	$ 83.3	$ 83.3

Cash and cash equivalents include money market mutual funds valued based on quoted market prices. Debt securities are valued based on broker/dealer quotations or by using observable market inputs. The stock and bond mutual funds are valued at the quoted market price of the identical securities.

14. INFORMATION BY OPERATING SEGMENT

The Company has three reportable segments: Gas Utility, Gas Marketing, and Midstream. The Gas Utility segment is the aggregation of the operations of the Utilities. The Gas Marketing segment includes the results of Spire Marketing, a subsidiary engaged in the non-regulated marketing of natural gas and related activities, including utilizing natural gas storage contracts for providing natural gas sales. The Midstream segment includes Spire STL Pipeline, a subsidiary of Spire providing interstate natural gas pipeline transportation services, and Spire Storage, a subsidiary of Spire providing interstate natural gas storage services. Other components of the Company's consolidated information include Spire's subsidiaries engaged in the operation of a propane pipeline and risk management, among other activities, and unallocated corporate items, including certain debt and associated interest costs.

Accounting policies are described in Note 1, Summary of Significant Accounting Policies. Intersegment transactions include sales of natural gas from Spire Marketing to Spire Missouri and Spire Alabama, sales of natural gas from Spire Missouri to Spire Marketing, sales of natural gas from Spire Alabama to Spire Marketing, propane transportation services provided by Spire NGL Inc. to Spire Missouri, and propane storage services provided by Spire Missouri to Spire NGL Inc.

Management evaluates the performance of the operating segments based on the computation of net economic earnings. Net economic earnings exclude from reported net income, as applicable, the after-tax impacts of fair value accounting and timing adjustments associated with energy-related transactions, the impacts of acquisition, divestiture and restructuring activities, and the largely non-cash impacts of other non-recurring or unusual items such as certain regulatory, legislative or GAAP standard-setting actions.

2023	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Revenues from external customers	$ 2,456.6	$ 179.1	$ 29.9	$ 0.7	$ —	$ 2,666.3
Intersegment revenues	0.3	—	36.2	16.0	(52.5)	—
Total Operating Revenues	2,456.9	179.1	66.1	16.7	(52.5)	2,666.3
Depreciation and amortization expense	244.4	1.5	8.4	0.5	—	254.8
Interest expense	139.9	—	8.6	72.1	(34.9)	185.7
Income tax expense (benefit)	32.7	12.8	3.8	(10.5)	—	38.8
Net economic earnings (loss)	200.5	47.6	14.1	(34.1)	—	228.1
Capital expenditures	588.6	0.4	73.6	(0.1)	—	662.5

2022	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Revenues from external customers	$ 1,945.6	$ 234.9	$ 17.4	$ 0.6	$ —	$ 2,198.5
Intersegment revenues	0.5	—	35.7	15.5	(51.7)	—
Total Operating Revenues	1,946.1	234.9	53.1	16.1	(51.7)	2,198.5
Depreciation and amortization expense	227.9	1.4	7.5	0.5	—	237.3
Interest expense	86.4	—	4.9	37.3	(8.8)	119.8
Income tax expense (benefit)	49.6	11.9	4.5	(7.1)	—	58.9
Net economic earnings (loss)	202.7	27.0	11.1	(24.5)	—	216.3
Capital expenditures	528.6	0.9	22.6	0.1	—	552.2

2021	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Revenues from external customers	$ 2,118.2	$ 96.5	$ 19.9	$ 0.9	$ —	$ 2,235.5
Intersegment revenues	1.1	—	32.7	14.2	(48.0)	—
Total Operating Revenues	2,119.3	96.5	52.6	15.1	(48.0)	2,235.5
Depreciation and amortization expense	204.4	1.2	6.9	0.6	—	213.1
Interest expense	74.7	—	4.0	29.3	(1.4)	106.6
Income tax expense (benefit)	56.9	13.4	4.4	(6.2)	—	68.5
Net economic earnings (loss)	230.6	47.0	11.1	(22.4)	—	266.3
Capital expenditures	590.4	0.7	33.0	0.7	—	624.8

Total Assets at End of Year	2023	2022	2021
Gas Utility	$ 8,486.7	$ 8,042.8	$ 7,615.4
Gas Marketing	332.0	638.7	466.1
Midstream	574.3	446.0	413.8
Other	2,533.3	2,705.5	2,193.3
Eliminations	(1,612.7)	(1,749.3)	(1,332.2)
Total Assets	$ 10,313.6	$ 10,083.7	$ 9,356.4

Reconciliation of Consolidated Net Income to Consolidated Net Economic Earnings	2023	2022	2021
Net Income	$ 217.5	$ 220.8	$ 271.7
Adjustments, pre-tax:			
Missouri regulatory adjustments	—	—	(9.0)
Fair value and timing adjustments	11.4	(11.4)	3.3
Acquisition and divestiture activities	2.5	—	(1.3)
Income tax adjustments	(3.3)	6.9	1.6
Net Economic Earnings	$ 228.1	$ 216.3	$ 266.3

15. REGULATORY MATTERS

As discussed below for Spire Missouri and Spire Alabama, the Purchased Gas Adjustment (PGA) clauses and Gas Supply Adjustment (GSA) riders allow the Utilities to pass through to customers the cost of purchased gas supplies. Regulatory assets and regulatory liabilities related to the PGA clauses and the GSA rider are both labeled Unamortized Purchased Gas Adjustments herein.

The following regulatory assets and regulatory liabilities were reflected in the balance sheets of the Company, Spire Missouri and Spire Alabama as of September 30, 2023 and 2022.

	Spire		Spire Missouri		Spire Alabama	
September 30	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Regulatory Assets:						
Current:						
Unamortized purchased gas adjustments	$ 293.2	$ 322.2	$ 269.4	$ 275.1	$ 21.7	$ 43.8
Other	55.1	33.2	23.7	13.0	19.9	13.1
Total Current Regulatory Assets	348.3	355.4	293.1	288.1	41.6	56.9
Noncurrent:						
Future income taxes due from customers	144.5	137.8	136.2	129.2	2.0	2.2
Pension and postretirement benefit costs	261.0	294.5	189.1	222.9	67.8	66.5
Cost of removal	633.2	493.7	97.0	25.2	536.2	468.5
Unamortized purchased gas adjustments	23.0	—	23.0	—	—	—
Energy efficiency	56.3	57.2	56.3	57.2	—	—
Other	131.2	129.2	116.0	113.1	0.9	1.0
Total Noncurrent Regulatory Assets	1,249.2	1,112.4	617.6	547.6	606.9	538.2
Total Regulatory Assets	$ 1,597.5	$ 1,467.8	$ 910.7	$ 835.7	$ 648.5	$ 595.1
Regulatory Liabilities:						
Current:						
Other	$ 7.3	$ 3.7	$ —	$ —	$ —	$ —
Total Current Regulatory Liabilities	7.3	3.7	—	—	—	—
Noncurrent:						
Deferred taxes due to customers	128.0	145.3	114.8	127.9	—	—
Pension and postretirement benefit costs	185.2	172.6	156.5	143.6	17.9	19.4
Accrued cost of removal	126.6	32.9	90.4	—	—	—
Unamortized purchased gas adjustments	11.2	53.0	11.2	53.0	—	—
Other	21.4	14.4	16.5	7.3	3.3	3.6
Total Noncurrent Regulatory Liabilities	472.4	418.2	389.4	331.8	21.2	23.0
Total Regulatory Liabilities	$ 479.7	$ 421.9	$ 389.4	$ 331.8	$ 21.2	$ 23.0

A portion of the Company's and Spire Missouri's regulatory assets are not earning a return, as shown in the table below:

	Spire		Spire Missouri	
September 30	**2023**	**2022**	**2023**	**2022**
Pension and postretirement benefit costs	$ 133.4	$ 152.9	$ 133.4	$ 152.9
Future income taxes due from customers	142.5	135.6	136.2	129.2
Unamortized purchase gas adjustments	292.4	275.1	292.4	275.1
Other	104.2	122.7	104.2	122.7
Total Regulatory Assets Not Earning a Return	$ 672.5	$ 686.3	$ 666.2	$ 679.9

Like all the Company's regulatory assets, these regulatory assets as of September 30, 2023 are expected to be recovered from customers in future rates. The recovery period for the future income taxes due from customers and pension and other postretirement benefit costs could be 20 years or longer, based on current Internal Revenue Service guidelines and average remaining service life of active participants, respectively. The recovery period for the PGA assets is less than two years. The other items not earning a return are expected to be recovered over a period not to exceed 15 years, consistent with precedent set by the MoPSC, except for certain debt costs expected to be recovered over the related debt term, up to 35 years. Spire Alabama does not have any regulatory assets that are not earning a return.

Spire Missouri

As authorized by the MoPSC, the PGA clause allows Spire Missouri to flow through to customers, subject to prudence review by the MoPSC, the cost of purchased gas supplies. To better match customer billings with market natural gas prices, Spire Missouri is allowed to file to modify, on a periodic basis, the level of gas costs in its PGA. Certain provisions of the PGA clause are included below:

- Spire Missouri has a risk management policy that allows for the purchase of natural gas derivative instruments with the goal of managing price risk associated with purchasing natural gas on behalf of its customers. The MoPSC clarified that costs, cost reductions, and carrying costs associated with the Utility's use of natural gas derivative instruments are gas costs recoverable through the PGA mechanism.
- The tariffs allow Spire Missouri flexibility to make up to three discretionary PGA changes during each year, in addition to its mandatory November PGA change, so long as such changes are separated by at least two months.
- Spire Missouri is authorized to apply carrying costs to all over- or under-recoveries of gas costs, including cost increases and cost reductions associated with the use of derivative instruments, including cash payments for margin deposits.
- Pre-tax income from off-system sales and capacity release revenues is shared with customers (such that customers receive 75% and Spire Missouri receives 25%).

Pursuant to the provisions of the PGA clause, the difference between actual costs incurred and costs recovered through the application of the PGA clause, as well as the actual amount of off-system sales and capacity release revenues allocated to customers, are reflected as a regulatory asset or liability at the end of the fiscal year. At that time, the balance is classified as a current asset or current liability and recovered from, or credited to, customers over an annual period commencing in the subsequent November. The balance in the current account is amortized as amounts are reflected in customer billings. In fiscal 2023, Spire Missouri filed two changes to its tariff, which were approved and became effective November 29, 2022 and January 19, 2023.

In mid- February 2021, the central U.S. experienced a period of unusually severe cold weather ("Winter Storm Uri"), and Spire Missouri implemented an Operational Flow Order (OFO) to preserve the integrity of its distribution system. During this time, Spire Missouri was required to purchase additional natural gas supply, both to ensure adequate supply for its firm utility customers, and to cover the shortfall created when third-party marketers failed to deliver natural gas supply to its city gates on behalf of their customers. In accordance with its MoPSC-approved OFO tariff, Spire Missouri invoiced the cost of gas and associated penalties totaling $195.8 to non-compliant marketers and recorded accounts receivable. Recoveries collected are an offset to cost of natural gas for firm utility customers through the PGA and Actual Cost Adjustment (ACA), so are net income neutral to Spire Missouri. The three largest counterparties did not remit payment when due, so Spire Missouri filed suit against them in federal court to recover the invoiced amounts. In late February 2022, the parties to the OFO waiver suits agreed to a settlement in principle, pursuant to which marketers will reimburse Spire Missouri for the actual cost of its incremental gas purchases to serve marketers' customers during Winter Storm Uri, so Spire Missouri reduced revenue, accounts receivable, cost of gas and regulatory liabilities by approximately $150 in the second quarter of fiscal 2022. The settlement, which reduced the total amount due from the three marketers to approximately $42, was approved by the MoPSC in late May 2022, and the marketers are making timely payments to Spire Missouri.

As a result of the significant net deferred gas costs and average inventory cost in the second quarter of fiscal 2021, primarily due to Winter Storm Uri, Spire Missouri filed for and received MoPSC approval for an adjustment to the PGA tariff to increase a Filing Adjustment Factor (FAF) credit on customers' bills for three years. This lowered the net PGA rate to mitigate the impact of Winter Storm Uri costs on customers. All gas costs will eventually be recovered by Spire Missouri through the PGA or ACA mechanisms and carrying costs will be applied per the terms of the tariff.

In the first quarter of fiscal 2022, the MoPSC approved Spire Missouri compliance tariffs with an effective date of December 23, 2021, consistent with its order in Spire Missouri's general rate case. These new tariffs were designed to increase Spire Missouri's aggregate annual gross base rate revenues by $72.2, which includes $24.9 incremental and $47.3 already being collected through the Infrastructure System Replacement Surcharge (ISRS). The MoPSC required Spire Missouri to defer all non-operational overheads from December 23, 2021 through September 30, 2022 into a regulatory asset totaling $42.8. On April 1, 2022, Spire Missouri filed tariff sheets to initiate a new general rate case proceeding intended to address the deferred amounts, along with other matters. The parties reached a Full Unanimous Stipulation and Agreement (the "Stipulation") to resolve all issues in the

case, which was filed with the MoPSC on November 4, 2022. On November 18, 2022, the Stipulation was approved, including authorization of $78.0 in new base rate revenue (including $19.0 already being collected through ISRS) and recovery of deferred overheads through amortization of the related regulatory asset. New base rates became effective on December 26, 2022.

ISRS allows Spire Missouri expedited recovery for its investment to replace qualifying components of its infrastructure without the necessity of a formal rate case. As noted above, all prior ISRS revenues were reset to zero as of December 26, 2022 as a result of Spire Missouri's most recent base rate case. On April 20, 2023, the MoPSC approved an incremental annual ISRS revenue increase of $7.7, effective May 6, 2023, reflecting eligible pipe replacement from October 2022 through February 2023. On October 4, 2023, the MoPSC approved an incremental annual ISRS revenue increase of $12.4, effective October 23, 2023, reflecting eligible pipe replacement from March 2023 through August 2023.

On May 27, 2022, the MoPSC staff filed an ACA Review Recommendation and Report for the ACA period that first includes transportation charges incurred by Spire Missouri for service on the Spire STL Pipeline. That report concluded that the transaction complied with Missouri affiliate transaction rules and was prudent, and it recommended no disallowance of any Spire STL Pipeline related costs from the ACA mechanism. On July 11, 2022, Spire Missouri filed its response comments in support of the recommendation. The Missouri Office of the Public Counsel and Environmental Defense Fund (EDF) filed comments on July 29 and August 1, 2022, respectively, raising concerns about the Spire STL Pipeline transaction, the ACA process itself, and other matters. On January 6, 2023, Spire Missouri filed a Partial Stipulation and Agreement resolving all other issues raised by the MoPSC staff in its Recommendation and Report. The partial stipulation was approved by the MoPSC on January 25, 2023, resulting in a $0.6 credit to the ACA balance, but issues relating to Spire STL Pipeline costs remained contested. An evidentiary hearing on this matter was scheduled to be held July 25-26, 2023; however, on July 21, 2023, MoPSC suspended the procedural schedule in recognition that the parties had reached an agreement in principle to resolve the matter via settlement stipulation. The stipulation and agreement was approved by the Commission on August 23, 2023 and included an increase in customer assistance program funding among other non-monetary commitments.

In 2022, the MoPSC initiated their annual ACA dockets (GR-2022-0135 and GR-2022-0136) to audit gas commodity and transportation costs for the 2020-2021 heating season, which included the impact of Winter Storm Uri on Spire Missouri's natural gas portfolio. On December 15, 2022, the MoPSC staff filed its Reports and Recommendations in these cases proposing various disallowances relating to imbalance cash-outs and an off-system sale. On January 19, 2023, Spire Missouri filed its response to this proposal setting forth its position that there is no basis in law or fact for either disallowance. On July 12, 2023, the MoPSC entered a scheduling order in this matter which includes several rounds of pre-filed testimony prior to an evidentiary hearing to be held in early May 2024. On November 2, 2023, Spire Missouri filed an unopposed settlement stipulation by which the MoPSC Staff agreed to withdraw its recommendation of a proposed disallowance relating to imbalance cash-outs. The proposed disallowance relating to an off-system sale remains pending in the case. Management believes the likelihood of an unfavorable outcome is remote.

Spire Alabama

In September 2022, the APSC approved the renewal of RSE through September 30, 2025, with certain modifications to the previous terms. Under RSE, the APSC conducts reviews in March, June and September to determine whether Spire Alabama’s return on average common equity (ROE) at the end of the rate year will be within the allowed range of return. Reductions in rates can be made quarterly to bring the projected ROE within the allowed range; increases, however, are allowed only once each rate year, effective December 1, and cannot exceed 4% of prior-year revenues. Effective October 1, 2022, Spire Alabama's allowed range of ROE is 9.50% to 9.90% with an adjusting point of 9.70%. Previously, the allowed range was 10.15% to 10.65% with an adjusting point of 10.40%. Spire Alabama is subject to a performance-based adjustment of plus or minus 10 basis points to the ROE adjusting point, based upon the terms of the previously approved Accelerated Infrastructure Modernization (AIM) Program tariff; however, Spire applied for and received approval to suspend the operation of the AIM performance-based adjustment for 2022, 2023, and 2024, impacting fiscal years 2023 through 2025. Spire Alabama’s equity as a percent of total capitalization is limited to 55.5%, and Average Common Equity growth is limited to 6.00% each year.

The inflation-based Cost Control Measure (CCM) established by the APSC allows for annual changes in operation and maintenance ("O&M") expense relative to an index range. Effective October 1, 2022, the Base Year O&M expense was computed by averaging the actual O&M expenses for 2020, 2021, and 2022. The Base CPI-U was computed by averaging the August CPI-U for 2020, 2021, 2022. The "Index" is computed by measuring the change from the Base CPI-U to the August CPI-U of the most recently completed fiscal year, less a factor of 1.50%. The index range will be computed by adjusting the Index plus or minus 1.50%. If rate year O&M expense falls within the index range, no adjustment is required. If rate year O&M expense exceeds the index range, three-quarters of the difference is returned to customers through future rate adjustments. To the extent rate year O&M is less than the index range, Spire Alabama benefits by one-half of the difference through future rate adjustments. If a benefit is achieved, the Base Year and the Base CPI-U for the following year will each be reset to an average of the three preceding completed years. If a benefit is not achieved, the Base Year and Base CPI-U will not be updated. Certain items that fluctuate based on situations demonstrated to be beyond Spire Alabama's control may be excluded from the CCM calculation.

The RSE reduction for September 30, 2021 following the year-end point of test was $2.2 to bring the expected rate of return on average common equity to within the allowed rate of return. The CCM benefit for rate year 2021 was $8.8. To mitigate the impact on ratepayers, Spire Alabama requested and received approval from the APSC to recover the 2021 CCM benefit over five years (with recognition of revenue only up to 24 months in advance of recovery). As a part of the annual update for RSE, on December 29, 2021, Spire Alabama filed an increase for rate year 2022 of $5.3. The 2021 RSE reduction of $2.2, the five-year recovery of the 2021 CCM benefit of $8.8 and the annual RSE increase of $5.3 were all effective on January 1, 2022. There was no RSE reduction in 2022 for the January 31, April 30, July 31 or September 30 quarterly points of test. Spire Alabama recorded a CCM benefit for rate year 2022 of $17.2. Similar to the rate year 2021 CCM benefit, Spire requested and received approval to recover the rate year 2022 CCM benefit over five years. On October 26, 2022, Spire Alabama made its annual RSE rate filing with the APSC, presenting the utility's budget for the fiscal year ended September 30, 2023, including net income and a calculation of allowed ROE. The budget reflected the start of amortization of the accumulated deferred income tax (ADIT) adjustment related to the Tax Cuts and Jobs Act of 2017 (TCJA). New rates designed to provide an annual revenue increase of $15.0 became effective January 1, 2023. There was no RSE reduction in 2023 for the March 31, June 30 or September 30 points of test. Spire Alabama recorded a CCM benefit for rate year 2023 of $4.4. On October 26, 2023, Spire Alabama made its annual RSE rate filing, presenting the utility's budget for the fiscal year ending September 30, 2024, including net income and a calculation of allowed ROE. New rates designed to provide an annual revenue increase of $15.8 are anticipated to become effective December 1, 2023.

Spire Alabama's rate schedules for natural gas distribution charges contain a GSA rider which permits the pass-through to customers of changes in the cost of gas supply. Spire Alabama's tariff provides a temperature adjustment mechanism, also included in the GSA rider, which is designed to moderate the impact of departures from normal temperatures on Spire Alabama's earnings. The temperature adjustment applies primarily to residential, small commercial and small industrial customers. Other non-temperature weather-related conditions that may affect customer usage are not included in the temperature adjustment. There is also a mechanism under Spire Alabama's GSA rider allowing the utility to create value through off-system sales of excess natural gas supply and capacity and to give 75% of the value created to customers while retaining 25%. As of April 2022, the first $1.6 of value from capacity release goes entirely to customers before Spire Alabama retains 25%. In the past year, Spire Alabama filed GSA rate increases effective December 1, 2022 and January 1, 2023, and GSA rate decreases effective October 1, 2023 and anticipated to become effective December 1, 2023, primarily attributable to changes in natural gas prices.

The APSC approved an Enhanced Stability Reserve (ESR) in 1998, which was subsequently modified and expanded in 2010. As currently approved, the ESR provides deferred treatment and recovery for the following: (1) extraordinary O&M expenses related to environmental response costs; (2) extraordinary O&M expenses related to self-insurance costs that exceed $1.0 per occurrence; (3) extraordinary O&M expenses, other than environmental response costs and self-insurance costs, resulting from a single force majeure event or multiple force majeure events greater than $0.3 and $0.4, respectively, during a rate year; and (4) negative individual large commercial and industrial customer budget revenue variances that exceed $0.4 during a rate year. Charges to the ESR are subject to certain limitations which may disallow deferred treatment and which prescribe the timing of recovery. Subject to APSC authorization, Spire Alabama expects to be able to recover underfunded ESR balances over a five-year amortization period with an annual limitation of $0.7. Amounts in excess of this limitation are deferred for recovery in future years.

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Spire

In addition to those discussed above for Spire Missouri and Spire Alabama, Spire is affected by the following regulatory matters.

Spire Gulf has similar rate regulation to Spire Alabama. Its RSE rate-setting mechanism was renewed in September 2021 for a four-year term through September 2025. The RSE allowed ROE range was 10.45% to 10.95% with an adjusting point of 10.70% in fiscal 2021, while the ROE range is 9.70% to 10.30% with an adjusting point of 9.95% for fiscal 2022 through fiscal 2025. In October 2021 and 2022, Spire Gulf made its annual RSE rate filings with the APSC based on its budget for the new fiscal year and an allowed ROE of 9.95%, and new rates designed to provide increased annual revenues of $1.0 and $2.5 became effective at the beginning of January 2022 and 2023, respectively. The fiscal 2023 budget reflected the start of amortization of the excess ADIT from the TCJA. Spire Gulf filed its RSE point of test as of April 30, 2023 with the APSC reflecting that its projected ROE exceeded the allowed ROE resulting in an annualized refund of $1.8 that became effective July 1, 2023. Spire Gulf filed its RSE point of test as of September 30, 2023, reflecting that its actual ROE exceeded the allowed ROE resulting in an additional annualized refund of $2.0 that are anticipated to become effective December 1, 2023. The CCM has similar evaluation and recovery provisions when expenses exceed or are under a band of plus or minus 1.50% around the CPI-U inflated O&M per customer expense level from the base year, excluding expenses for pensions and gas bad debt. The base year for the O&M index was 2017 for fiscal 2021 and was 2021 for fiscal 2022. Since a CCM benefit was recorded in fiscal 2022, the base year O&M index for fiscal 2023 through fiscal 2025 will be the 2022 O&M level. Spire Gulf recorded a CCM benefit for rate year 2021 of $2.3 to revenues, resulting in a net income benefit of $1.6. A CCM benefit of $1.7 was recorded for fiscal 2022 to an economic development fund that can be used for economic development purposes subject to APSC approval. Spire Gulf's O&M for fiscal 2023 was within the O&M per customer inflation adjusted band. Spire Gulf has a Cast Iron Main Replacement Factor (CIF) that provides an enhanced return on the pro-rata costs associated with cast iron main replacement exceeding 10 miles per year based on a 75% weighting for the equity content. Capital expenditures recovered under the CIF have not increased since fiscal 2019 pursuant to applicable tariff provisions although the Company is continuing to recover costs of service associated with accumulated expenditures under the CIF. Spire Gulf also has an ESR for negative revenue variances over $0.1 or a force majeure event expense of $0.1 (or two events that exceed $0.15) and an Environmental Cost Recovery Factor that recovers 90% of prudently incurred costs for compliance with environmental laws, rules and regulations. Spire Gulf has an APSC-approved intercompany revolving credit agreement with Spire to borrow in a principal amount not to exceed $75.0 and to loan up to $25.0.

Spire Mississippi utilizes a formula rate-making process under the Rate Stabilization Adjustment Rider (RSA). An allowed return on equity (currently 10.04%) is computed annually and compared to the actual return on equity based on a rate year ending June 30. If the actual equity return on an end of period rate base is beyond the allowed return on equity by 1.0%, then 75% of any shortfall is recovered through a rate increase and 50% of any excess results in a rate decrease. Updates may include known and measurable adjustments to historic costs from the 12 months ended June 30, submitted September 15 for an effective date of November 1, unless disputed by the Mississippi Public Utilities Staff (MPUS), with any disputes to be resolved by the Mississippi Public Service Commission (MSPSC) by January 15 of the following year. The MSPSC approved stipulation agreements between the MPUS and Spire Mississippi that provided for increased annual revenues of $0.8 through rates effective on February 1, 2022 and an additional $0.8 effective on January 1, 2023. Spire Mississippi's RSA filing made on September 1, 2023 reflected a rate increase of $1.3 and is pending review by the MPUS. Additionally, a Supplemental Growth Rider provides recovery of certain Spire Mississippi system expansion projects to serve qualified economic development projects.

In August 2018, the FERC approved an order issuing Certificates of Public Convenience and Necessity ("FERC Certificates") for the Spire STL Pipeline ("August 2018 Order"). In June 2021, the U.S. Court of Appeals for the District of Columbia Circuit issued an order vacating the FERC Certificates and remanding the matter back to the FERC for further action. In September and December 2021, the FERC issued temporary certificates for the continued authorized operation of the Spire STL Pipeline pending the outcome of its determination on remand. On December 15, 2022, the FERC issued its order on remand reissuing permanent FERC Certificates for the continued operation of the Spire STL Pipeline, and that order is final and no longer appealable.

16. COMMITMENTS AND CONTINGENCIES

Commitments

The Company and the Utilities have entered into contracts with various counterparties, expiring on dates through calendar 2039, for the storage, transportation, and supply of natural gas. Minimum payments required under the contracts in place at September 30, 2023, are estimated at $1,613.2, $1,182.0 and $251.6 for the Company, Spire Missouri and Spire Alabama, respectively. Additional contracts are generally entered into prior to or during the heating season of November through April. The Utilities recover their costs from customers in accordance with their PGA clauses or GSA riders.

In May 2023, Spire entered into an agreement to acquire MoGas Pipeline, an interstate natural gas pipeline, and Omega Pipeline, a connected gas distribution system, from CorEnergy Infrastructure Trust, Inc., for $175 cash, subject to customary working capital and other closing adjustments. Spire has received a request for additional information ("Second Request") from the Federal Trade Commission (FTC) with regard to this proposed acquisition. The Company is cooperating fully with the FTC regarding the Second Request and expects to close in the second quarter of fiscal 2024 subject to receiving FTC approval.

A consolidated subsidiary of Spire is a limited partner in Inter-Atlantic Energy Capital Ventures, L.P., an unconsolidated partnership focusing on sustainability initiatives largely tied to the natural gas utility sector. Spire committed to contribute a total of $10.0 of capital to the partnership as and when requested by the general partner. As of September 30, 2023, the remaining unfunded commitment was $4.9.

Contingencies

The Company and the Utilities account for contingencies, including environmental liabilities, in accordance with accounting standards under the loss contingency guidance of ASC Topic 450, *Contingencies*, when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

In addition to matters noted below, the Company and the Utilities are involved in other litigation, claims, and investigations arising in the normal course of business. Management, after discussion with counsel, believes the final outcome will not have a material effect on the statements of income, balance sheets, and statements of cash flows of the Company, Spire Missouri, or Spire Alabama. However, there is uncertainty in the valuation of pending claims and prediction of litigation results.

The Company and the Utilities own and operate natural gas distribution, transmission, and storage facilities, the operations of which are subject to various environmental laws, regulations, and interpretations. While environmental issues resulting from such operations arise in the ordinary course of business, such issues have not materially affected the Company's or Utilities' financial position and results of operations. As environmental laws, regulations, and their interpretations change, the Company or the Utilities may incur additional environmental liabilities that may result in additional costs, which may be material.

In the natural gas industry, many gas distribution companies have incurred environmental liabilities associated with sites they or their predecessor companies formerly owned or operated where manufactured gas operations took place. The Utilities each have former manufactured gas plant (MGP) operations in their respective service territories, some of which are discussed under the Spire Missouri and Spire Alabama headings below. To the extent costs are incurred associated with environmental remediation activities, the Utilities would request authority from their respective regulators to defer such costs (less any amounts received from insurance proceeds or as contributions from other potentially responsible parties (PRPs)) and collect them through future rates.

To date, costs incurred for all Spire MGP sites for investigation, remediation and monitoring have not been material. However, the amount of costs relative to future remedial actions at these and other sites is unknown and may be material. The actual future costs that Spire Missouri and Spire Alabama may incur could be materially higher or lower depending upon several factors, including whether remediation will be required, final selection and regulatory approval of any remedial actions, changing technologies and government regulations, the ultimate ability of other PRPs to pay, and any insurance recoveries.

In 2020, Spire retained an outside consultant to conduct probabilistic cost modeling of its former MGP sites in Missouri and Alabama. The purpose of this analysis was to develop an estimated range of probabilistic future liability for each of their MGP sites. That analysis, completed in March 2021, provided a range of demonstrated possible future expenditures to investigate, monitor and remediate the former MGP sites. Spire Missouri and Spire Alabama have recorded their best estimates of the probable expenditures that relate to these matters. The amount remains immaterial, and Spire Missouri, Spire Alabama and the Company do not expect potential liabilities that may arise from remediating these sites to have a material impact on their future financial condition or results of operations.

Spire Missouri

Spire Missouri has identified three former MGP sites in the city of St. Louis, Missouri (the "City") where costs have been incurred and claims have been asserted. Spire Missouri has enrolled two of the sites in the Missouri Department of Natural Resources (MoDNR) Brownfields/Voluntary Cleanup Program (BVCP). The third site is the result of an assertion by the United States Environmental Protection Agency (EPA).

In conjunction with redevelopment of the Carondelet Coke site, Spire Missouri and another former owner of the site entered into an agreement (the "Remediation Agreement") with the City development agencies, the developer, and an environmental consultant that obligates one of the City agencies and the environmental consultant to remediate the site and obtain a No Further Action (NFA) letter from the MoDNR. The Remediation Agreement also provides for a release of Spire Missouri and the other former site owner from certain liabilities related to the past and current environmental condition of the site and requires the developer and the environmental consultant to maintain certain insurance coverage, including remediation cost containment, premises pollution liability, and professional liability. The operative provisions of the Remediation Agreement were triggered on December 20, 2010, on which date Spire Missouri and the other former site owner, as full consideration under the Remediation Agreement, paid a small percentage of the cost of remediation of the site. The property was divided into seven parcels, and MoDNR NFA letters have been received for six of the parcels. Remediation is ongoing on the last parcel.

In a letter dated June 29, 2011, the Attorney General for the State of Missouri informed Spire Missouri that the MoDNR had completed an investigation of the second site, Station A. The Attorney General requested that Spire Missouri participate in the follow up investigations of the site. In a letter dated January 10, 2012, Spire Missouri stated that it would participate in future environmental response activities at the site in conjunction with other PRPs. Accordingly, Spire Missouri entered into a cost sharing agreement for remedial investigation with other PRPs. MoDNR never approved the agreement, so no remedial investigation took place. Recently, Spire Missouri was approached by a real estate developer interested in purchasing the northern half of the Station A site and developing the same for industrial purposes. Consequently, Spire Missouri is now in discussions with the developer, other PRPs and MoDNR to develop a new remedial investigation plan for the site.

Additionally, in correspondence dated November 30, 2016, Region 7 of the EPA has asserted that Spire Missouri is liable under Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) for alleged coal gas waste contamination at a third site, Station B. Spire Missouri and the site owner notified the EPA that information and data provided by the EPA to date does not rise to the level of documenting a threat to the public health or environment. As such, in March 2017 Spire Missouri requested more information from the EPA. Spire Missouri never received a response from the EPA.

Spire Missouri has notified its insurers that it seeks reimbursement for costs incurred in the past and future potential liabilities associated with these MGP sites. While some of the insurers have denied coverage and reserved their rights, Spire Missouri retains the right to seek potential reimbursements from them.

On March 10, 2015, Spire Missouri received a Section 104(e) information request under CERCLA from EPA Region 7 regarding the former Thompson Chemical/Superior Solvents site in the City. In turn, Spire Missouri issued a Freedom of Information Act (FOIA) request to the EPA on April 3, 2015, to identify the basis of the inquiry. The FOIA response from the EPA was received on July 15, 2015, and a response was provided to the EPA on August 15, 2015. Spire Missouri has received no further inquiry from the EPA regarding this matter.

In its western service area, Spire Missouri has six owned MGP sites enrolled in the BVCP, including Joplin MGP #1, St. Joseph MGP #1, Kansas City Coal Gas Station B, Kansas City Station A Railroad area, Kansas City Coal Gas Station A, and Independence MGP #2. Source removal has been conducted at all the owned sites since 2003 with the exception of Joplin. On September 15, 2016, a request was made with the MoDNR for a restrictive covenant use limitation with respect to Joplin. Remediation efforts at the six sites are at various stages of completion, ranging from groundwater monitoring and sampling following source removal activities to the aforementioned request for the Joplin site. As part of its participation in the BVCP, Spire Missouri communicates regularly with the MoDNR with respect to its remediation efforts and monitoring activities at these sites. On May 11, 2015, MoDNR approved the next phase of investigation at the Kansas City Station A Railroad area.

Spire Alabama

Spire Alabama is in the chain of title of nine former MGP sites, four of which it still owns, and five former manufactured gas distribution sites, one of which it still owns. All are located in the state of Alabama.

In 2011, a removal action was completed and an NFA letter was received at the Huntsville MGP site pursuant to an Administrative Settlement Agreement and Order on Consent among the EPA, Spire Alabama and the current site owner.

In 2012, Spire Alabama responded to an EPA Request for Information Pursuant to Section 104 of CERCLA relating to the 35th Avenue Superfund Site located in North Birmingham, Jefferson County, Alabama. Spire Alabama was identified as a PRP under CERCLA for the cleanup of the site or costs the EPA incurs in cleaning up the site. At this point, Spire Alabama has not been provided information that would allow it to determine the extent, if any, of its potential liability with respect to the 35th Avenue Superfund Site and vigorously denies its inclusion as a PRP.

Assessments were performed by the EPA of the former MGP sites in Gadsden and Anniston, and NFA letters were received after each assessment.

Spire

In addition to those discussed above for Spire Missouri and Spire Alabama, Spire is aware of the following contingent matters.

Spire Marketing, along with many natural gas industry participants, faced the unprecedented effects of Winter Storm Uri in February 2021. Numerous natural gas producers and midstream operators were unable to deliver natural gas to market as they experienced wellhead freeze-offs, power outages and equipment failure due to the extreme weather. These events resulted in supply curtailments, and related notices of force majeure to excuse performance, from and to certain counterparties. Further, these events have made Spire Marketing subject to various commercial disputes (including regarding force majeure). As such, Spire Marketing has recorded an estimate of potential liabilities for damages based on communications with counterparties and the facts and circumstances surrounding each transaction. These estimates are adjusted as new facts emerge or settlement agreements are reached, and it is possible that final settlement amounts may materially differ from the current estimate.

17. LEASES

The lease agreement covering the Company's primary office space in St. Louis extends through February 2035, with an option to renew for an additional five years. Spire Alabama's lease agreement for office space in Birmingham extends through January 2037, with an option to renew for two additional five-year terms. The lease agreement covering Spire Marketing and Spire Storage office space in Houston extends through December 2028, with options to terminate three years earlier or to renew for an additional five years. The renewal options in the St. Louis and Houston leases are reasonably certain to be exercised and are included in the lease term used to determine the right-of-use assets and lease liabilities. The Company and its subsidiaries have other relatively minor rental arrangements for real estate and equipment with remaining terms of up to ten years.

Operating lease cost, cash flow and noncash information are shown in the following table.

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Operating lease cost, including amounts capitalized	$ 7.3	$ 7.4	$ 7.2	$ 0.5	$ 0.5	$ 0.4	$ 2.0	$ 2.1	$ 2.1
Cash flow and noncash information about operating leases:									
Operating cash flows representing cash paid for amounts included in the measurement of lease liabilities	7.3	7.3	7.2	0.5	0.5	0.4	2.1	2.1	2.1

Right-of-use assets obtained in exchange for lease liabilities	0.8	24.6	—	0.8	1.1	—	—	23.5	—

The following table shows year-end balance sheet and weighted-average information about operating leases.

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Right-of-use assets	$ 70.6	$ 73.7	$ 2.1	$ 1.7	$ 19.2	$ 20.2
Lease liabilities, current	6.8	6.5	0.5	0.4	1.9	1.9
Lease liabilities, noncurrent	70.2	73.7	1.8	1.5	23.5	24.6
Weighted-average remaining lease term (in years)	14.1	15.0	5.6	5.1	13.3	14.3
Weighted-average discount rate	4.2%	4.1%	3.3%	2.2%	3.7%	3.7%

On the balance sheets, right-of-use assets are included in “Deferred Charges and Other Assets: Other,” current lease liabilities are in “Current Liabilities: Other,” and noncurrent lease liabilities are in “Deferred Credits and Other Liabilities: Other.”

Following is a maturity analysis by fiscal year for operating lease liabilities as of September 30, 2023.

	Spire	Spire Missouri	Spire Alabama
2024	$ 6.9	$ 0.5	$ 1.9
2025	7.5	0.6	2.2
2026	7.5	0.4	2.2
2027	7.4	0.3	2.3
2028	7.4	0.3	2.3
Thereafter	65.9	0.5	21.7
Total undiscounted lease payments	102.6	2.6	32.6
Less present value discount	(25.6)	(0.3)	(7.2)
Total current and noncurrent lease liabilities	$ 77.0	$ 2.3	$ 25.4

There are no significant finance leases, short-term leases, subleases, variable lease payments, residual value guarantees, restrictions or covenants pertaining to leases.

The Company elected, for all asset classes, not to recognize right-of-use assets and lease liabilities for short-term leases. Instead, the lease payments for short-term leases are recognized in profit or loss on a straight-line basis over the lease term and variable lease payments are recognized in the period in which the obligation for those payments is incurred. The Company elected, for all asset classes, not to separate nonlease components from lease components and instead to account for each separate lease component and the nonlease components associated with that lease component as a single lease component.

The discount rate used for all the leases is the applicable incremental borrowing rate, which is the rate of interest that a lessee would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. For a subsidiary lessee, the rate applicable to the subsidiary is used unless the lease terms are influenced by parent credit.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There have been no changes in or disagreements on accounting and financial disclosure with Spire's, Spire Missouri's, or Spire Alabama's outside auditors that are required to be disclosed.

Item 9A. Controls and Procedures

Spire

Management Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting. Spire Inc.'s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Spire Inc.'s management, including its Chief Executive Officer and Chief Financial Officer, conducted an assessment of the effectiveness of Spire Inc.'s internal control over financial reporting as of September 30, 2023. In making this assessment, management used the criteria in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management concluded that Spire Inc.'s internal control over financial reporting was effective as of September 30, 2023. Deloitte & Touche LLP, an independent registered public accounting firm, has issued an attestation report on Spire Inc.'s internal control over financial reporting, which is included in Item 8, Financial Statements and Supplementary Data.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon such evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Change in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Spire Missouri

Management Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting. Spire Missouri Inc.'s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Spire Missouri Inc.'s management, including its Chief Executive Officer and Chief Financial Officer, conducted an assessment of the effectiveness of Spire Missouri Inc.'s internal control over financial reporting as of September 30, 2023. In making this assessment, management used the criteria in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management concluded that Spire Missouri Inc.'s internal control over financial reporting was effective as of September 30, 2023.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Spire Alabama

Management Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting. Spire Alabama Inc.'s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Spire Alabama Inc.'s management, including its Chief Executive Officer and Chief Financial Officer, conducted an assessment of the effectiveness of Spire Alabama Inc.'s internal control over financial reporting as of September 30, 2023. In making this assessment, management used the criteria in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management concluded that Spire Alabama Inc.'s internal control over financial reporting was effective as of September 30, 2023.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the quarterly period ended September 30, 2023, no director or officer of the Company adopted or terminated any contract, instruction or written plan for the purchase or sale of securities of the Company intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) of the Exchange Act or any "non-Rule 10b5-1 trading arrangement" (as defined in the Exchange Act).

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information about:

- our directors is incorporated by reference from the discussion under Proposal 1 of our proxy statement to be filed on or about December 13, 2023 ("2023 proxy statement");
- our executive officers is reported in Part I of this Form 10-K;
- our Financial Code of Ethics is posted on our website, www.SpireEnergy.com, under Investors/Governance/Governance documents (http://investors.spireenergy.com/governance/governance-documents); and
- our Audit Committee, our Audit Committee financial experts, and submitting nominations to the Corporate Governance Committee

is incorporated by reference from the discussion in our 2023 proxy statement under the heading "Governance."

In addition, our Code of Business Conduct, Corporate Governance Guidelines, and charters for our Audit, Compensation and Corporate Governance Committees are available under "Governance documents" on our website, as indicated above, and a copy will be sent to any shareholder upon written request.

Item 11. Executive Compensation

Information about director and executive compensation is incorporated by reference from the discussion in our 2023 proxy statement under the headings "Directors' compensation" and "Executive compensation."

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information about:

- security ownership of certain beneficial owners and management and
- aggregate information regarding the Company's equity compensation plan

is incorporated by reference from the discussion in our 2023 proxy statement under "Beneficial ownership of Spire stock."

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information about:

- our policy and procedures for related party transactions and
- the independence of our directors

is included in our 2023 proxy statement under "Governance" and is incorporated by reference. There were no related party transactions in fiscal 2023.

Item 14. Principal Accounting Fees and Services

Information about fees paid to our independent registered public accountant and our policy for pre-approval of services provided by our independent registered public accountant is incorporated by reference from our 2023 proxy statement under "Fees of independent registered public accountant" and "Governance," respectively.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) (1) Financial Statements

See Item 8, Financial Statements and Supplementary Data, filed herewith, for a list of financial statements.

(2) Financial Statement Schedules

Schedules have been omitted because they are not applicable, related significance tests were not met, or the required data has been included in the financial statements or notes to financial statements.

(3) Exhibits

Exhibit Number	Description
2.01*	Agreement and Plan of Merger and Reorganization; filed as Appendix A to proxy statement/prospectus contained in the Company's Registration Statement on Form S-4 filed October 27, 2000, No. 333-48794.
3.01*	Articles of Incorporation of Spire Inc., as amended, effective as of April 28, 2016; filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on May 3, 2016.
3.02*	Amended Bylaws of Spire Inc., effective as of July 27, 2023; filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on July 28, 2023.
3.03*	Spire Missouri Inc.'s Amended Articles of Incorporation, as amended, effective August 30, 2017; filed as Exhibit 3.1 to Spire Missouri's Current Report on Form 8-K on September 1, 2017.
3.04*	Amended Bylaws of Spire Missouri Inc., effective as of March 26, 2020; filed as Exhibit 3.1 to Spire Missouri's Current Report on Form 8-K on March 27, 2020.
3.05*	Articles of Amendment of the Articles of Incorporation of Spire Alabama Inc., dated September 1, 2017; filed as Exhibit 3.3 to Spire Alabama's Current Report on Form 8-K filed September 1, 2017.
3.06*	Amended Bylaws of Spire Alabama Inc. effective March 26, 2020; filed as Exhibit 3.2 to Spire Alabama's Current Report on Form 8-K on March 27, 2020.
3.07*	Certificate of Designations with respect to the Series A Preferred Stock, dated May 16, 2019; filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.01*[3]	Mortgage and Deed of Trust, dated as of February 1, 1945, between Laclede Gas Company and Mississippi Valley Trust Company; filed as Exhibit 4.10 to the Company's Registration Statement on Form S-3 (No. 333-264799) on May 9, 2022.
4.02*[3]	Fourteenth Supplemental Indenture, dated as of October 26, 1976, between Laclede Gas and Mercantile Trust Company National Association; filed as Exhibit 4.11 to the Company's Registration Statement on Form S-3 (No. 333-264799) on May 9, 2022.
4.03*†[3]	Laclede Gas Board of Directors' Resolution dated August 28, 1986 which generally provides that the Board may delegate its authority in the adoption of certain employee benefit plan amendments to certain designated Executive Officers; filed as Exhibit 4.12 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1991.
4.04*†[2]	Indenture dated as of November 1, 1993, between Alagasco and NationsBank of Georgia, National Association, Trustee, ("Alagasco 1993 Indenture"); filed as Exhibit 4(k) to Alagasco's Registration Statement on Form S-3 (Registration No. 33-70466).
4.05*[3]	Twenty-Fourth Supplemental Indenture, dated as of June 1, 1999, between Laclede Gas and State Street Bank and Trust Company of Missouri, N.A., as trustee; filed as Exhibit 4.01 to Laclede Gas' Current Report on Form 8-K on June 4, 1999.
4.06*[3]	Twenty-Fifth Supplemental Indenture, dated as of September 15, 2000, between Laclede Gas and State Street Bank and Trust Company of Missouri, as trustee; filed as Exhibit 4.01 to Laclede Gas' Current Report on Form 8-K on September 29, 2000.
4.07*[3]	Laclede Gas' Board of Directors' Resolutions dated March 27, 2003, updating authority delegated pursuant to August 28, 1986 Laclede Gas resolutions; filed as Exhibit 4.19(a) to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 2003.

Exhibit Number	Description
4.08*3	Twenty-Eighth Supplemental Indenture, dated as of April 15, 2004, between Laclede Gas and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.02 to Laclede Gas' Current Report on Form 8-K on April 28, 2004.
4.09*3	Twenty-Ninth Supplemental Indenture, dated as of June 1, 2006, between Laclede Gas and UMB Bank and Trust, N.A., as trustee; filed as Exhibit 4.1 to Laclede Gas' Current Report on Form 8-K on June 9, 2006.
4.10*2	Officers' Certificate, dated January 16, 2007, pursuant to Section 301 of the Alagasco 1993 Indenture setting forth the terms of the 5.90 percent Notes due January 15, 2037; filed as Exhibit 4.2 to Alagasco's Current Report on Form 8-K on January 16, 2007.
4.11*3	Thirty-First Supplemental Indenture, dated as of March 15, 2013, between Laclede Gas and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to Laclede Gas' Form 10-Q for the quarter ended March 31, 2013.
4.12*3	Thirty-Second Supplemental Indenture, dated as of August 13, 2013, between Laclede Gas and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to Laclede Gas' Current Report on Form 8-K on August 13, 2013.
4.13*	Indenture, dated as of August 19, 2014, between the Company and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on August 19, 2014.
4.14*	First Supplemental Indenture, dated as of August 19, 2014, between the Company and UMB Bank & Trust, N.A., as trustee (including Form of Floating Rate Senior Notes due 2017, Form of 2.55% Senior Notes due 2019 and Form of 4.70% Senior Notes due 2044); filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on August 19, 2014.
4.15*2	Master Note Purchase Agreement, dated as of June 5, 2015, among Alagasco and certain institutional purchasers; filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015.
4.16*	Second Supplemental Indenture, dated as of February 27, 2017, between Spire Inc. and UMB Bank & Trust, N.A., as Trustee (including Form of 3.543% Senior Notes due 2024); filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on February 27, 2017.
4.17*	Master Note Purchase Agreement dated June 20, 2016, among Spire Inc. and certain institutional purchasers party thereto; filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.
4.18*	First Supplement to Master Note Purchase Agreement dated as of March 15, 2017, among Spire Inc. and certain institutional purchasers party thereto; filed as Exhibit 4.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.
4.19*3	Bond Purchase Agreement dated March 20, 2017, among Laclede Gas Company and certain institutional purchasers party thereto; filed as Exhibit 4.4 to the Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.
4.20*	First Supplement to Master Note Purchase Agreement, dated as of December 1, 2017, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2017.
4.21*	Second Supplement to Master Note Purchase Agreement, dated as of January 15, 2019, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.1 to Spire Alabama's Current Report on Form 8-K on January 22, 2019.
4.22*	Deposit Agreement, dated as of May 21, 2019, among the Company, Computershare Inc. and Computershare Trust Company, N.A., acting jointly as depositary, and the holders from time to time of the depositary receipts described therein; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.23*	Form of depositary receipt representing the Depositary Shares; filed as Exhibit A to Exhibit 4.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.24*	Form of Certificate representing the Series A Preferred Stock; filed as Exhibit A to Exhibit 3.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.25*	Thirty-Third Supplemental Indenture, dated as of September 15, 2017, between Spire Missouri Inc. and UMB Bank & Trust, N.A., as trustee, filed as Exhibit 4.28 to Spire Missouri's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.
4.26*	Thirty-Fourth Supplemental Indenture, dated as of November 12, 2019, between Spire Missouri Inc. and UMB Bank & Trust, N.A., as trustee, filed as Exhibit 4.1 to Spire Missouri's Quarterly Report on Form 10-Q for the quarter ended December 31, 2019.

Exhibit Number	Description
4.27*	Third Supplement to Master Note Purchase Agreement, dated as of December 2, 2019, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.1 to Spire Alabama's Current Report on Form 8-K on December 4, 2019.
4.28*	Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934; filed as Exhibit 4.29 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.
4.29*	Fourth Supplement to Master Note Purchase Agreement, dated as of December 15, 2020, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.1 to Spire Alabama's Current Report on Form 8-K on December 18, 2020.
4.30*	Indenture (For Unsecured Debt Securities), dated as of February 16, 2021, between the Company and U.S. Bank National Association, as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on February 16, 2021.
4.31*	First Supplemental Indenture, dated as of February 16, 2021, between the Company and U.S. Bank National Association, as trustee; filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on February 16, 2021.
4.32*	Form of Series A 0.75% Remarketable Senior Note due 2026; included in Exhibit 4.2 to the Company's Current Report on Form 8-K on February 16, 2021.
4.33*	Purchase Contract and Pledge Agreement, dated as of February 16, 2021, between the Company and U.S. Bank National Association, as purchase contract agent, collateral agent, custodial agent and securities intermediary; filed as Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.34*	Form of Remarketing Agreement; included in Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.35*	Form of Corporate Unit; included in Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.36*	Form of Treasury Unit; included in Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.37*	Thirty-Fifth Supplemental Indenture, dated as of May 20, 2021, between Spire Missouri and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on May 20, 2021.
4.38*	Form of 3.300% Series First Mortgage Bonds due 2051; included in Exhibit 4.1 to the Company's Current Report on Form 8-K on May 20, 2021.
4.39*	Thirty-Sixth Supplemental Indenture, dated as of December 7, 2021, between Spire Missouri and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on December 7, 2021.
4.40*	Form of First Mortgage Bonds, Floating Rate Series due 2024; included in Exhibit 4.1 to the Company's Current Report on Form 8-K on December 7, 2021.
4.41*	Thirty-Seventh Supplemental Indenture, dated as of May 2, 2022, between Spire Missouri and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022.
4.42*	Fifth Supplement to Master Note Purchase Agreement, dated as of October 13, 2022, between Spire Alabama Inc. and certain institutional investors, filed as Exhibit 4.1 to the Company's and Spire Alabama's Current Report on Form 8-K on October 19, 2022.
4.43*	Thirty-Eighth Supplemental Indenture, dated as of February 13, 2023 between Spire Missouri and Regions Bank, as trustee (including Form of 4.800% Series First Mortgage Bond due 2033); filed as Exhibit 4.1 to the Company's and Spire Missouri's Current Report on Form 8-K on February 13, 2023.
4.44*	Second Supplement to Master Note Purchase Agreement, dated as of March 7, 2023, between Spire Inc. and certain institutional investors (including Form of 5.80% Series 2023 Senior Note, Tranche D, due March 15, 2033); filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023.

Exhibit Number	Description
10.01*†3	**Form of Indemnification Agreement between Laclede Gas and its Directors and Officers; filed as Exhibit 10.13 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1990.**
10.02*†3	**Salient Features of Laclede Gas' Deferred Income Plan for Directors and Selected Executives, including amendments adopted by the Board of Directors on July 26, 1990; filed as Exhibit 10.12 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1991.**
10.03*†3	**Amendment to Laclede Gas' Deferred Income Plan for Directors and Selected Executives, adopted by the Board of Directors on August 27, 1992; filed as Exhibit 10.12a to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1992.**
10.04*3	**Amendment and Restatement of Retirement Plan for Non-Employee Directors of Laclede Gas as of November 1, 2002; filed as Exhibit 10.08c to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 2002.**
10.05*3	**Amendment to Terms of Retirement Plan for Non-Employee Directors of Laclede Gas as of October 1, 2004; filed as Exhibit 10.2 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended June 30, 2004.**
10.06*	**Form of Non-Qualified Stock Option Award Agreement with Mandatory Retirement Provisions; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on November 5, 2004.**
10.07*	**Form of Non-Qualified Stock Option Award Agreement without Mandatory Retirement Provisions; filed as Exhibit 10.2 to the Company's Current Report on Form 8-K on November 5, 2004.**
10.08*3	Automated Meter Reading Services Agreement with Amendment dated as of July 1, 2017, between Landis+Gyr Technology, Inc., formerly known as Cellnet Technology, Inc., and Laclede Gas Company; filed as Exhibit 10.08 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2020.
10.09*3	**Restated Laclede Gas Supplemental Retirement Benefit Plan, as amended and restated as of January 1, 2005; filed as Exhibit 10.06 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.10*3	**Laclede Gas Supplemental Retirement Benefit Plan II, effective as of January 1, 2005; filed as Exhibit 10.7 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.11*3	**Salient Features of Laclede Gas' Deferred Income Plan II for Directors and Selected Executives (as amended and restated effective as of January 1, 2005); filed as Exhibit 10.1 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.12*	**Salient Features of the Company's Deferred Income Plan for Directors and Selected Executives (effective as of January 1, 2005); filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.13*	**The Company's Form of Restricted Stock Award Agreement; filed as Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.14*3	**The Laclede Group Management Continuity Protection Plan, effective as of January 1, 2005; filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.15*	**Form of Management Continuity Protection Agreement; filed as Exhibit 10.5a to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.16*3	**The Laclede Group 2011 Management Continuity Protection Plan; filed as Exhibit 10.25 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010.**
10.17*	**Form of Agreement under the Company's 2011 Management Continuity Protection Plan; filed as Exhibit 10.25a to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010.**
10.18*	**The Company's Form of Performance Contingent Restricted Stock Unit Award Agreement; filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2012.**
10.19*3	**Laclede Gas Cash Balance Supplemental Retirement Benefit Plan, effective as of January 1, 2009; filed as Exhibit 10.19 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 2012.**

Exhibit Number	Description
10.20*	Lease Agreement, dated January 21, 2014, between the Company, as Tenant, and Market 700, LLC, as Landlord; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on January 27, 2014.
10.21*	**The Company's Deferred Income Plan for Directors and Selected Executives, as Amended and Restated as of January 1, 2015; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on November 4, 2014.**
10.22*[1]	**The Laclede Group 2015 Equity Incentive Plan; filed as the Appendix to the Company's Definitive Proxy Statement on Form DEF 14A on December 19, 2014.**
10.23*[1]	**The Laclede Group, Inc. Annual Incentive Plan, as Amended; filed as Appendix to the Company's Definitive Proxy Statement on Schedule 14A on December 18, 2015.**
10.24*[2] [3]	Loan Agreement, dated December 14, 2016, by and among Spire Inc., Alabama Gas Corporation, Laclede Gas Company, and the several banks party thereto, including Wells Fargo Bank, National Association, as Administrative Agent; JPMorgan Chase Bank, N.A. and U.S. Bank National Association, as Co-Syndication Agents; Wells Fargo Securities, LLC, JPMorgan Chase Bank, N.A., and U.S. Bank National Association, as Joint Lead Arrangers and Joint Bookrunners; and Bank of America, N.A., Credit Suisse AG, Cayman Islands Branch, Morgan Stanley Bank, N.A., Regions Bank, Royal Bank of Canada, and TD Bank, N.A., as Documentation Agents; filed as Exhibit 99.1 to the Company's Current Report on Form 8-K on December 16, 2016.
10.25*	Commercial Paper Dealer Agreement, dated December 21, 2016, between Spire Inc. and Wells Fargo Securities, LLC; filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2016.
10.26*	Commercial Paper Dealer Agreement, dated December 21, 2016, between Spire Inc. and Credit Suisse Securities (USA) LLC; filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2016.
10.27*	**Spire Inc. Executive Severance Plan; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on May 2, 2017.**
10.28*[1]	**Amendment 1 to The Laclede Group Annual Incentive Plan effective January 1, 2018; filed as Exhibit 10.53 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.29*[1]	**Amendment 1 to The Laclede Group 2015 Equity Incentive Plan effective January 1, 2018; filed as Exhibit 10.54 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.30*	**Amendment 1 to Spire Inc. Executive Severance Plan effective January 1, 2018; filed as Exhibit 10.55 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.31*[1]	**Amendment 1 to The Laclede Group 2011 Management Continuity Protection Plan effective January 18, 2018; filed as Exhibit 10.56 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.32*	First Amendment to Loan Agreement, dated as of October 31, 2018, by and among Spire Inc., a Missouri corporation, Spire Alabama Inc. (formerly Alabama Gas Corporation), an Alabama corporation, and Spire Missouri Inc. (formerly Laclede Gas Company), a Missouri corporation, the Banks from time to time party thereto, and Wells Fargo Bank, National Association, as Administrative Agent for the Banks; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on November 6, 2018.
10.33*	**Spire Deferred Income Plan, Amended and Restated Effective January 1, 2019; filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.**
10.34*	**The Company's Form of Restricted Stock Award Agreement; filed as Exhibit 10.38 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.**
10.35*	**The Company's Form of Restricted Stock Unit Award Agreement; filed as Exhibit 10.39 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.**
10.36*	**The Company's Form of Performance Contingent Stock Unit Award Agreement; filed as Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.**

Exhibit Number	Description
10.37*	Amended and Restated Loan Agreement, dated July 22, 2022, among Spire Inc., Spire Missouri Inc., Spire Alabama Inc., Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto as Banks; filed as Exhibit 99.1 to the Company's Current Report on Form 8-K on July 28, 2022.
10.38*	Equity Distribution Agreement of the Company, dated as of February 6, 2019; filed as Exhibit 1.1 to the Company's Current Report on Form 8-K on February 6, 2019.
10.39*	Letter Agreement to the Equity Distribution Agreement of the Company, dated as of May 14, 2019; filed as Exhibit 1.1 to the Company's Current Report on Form 8-K on May 14, 2019.
10.40*	Second Letter Agreement to the Equity Distribution Agreement of the Company, dated as of May 10, 2022, dated as of May 9, 2022; filed as Exhibit 1.1 to the Company's Current Report on Form 8-K on May 10, 2022.
21	Subsidiaries of the Company.
23.1	Consent of Independent Registered Public Accounting Firm of the Company.
23.2	Consent of Independent Registered Public Accounting Firm of Spire Missouri Inc.
23.3	Consent of Independent Registered Public Accounting Firm of Spire Alabama Inc.
31.1	Certifications under Rule 13a-14(a) of the CEO and CFO of the Company.
31.2	Certifications under Rule 13a-14(a) of the CEO and CFO of Spire Missouri Inc.
31.3	Certifications under Rule 13a-14(a) of the CEO and CFO of Spire Alabama Inc.
32.1	Section 1350 Certifications under Rule 13a-14(b) of the CEO and CFO of the Company.
32.2	Section 1350 Certifications under Rule 13a-14(b) of the CEO and CFO of Spire Missouri Inc.
32.3	Section 1350 Certifications under Rule 13a-14(b) of the CEO and CFO of Spire Alabama Inc.
97	Spire Inc. Clawback Policy
101	Interactive Data Files including the following information from the Annual Report on Form 10-K for the fiscal year ended September 30, 2023, formatted in inline extensible business reporting language ("Inline XBRL"): (i) Cover Page Interactive Data and (ii) the Financial Statements listed on the first page of Item 8.
104	Cover Page Interactive Data File (formatted in Inline XBRL and included in the Interactive Data Files submitted under Exhibit 101).

* Incorporated herein by reference and made a part hereof. Spire Inc. File No. 1-16681. Spire Missouri Inc. File No. 1-1822. Spire Alabama Inc. File No. 2-38960.

† Paper exhibit.

1 The Laclede Group, Inc. changed its name to Spire Inc. effective April 28, 2016.

2 Alabama Gas Corporation ("Alagasco") changed its name to Spire Alabama Inc. effective September 1, 2017.

3 Laclede Gas Company changed its name to Spire Missouri Inc. effective August 30, 2017.

Bold items reflect management contracts or compensatory plans or arrangements.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Spire Inc.

Date November 16, 2023

By /s/ Steven P. Rasche
Steven P. Rasche
Executive Vice President and Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date	Signature	Title
November 16, 2023	/s/ Steven L. Lindsey Steven L. Lindsey	Director, President and Chief Executive Officer (Principal Executive Officer)
November 16, 2023	/s/ Steven P. Rasche Steven P. Rasche	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)
November 16, 2023	/s/ Edward L. Glotzbach Edward L. Glotzbach	Chairman of the Board
November 16, 2023	/s/ Mark A. Borer Mark A. Borer	Director
November 16, 2023	/s/ Vincent J. Ferrari Vincent J. Ferrari	Director
November 16, 2023	/s/ Maria V. Fogarty Maria V. Fogarty	Director
November 16, 2023	/s/ Carrie J. Hightman Carrie J. Hightman	Director
November 16, 2023	/s/ Rob L. Jones Rob L. Jones	Director
November 16, 2023	/s/ Paul D. Koonce Paul D. Koonce	Director
November 16, 2023	/s/ Brenda D. Newberry Brenda D. Newberry	Director
November 16, 2023	/s/ Stephen S. Schwartz Stephen S. Schwartz	Director
November 16, 2023	/s/ Suzanne Sitherwood Suzanne Sitherwood	Director
November 16, 2023	/s/ John P. Stupp Jr. John P. Stupp Jr.	Director

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Spire Missouri Inc.

Date November 16, 2023

By /s/ Timothy W. Krick
Timothy W. Krick
Controller and Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date	Signature	Title
November 16, 2023	/s/ Steven L. Lindsey Steven L. Lindsey	Director and Chief Executive Officer (Principal Executive Officer)
November 16, 2023	/s/ Adam W. Woodard Adam W. Woodard	Chief Financial Officer and Treasurer (Principal Financial Officer)
November 16, 2023	/s/ Timothy W. Krick Timothy W. Krick	Controller and Chief Accounting Officer (Principal Accounting Officer)
November 16, 2023	/s/ Suzanne Sitherwood Suzanne Sitherwood	Chairman of the Board
November 16, 2023	/s/ Matthew J. Aplington Matthew J. Aplington	Director
November 16, 2023	/s/ Stephen M. Mills Stephen M. Mills	Director and President
November 16, 2023	/s/ Steven P. Rasche Steven P. Rasche	Director

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Spire Alabama Inc.

Date November 16, 2023

By /s/ Timothy W. Krick
Timothy W. Krick
Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date	Signature	Title
November 16, 2023	/s/ Steven L. Lindsey Steven L. Lindsey	Director and Chief Executive Officer (Principal Executive Officer)
November 16, 2023	/s/ Adam W. Woodard Adam W. Woodard	Chief Financial Officer and Treasurer (Principal Financial Officer)
November 16, 2023	/s/ Timothy W. Krick Timothy W. Krick	Chief Accounting Officer (Principal Accounting Officer)
November 16, 2023	/s/ Suzanne Sitherwood Suzanne Sitherwood	Chairman of the Board
November 16, 2023	/s/ Matthew J. Aplington Matthew J. Aplington	Director
November 16, 2023	/s/ Joseph B. Hampton Joseph B. Hampton	Director and President
November 16, 2023	/s/ Steven P. Rasche Steven P. Rasche	Director

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

☒ **Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2023 or**

☐ **Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from to**

Commission File Number	Registrant, State of Incorporation Address, Zip Code and Telephone Number	IRS Employer Identification No.
001-14431	**American States Water Company** Incorporated in California 630 E. Foothill Boulevard, San Dimas CA 91773-1212 (909) 394-3600	95-4676679

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Shares	AWR	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Commission File Number	Registrant, State of Incorporation Address, Zip Code and Telephone Number	IRS Employer Identification No.
001-12008	**Golden State Water Company** Incorporated in California 630 E. Foothill Boulevard, San Dimas CA 91773-1212 (909) 394-3600	95-1243678

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
None	None	None

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

American States Water Company	Yes	☒	No	☐
Golden State Water Company	Yes	☐	No	☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

American States Water Company	Yes	☐	No	☒
Golden State Water Company	Yes	☐	No	☒

Indicate by check mark whether Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

American States Water Company	Yes	☒	No	☐
Golden State Water Company	Yes	☒	No	☐

Indicate by check mark whether Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or such shorter period that the Registrant was required to submit such files).

American States Water Company	Yes	☒	No	☐
Golden State Water Company	Yes	☒	No	☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

American States Water Company

Large accelerated filer	☒	Accelerated filer	☐	Non-accelerated filer	☐	Smaller reporting company	☐	Emerging growth company	☐

Golden States Water Company

Large accelerated filer	☐	Accelerated filer	☐	Non-accelerated filer	☒	Smaller reporting company	☐	Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

American States Water Company ☐
Golden State Water Company ☐

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

American States Water Company ☒
Golden State Water Company ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the Registrant included in the filing reflect the correction of an error to previously issued financial statements.

American States Water Company ☐
Golden State Water Company ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the Registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

American States Water Company ☐
Golden State Water Company ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act)

American States Water Company	Yes	☐	No	☒
Golden State Water Company	Yes	☐	No	☒

The aggregate market value of all voting and non-voting common shares, no par value, of American States Water ("Common Shares") held by non-affiliates of American States Water Company was approximately $3,189,000,557 on June 30, 2023, the last business day of the Registrant's most recently completed second fiscal quarter, based on the closing price per Common Share of American States Water Company as traded on the New York Stock Exchange. As of February 20, 2024, the number of Common Shares of American States Water Company outstanding was 36,988,764. As of that same date, American States Water Company owned all 171 outstanding Common Shares of Golden State Water Company. The aggregate market value of all voting stock held by non-affiliates of Golden State Water Company was zero on June 30, 2023.

Golden State Water Company meets the conditions set forth in General Instruction I(1)(a) and (b) of Form 10-K and is therefore filing this Form, in part, with the reduced disclosure format for Golden State Water Company.

Documents Incorporated by Reference:

Portions of the Proxy Statement of American States Water Company will be subsequently filed with the Securities and Exchange Commission as to Part III, Item Nos. 10, 11, 13 and 14 and portions of Item 12, in each case as specifically referenced herein.

AMERICAN STATES WATER COMPANY
and
GOLDEN STATE WATER COMPANY

FORM 10-K

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GLOSSARY OF TERMS

The following terms and acronyms used in this Form 10-K are defined below:

Term or Acronym	Definition
50-year contract	ASUS's initial 50-year, firm-fixed-price contracts
AFUDC	Allowance for Funds Used During Construction
Arrearage Program	California Water and Wastewater Arrearage Payment Program
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
ASUS	American States Utility Services, Inc.
AWR	American States Water Company
BRRAM	Base Revenue Requirement Adjustment Mechanism
BSUS	Bay State Utility Services LLC
BVES	Bear Valley Electric Service, Inc.
CCPA	California Consumer Privacy Act
CEMA	Catastrophic Emergency Memorandum Account
COC	Cost of Capital
CPUC	California Public Utilities Commission
CWA	California Water Association
DCAA	Defense Contract Auditing Agency
DCMA	Defense Contract Management Agency
DDW	Division of Drinking Water
DRP	Common Share Purchase and Dividend Reinvestment Plan
EBITDA	Earnings Before Income Taxes, Depreciation and Amortization
ECUS	Emerald Coast Utility Services, Inc.
EPA	Economic Price Adjustment
EPS	Earnings Per Share
ERISA	Employee Retirement Income Security Act of 1974, as amended
Exchange Act	Securities Exchange Act of 1934, as amended
Extended Arrearage Program	New Extended Water and Wastewater Arrearage Program
FBWS	Fort Bliss Water Services Company
FRUS	Fort Riley Utility Services, Inc.
FTB	California Franchise Tax Board
GAAP	Generally Accepted Accounting Principles in the United States of America
GHG	Greenhouse Gas
gpcd	Gallons Per Capita Per Day
GSWC	Golden State Water Company
IRS	Internal Revenue Service
IOWU	Investor-Owned Water Utility
JBCC	Joint Base Cape Cod
kv	Kilovolt
MAF	Million Acre-Feet
MCBA	Modified Cost Balancing Account
MCL	Maximum Contamination Level
Moody's	Moody's Investors Service
MWD	Metropolitan Water District of Southern California
MWh	Megawatt-Hour
NYSE	New York Stock Exchange
ODUS	Old Dominion Utility Services, Inc.
OEIS	Office of Energy Infrastructure Safety

ONUS	Old North Utility Services, Inc.
PCAOB	Public Company Accounting Oversight Board
PFAS	Perfluoroalkyl Substances
PFBS	Perfluorobutane Sulfonic Acid
PFHxS	Perfluorohexane Sulfonic Acid
PFOA	Perfluorooctanoic Acid
PFOS	perfluorooctanesulfonic acid
ppb	Parts Per Billion
ppt	Parts Per Trillion
PRUS	Patuxent River Utility Services LLC
PSUS	Palmetto State Utility Services, Inc.
Public Advocates	Public Advocates Office at the CPUC
REA	Request for Equitable Adjustment
REC	Renewable Energy Credit
Registrant	American States Water Company and Golden State Water Company
ROU	Right-of-Use
RPS	Renewables Portfolio Standard
RSU	Restricted Stock Unit
S&P	Standard and Poor's Global Ratings
SB	Senate Bill
SEC	Securities and Exchange Commission
SERP	Supplemental Executive Retirement Plan
SOFR	Secured Overnight Financing Rate
SWP	State Water Project
SWRCB	State Water Resources Control Board
TSR	Total Shareholder Return
TUS	Terrapin Utility Services, Inc.
U.S.	United States
USEPA	United States Environmental Protection Agency
WCCM	Water Cost of Capital Mechanism
WMP	Wildfire Mitigation Plan
WRAM	Water Revenue Adjustment Mechanism

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This Form 10-K and the information incorporated by reference into this Form 10-K contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements reflect the current views of our senior management with respect to future events and our financial performance. These statements include forward-looking statements with respect to our business and industry in general. Statements that include the words "expect," "intend," "believe," "estimate," "may," "can," "will," "likely," "should," "could," "anticipate," "plan" and similar statements of a future or forward-looking nature identify forward-looking statements for purposes of the federal securities laws or otherwise. Forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or will be important factors that could cause our actual results to differ materially from those indicated in these statements. We believe that these factors include, but are not limited to, the following:

- the impact of laws, regulations and policies of regulatory agencies or the U.S. government applicable to water, wastewater and electric utility operations;
- the ability of GSWC and BVES to recover their respective costs through regulated rates, including increased costs associated with addressing climate change risks, such as drought and wildfires in California, costs incurred in connection with complying with water quality regulations, and increased costs of operation and maintenance due to inflation, supply chain disruptions and increases in interest rates, while facing an increase in customer rate increase opposition and possible reluctance from the CPUC to pass through all such costs to the customers;
- customer dissatisfaction due to rising rates needed to recover the costs of replacing aging infrastructure, address climate change risks, comply with water quality, renewable energy and greenhouse gas regulation;
- all of our contracts for providing services on military bases are provided to the U.S. government under long-term, fixed-price contracts subject to annual economic price adjustments
- all contracts for providing services on military bases may be terminated or suspended at any time by the government;
- ASUS is subject to potential government audits or investigations of its business practices and compliance with government procurement statutes and regulations that could result in fines and penalties;
- GSWC and BVES are subject to potential audit and investigations by the CPUC for failure to comply with regulations applicable to public utilities, including failure to comply with state and federal water quality requirements, wildfire mitigation plans, renewable energy legislation, greenhouse gas regulations and other climate related regulations that could result in fines and penalties;
- we compete with other companies in bidding on providing utility services on military bases which involves estimating costs and potential profits that may not be realized;
- the impact of water quality and wastewater quality regulations on military bases;
- asset or business acquisitions may not yield the anticipated benefits;
- the impact of climate change and extreme weather events, including droughts, storms, high wind events, wildfires, flash flooding and other natural disasters, and the effects they could have on our operations;
- our assets at our regulated utilities are subject to condemnation by municipalities and other governmental subdivisions;
- increases in the costs of obtaining and complying with the terms of franchise agreements;
- damage to our reputation or adverse publicity may lead to increased regulatory oversight or sanctions;
- costs and effects of legal and administrative proceedings, settlements, investigations and claims;
- our ability to control operation and maintenance costs within the amounts that have been approved in rates or estimated in our military base contracts;
- the outbreak of pandemics, such as COVID-19, and other events that may cause region wide, statewide, nationwide or even global disruption, which could impact our businesses, operations, cash flows or financial results;
- the inherent risk of damage to private property and injury to employees and the general public involved in the generation, transmission and distribution of electricity, the handling of hazardous materials and equipment, and being in close proximity to public utility construction and maintenance operations;
- the impact of groundwater contamination and the increasing costs associated with treatment and mitigation;

- risks of incurring losses not covered by insurance or recoverable in rates;

- the adequacy of water supplies due to fluctuations of weather, climate change, and other uncontrollable factors;
- the impact that water conservation efforts may have on GSWC's operations and costs incurred;
- changes in electricity and natural gas prices in California;
- failure to make accurate estimates about financing and accounting matters;
- changes in accounting, public utility, environmental and tax laws and regulations affecting our businesses;
- changes in fair value of investments and other assets;
- the performance of subcontractors engaged to assist us in the performance of contracted services on military bases;
- incomplete or delayed reimbursement from the U.S. government and delays in obtaining decisions from the CPUC on regulated public utility rates that can adversely impact our financial condition and liquidity;
- physical security of our critical assets, personnel and data critical to our business, employees, customers and vendors;
- cybersecurity incidents that could disrupt critical information technology systems, resulting in the loss of financial and other information critical for operations and the breach of confidential information of our customers, employees and vendors;
- our ability to attract, retain, train, motivate, develop, and transition key employees;
- the failure of our employees to maintain required certifications and licenses or to complete required compliance training;
- changes in interest rates and our ability to borrow funds and access bank and capital markets on reasonable terms;
- the impact of inflation and supply chain disruptions on our operational costs and costs of capital that may not be recovered in rates for our regulated utilities and through economic price adjustments for our military bases;
- results of financing efforts, including the ability to obtain financing on favorable terms, which can be affected by various factors, including credit ratings, interest rate fluctuations, compliance with debt covenants and conditions, delays in receiving general rate case decisions from the CPUC, and general market and economic conditions;
- actions by credit rating agencies to downgrade AWR or GSWC's credit ratings or to place those ratings on negative outlook;
- our ability to finance the significant capital expenditures required by our operations, which are increasing;
- volatility in the price of our Common Shares;
- declines in the market prices of equity and fixed-income securities and resultant cash funding requirements for defined benefit pension plans and other post-retirement benefit plans;
- our reliance on cash flow from our subsidiaries to meet our financial obligations and to pay dividends on our Common Shares;
- the geographic concentration of our operations in California; and
- other risks and uncertainties described under the heading "Item 1A. Risk Factors" in this Form 10-K.

Although we believe that the expectations reflected in the forward-looking statements are reasonable based on our current knowledge of our business and operations, we cannot guarantee future results, levels of activity, performance or achievements. If one or more of these or other risks or uncertainties materialize, or if our underlying assumptions prove to be incorrect, actual results may differ materially from what we anticipate. Any forward-looking statements you read in this Form 10-K and the information incorporated herein by reference reflect our views as of their respective dates and are subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, growth strategy and liquidity. You should not place undue reliance on these forward-looking statements and you should carefully consider all of the factors identified in this Form 10-K and the information incorporated herein by reference that could cause actual results to differ. Forward-looking statements speak only as of the date they are made and except as required by law, AWR expressly disclaims an obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

PART I

Item 1. Business

This annual report on Form 10-K is a combined report being filed by two separate Registrants, American States Water Company ("AWR") and Golden State Water Company ("GSWC"). References in this report to "Registrant" are to AWR and GSWC, collectively, unless otherwise specified. GSWC makes no representations as to the information contained in this report relating to AWR and its subsidiaries, other than GSWC.

AWR makes its periodic reports, Form 10-Q and Form 10-K, and current reports, Form 8-K, and amendments to those reports, available free of charge through its website, www.aswater.com, as soon as those reports are electronically filed with or furnished to the Securities and Exchange Commission ("SEC"). Such reports are also available on the SEC's website at www.sec.gov. AWR also makes available free of charge its code of business conduct and ethics, its corporate governance guidelines, its policy for the recoupment of performance-based compensation, its insider trading policy and the charters of its Nominating and Governance Committee, Compensation Committee and Audit and Finance Committee through its website or by calling (877) 463-6297.

Overview

AWR is the parent company of GSWC, Bear Valley Electric Service, Inc. ("BVES") and American States Utility Services, Inc. ("ASUS") (and its wholly-owned subsidiaries: Fort Bliss Water Services Company ("FBWS"), Old Dominion Utility Services, Inc. ("ODUS"), Terrapin Utility Services, Inc. ("TUS"), Palmetto State Utility Services, Inc. ("PSUS"), Old North Utility Services, Inc. ("ONUS"), Emerald Coast Utility Services, Inc. ("ECUS"), Fort Riley Utility Services, Inc. ("FRUS"), Bay State Utility Services LLC ("BSUS"), and Patuxent River Utility Services LLC ("PRUS")).

AWR has three reportable segments: water, electric and contracted services. Within the segments, AWR has three principal business units, water and electric service utility operations conducted through its regulated utilities GSWC and BVES, respectively, and contracted services conducted through ASUS and its subsidiaries.

GSWC is a public water utility engaged in the purchase, production, distribution and sale of water in 10 counties in the state of California. GSWC is regulated by the California Public Utilities Commission ("CPUC"). BVES is a public electric utility that distributes electricity in several San Bernardino County mountain communities in California and is also regulated by the CPUC. Additional information regarding public utility regulation is discussed in Item 7. *"Management's Discussion and Analysis of Financial Condition and Results of Operations"* under the section titled *"Regulatory Matters."*

AWR's regulated utilities served 264,093 water customers and 24,777 electric customers at December 31, 2023, or a total of 288,870 customers, compared with 263,265 water customers and 24,705 electric customers at December 31, 2022, or a total of 287,970 customers. Both GSWC's and BVES's operations exhibit seasonal trends. Although both have diversified customer bases, residential and commercial customers account for the majority of water and electric sales and revenues. Revenues derived from commercial and residential customers accounted for approximately 90% of total water and electric revenues for the years ended December 31, 2023, 2022 and 2021.

ASUS, through its subsidiaries, has contracted with the U.S. government to provide water and/or wastewater services at various military installations. ASUS operates, maintains and performs construction activities (including renewal and replacement capital work) on water and/or wastewater systems at various U.S. military bases pursuant to an initial 50-year, firm-fixed-price contract and additional firm-fixed-price contracts, task order agreements and contracts with third party prime contractors. ASUS has one subsidiary that has entered into a task order agreement with the U.S. government that has a term of 15 years. Each of the contracts with the U.S. government is subject to termination, in whole or in part, prior to the end of its term for convenience of the U.S. government or as a result of default or nonperformance by the ASUS subsidiary performing the contract. The price for each of these contracts is subject to annual economic price adjustments or task order adjustments. The contracts are also subject to modifications for changes in circumstances, changes in laws and regulations, and additions to the contract value for new construction of facilities at the military bases. AWR generally guarantees performance of all of the contracts of ASUS's subsidiaries.

Pursuant to the terms of the 50-year contracts with the U.S. government, the subsidiaries of ASUS operate the following water and wastewater systems:

Subsidiary	Military Base	Type of System	Location
FBWS	Fort Bliss	Water and Wastewater	Texas and New Mexico
ODUS	Fort Gregg-Adams	Wastewater	Virginia
ODUS	Joint-Base Langley Eustis and Joint Expeditionary Base Little Creek-Fort Story	Water and Wastewater	Virginia
TUS	Joint Base Andrews	Water and Wastewater	Maryland
PSUS	Fort Jackson	Water and Wastewater	South Carolina
ONUS	Fort Liberty, Pope Army Airfield and Camp Mackall	Water and Wastewater	North Carolina
ECUS	Eglin Air Force Base	Water and Wastewater	Florida
FRUS	Fort Riley	Water and Wastewater Collection and Treatment	Kansas
PRUS	Naval Air Station Patuxent River	Water and Wastewater	Maryland
BSUS	Joint Base Cape Cod*	Water and Wastewater Collection and Treatment	Massachusetts

*BSUS is the only subsidiary that has entered into a task order agreement serving Joint Base Cape Cod that has a term of 15 years.

Certain financial information for each of AWR's business segments - water distribution, electric distribution, and contracted services - is set forth in Note 17 to the Notes to Consolidated Financial Statements of American States Water Company and its subsidiaries. While AWR's water and electric utility segments are not dependent upon a single or only a few customers, the U.S. government is the primary customer for ASUS's contracted services. ASUS, from time to time, performs work at military bases for other prime contractors of the U.S. government.

Seasonality

The demand for water and electricity varies by season. For instance, there can be a higher level of water consumption during the third quarter of each year when weather in California has been hot and dry. During unusually wet weather, our customers generally use less water. The CPUC has adopted regulatory mechanisms at GSWC that help mitigate fluctuations in revenues due to changes in water consumption by our customers in California, which currently remain in effect.

The demand for electricity in our electric customer service area is greatly affected by winter snow levels. An increase in winter snow levels reduces the use of snow-making machines at ski resorts in the Big Bear area and, as a result, reduces our electric revenues. Likewise, unseasonably warm weather during a skiing season may result in temperatures too high for snow making conditions, which also reduces our electric revenues. The CPUC has adopted regulatory mechanisms for our electric business, which helps mitigate fluctuations in the revenues of our electric business due to changes in the amount of electricity used by BVES's customers.

Environmental Regulations

AWR's subsidiaries are subject to extensive environmental regulations. GSWC is required to comply with safe drinking water requirements, including testing to determine constituents in its water supply and customer notification requirements if certain contaminants exceed maximum levels or advisory levels, and requirements to address issues relating to known contamination. The subsidiaries of ASUS are subject to similar requirements in connection with their water and wastewater operations on military bases. GSWC is also responsible for clean-up and remediation at a plant site that contained an underground storage tank. As mandated by legislation enacted in California, BVES is required to submit wildfire mitigation plans to the CPUC and the Office of Energy Infrastructure Safety ("OEIS") for approvals. California requires electric utilities to prepare plans on constructing, maintaining, and operating their electrical lines and equipment to minimize the risk of catastrophic wildfire.

ASUS's subsidiaries are responsible for ensuring compliance with the reduction and/or removal of all constituents required under its wastewater treatment plant operating permits. ASUS works with state regulators and industry associations for the purpose of staying current with emergent issues and proactively addressing any change in wastewater treatment regulation.

The regulated utilities spent approximately $29.0 million in 2023 and expect to spend approximately $23.5 million in 2024 for capital expenditures on environmental control facilities. During 2023, ASUS performed construction activities (for the benefit of the U.S. government) related to environmental control facilities with a contract value of $4.5 million. ASUS expects to perform construction activities related to environmental control facilities with a contract value of $9.2 million in 2024. In

addition, various other capital expenditures at the regulated utilities and construction projects at ASUS are incurred for purposes other than environmental control facilities but may also have some environmental benefits. An environmental control facility is any facility that is reasonably expected to abate, reduce or aid in the prevention, measurement, control of monitoring of noise, air or water pollutants, solid waste, thermal pollution, radiation or other pollutants.

Environmental matters and compliance with such laws and regulations are discussed further in Item 7. *"Management's Discussion and Analysis of Financial Condition and Results of Operations"* under the section titled *"Environmental Matters*."

Climate Change Planning, Risks and Opportunities

Climate change is one area that we focus on as we develop and execute our business strategy and financial planning, both in the short- and long-term and is subject to the oversight of the Board of Directors and senior management. First and foremost, designing and implementing efficient and resilient infrastructure and operational processes not only addresses climate change, but also reduces costs. Our capital investment programs are critical to ensure we can continue delivering reliable, high-quality water, wastewater and electric services without interruption. As a utility company, our operating strategy is dependent on having a reliable infrastructure in place.

The risks posed by climate variability increase the need for us to plan for and address supply resiliency. We address these risks by planning, assessing, mitigating, and investing in our infrastructure for the long-term benefit of our communities. As a provider of an essential product and service, our primary goal is to ensure service is uninterrupted.

GSWC considers the potential impacts of climate change in its water supply portfolio planning and its overall infrastructure replacement plans. We evaluate how water supplies, water quality and water demands may change, and consider mitigation strategies to assist us in being able to deliver water to our customers.

We seek to minimize our greenhouse gas ("GHG") emissions to assist in reducing the effects of climate change. We have studied our GHG emissions levels, set a 2020 baseline, and developed a GHG emissions reduction target of 60% by 2035 from the 2020 baseline. To accomplish this, GSWC and BVES have developed a phased approach, which includes short-, medium- and long-term actions. Our priorities include reductions in energy use and increasing purchases of green energy for our water operations, increasing purchases of green energy for distribution to our electric customers, and reviewing our vehicle fleet needs and electrification. Achievement of this reduction target is contingent on certain external factors, which include the ongoing development of technology.

Water Utility

There are risks to maintaining adequate water quality and/or supply, either from climate variability or other events. They include droughts, changes in weather patterns, natural disasters, wildfires, decisions or actions restricting the use of water from our sources, and/or pumping of groundwater, and contamination or acts of terrorism or vandalism. We consider these potential events in our strategic planning process as we aim to avoid service interruptions and compromised water quality.

Our goal is to maintain adequate and high-quality water supplies. We strive to reach this goal in a number of ways, including monitoring water levels, short- and long-term water supply planning, having a diverse water supply portfolio, developing contingency plans, water efficiency and conservation efforts, and maintaining a strong infrastructure. Additional information on GSWC's water supplies is discussed further in Item 7. *"Management's Discussion and Analysis of Financial Condition and Results of Operation"* under the section titled *"Water Supplies."*

Electric Utility

Climate change has also impacted electric utilities in California due to an increase in wildfires. BVES's compliance with its wildfire mitigation plans have resulted in an increase in capital expenditures for wildfire mitigation projects. BVES will not be able to recover the costs incurred to make capital improvements included in BVES's current wildfire mitigation plans from customers until the CPUC approves recovery of these costs in its next general rate case filing. BVES filed a general rate case application in August 2022, which will determine new electric rates for the years 2023-2026. Power supplies may also become more constrained and more expensive due to regulation of power plants using fossil fuels.

California has established a cap-and-trade program applicable to greenhouse gas emissions. While BVES's power-plant emissions are below the reporting threshold, as a "Covered Entity," BVES has an obligation to file a report with the California Air Resources Board ("CARB") in June of each year under the Greenhouse Gas Mandatory Reporting Regulation. The report will become available publicly in the third quarter of 2024.

The State of California and the CPUC have established renewable energy procurement targets. BVES has entered into a CPUC-approved eleven-year contract for renewable energy credits. Because of this agreement, BVES believes it will comply through at least 2024 with California's renewable energy statutes that address this issue. BVES is pursuing short- and long-term renewable energy contracts to satisfy its requirements related to its resource portfolio for the compliance period covering the years 2021-2024 and beyond.

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In 2023, BVES's renewable power represented 41.3% of total retail sales. Renewable energy procurement requirements continue to escalate, reaching 50% by 2026 and 100% carbon free by 2045. BVES has entered into a contract to construct a solar energy project in Big Bear Lake, subject to obtaining CPUC approval and necessary permits. If approved and constructed, the project will provide a source of clean, local energy for BVES's customers.

BVES offers a distributed generation program, which benefits customers who install a solar or wind-generating facility that produces renewable energy. Those customers can receive a bill credit if their monthly renewable energy production exceeds their on-site use. BVES also has a number of customers on its Net Energy Metering Program (NEM), which was the previous renewable energy program. NEM customers can receive a bill credit if their annual renewable energy production exceeds their on-site use. Approximately 5% of the energy consumed by our BVES customers is now generated by customer-owned renewable sources (solar).

BVES is also required to comply with the CPUC's greenhouse gas emission performance standards. Under these standards, BVES must file an annual attestation with the CPUC stating that BVES has no new ownership investment in generation facilities exceeding the emission performance standards and no long-term commitments for generation exceeding the standards. In January 2024, BVES filed an attestation that BVES complied with the standards for 2023. At this time, management cannot estimate the impact, if any, that these regulations may have on future costs over BVES's power plant operations or the cost of BVES's purchased power from third party providers.

Competition

The businesses of GSWC and BVES are substantially free from direct and indirect competition with other public utilities, municipalities and other public agencies within their existing service territories. However, GSWC and BVES may be subject to eminent domain proceedings in which governmental agencies, under state law, may acquire GSWC's water systems or BVES's electric system if doing so is necessary and in the public's interest. GSWC competes with governmental agencies and other investor-owned utilities in connection with offering service to new real estate developments on the basis of financial terms, availability of water and ability to commence providing service on a timely basis. ASUS actively competes for business with other investor-owned utilities, other third-party providers of water and/or wastewater services, and governmental entities primarily on the basis of quality of service and price.

AWR Workforce

AWR and its subsidiaries had a total of 815 employees as of December 31, 2023. GSWC had 506 employees as of December 31, 2023. BVES had 50 employees, of which 18 employees are covered by a collective bargaining agreement with the International Brotherhood of Electrical Workers, which expires in December 2025. At times, GSWC and BVES use temporary and contract workers for a finite period of time and in a limited capacity to continue a project or workflow until they can hire a regular employee. It is also common for those temporary workers to be hired as a regular, full-time employee.

ASUS and its subsidiaries had a total of 259 employees as of December 31, 2023. FBWS, a subsidiary of ASUS, has 14 employees that are covered by a collective bargaining agreement with the International Union of Operating Engineers. This agreement expires in September 2024.

Our businesses require a combination of complex infrastructure, regulatory expertise and customer service. Ongoing development of our talent across the organization to meet critical business needs is a continual focus, and includes (i) building a culture such that high-potential talent is identified and further developed, (ii) creating career paths that not only move up a specialized ladder, but across the organization, and (iii) offering opportunities for employees to accept new challenges through stretch assignments.

Attracting Diverse Qualified Candidates

We understand that strength comes from having a diverse employee population. We strive to hire from our local communities and to have a workforce that is representative, at all job levels, of the communities we serve and from which we recruit. This begins with the recruitment process. We strive to have all aspects of employment, including the decision to hire, promote, discipline, or discharge, be based on merit, competence, performance, and business needs. It is our policy not to discriminate on the basis of race, color, religion, marital status, age, national origin, ancestry, physical or mental disability, medical condition, pregnancy, genetic information, gender, sexual orientation, gender identity or expression, veteran status, or any other status protected under federal, state, or local laws.

Compensation and Benefits

We believe that we pay employees a competitive and fair wage, as benchmarked with other leading companies and the market. Consistent with our principle of valuing personal mastery, we reward employees for improving their skills and capabilities. Our benefits include a defined benefit pension plan for employees hired prior to January 1, 2011, a defined contribution plan for hires or rehires after December 31, 2010, a 401(k) plan, healthcare and insurance benefits, health savings and flexible spending accounts.

Safety and Training

Strong occupational health and safety practices reduce injuries, keep our workforce healthy, and reduce operating costs. A safe workforce translates into better performance company-wide. We work to create a safety-focused culture in which each individual feels personally responsible for their own safety, the safety of their co-workers, as well as the safety of the communities they serve. Safety performance is included as a metric in the officer and manager compensation programs. Employees attend training in various mandated safety programs that are applicable to their area of operations, including training to meet regulatory safety training requirements and requirements of the Department of Transportation. We also provide training to assist in compliance with local, state, and federal environmental laws.

To reinforce our safety efforts and protocols, company-wide safety inspections at GSWC and BVES are conducted with supervisors. The inspection reports are forwarded to management for review, allocation of resources are made (if needed), and corrective actions are taken. ASUS has a dedicated Safety Coordinator located at each military base installation served. The onsite Safety Coordinator is responsible for regulatory compliance, as well as beneficial health and safety monitoring functions.

Learning and Development

Compliance training is required each year, for each employee. Other types of training are offered on an optional basis. Examples of optional programs include ongoing water operations competencies and education, supervisor development, knowledge capture and management, feedback and measurements to show the value of learning solutions, and administrative oversight for various business competencies relative to mandated training and compliance requirements. We pay for approved external business-related seminars and workshops. Certain positions require employees to maintain all of their job-specific certifications, licenses and continuing education credits.

On a regular and ongoing basis, we require all employees to certify that they have reviewed and understand our Code of Conduct as well as our Employee Handbook. We provide harassment and prevention awareness training for all employees.

Succession Planning

On an annual basis, our senior management team completes a roadmap for improving human capital management by developing succession plans with the goal of achieving the most efficient alignment of resources and talent to meet business needs. This includes identifying key succession positions and potential successors for top-level positions, such as Vice Presidents, for the next ten years.

Recruiting, developing and retaining the right talent is key to our long-term success. With approximately 30% of our employees eligible for retirement in the next five years, we are focused on transferring institutional knowledge, continuing succession planning and pursuing recruitment and development strategies to attract qualified talent.

Item 1A. Risk Factors

You should carefully read the risks described below and other information in this Form 10-K in order to understand certain of the risks of our business.

Overview of Risk Factors

We have three business segments, water utility, electric utility and contracted services, each of which are subject to different risks as further discussed below. We are also subject to risks frequently encountered by businesses of our size.

Regulated Water and Electric Utility Operations

GSWC's and BVES's revenues depend substantially on the rates and charges we are permitted to recover from our customers and the timing of that recovery as authorized by the CPUC. Decisions of the CPUC could result in impairment charges and customer refunds, and delays in recovering costs in rates. Some of the factors impacting our ability to obtain rate recovery on a timely basis include opposition to rate increases arising out of increased costs for replacing aging infrastructure and increased costs associated with addressing climate change and weather event risks, such as drought, storms and wildfires in California, costs incurred in connection with complying with water quality regulations, costs incurred in connection with obtaining and complying with franchise agreements with local governmental agencies and costs of obtaining permits from local, state and federal governmental agencies. There may also be increased customer opposition to rate increases due to customer dissatisfaction with conservation rate structures and public safety power shutdowns.

Our water and electric utility services are provided in California. As a result, our financial results are largely subject to political, water supply, labor, utility cost and regulatory risks, economic conditions, natural disasters (which may increase as a result of climate change), and other risks affecting California businesses. Our assets are also subject to condemnation in California.

Contract Services Operations

All of our utility privatization contract services are provided to the U.S. government pursuant to the terms of firm-fixed-price contracts subject to annual economic price adjustments. ASUS may also, from time to time, perform construction services on military bases as a subcontractor or pursuant to task order agreements. These contracts may be terminated or services suspended at any time for convenience of the government. We are subject to penalties for failure to conform or comply with U.S. government regulations and the terms of our contracts, and may be suspended or debarred for such failure to comply. The fees that we may charge are adjusted annually and in response to our requests for equitable adjustments. We have experienced delays in obtaining price and equitable adjustments, as well as delays in being paid by the U.S. government.

We are also responsible for complying with water quality and wastewater quality regulations on military bases.

We compete with other companies in bidding on providing utility services on military bases. We submit bids on new U.S. government contracts for military bases based on estimates of cost and potential profit. Our estimates and judgment are important, for in the event we overpay to obtain a contract, we could incur losses on it.

Other Business Risks

We may be subject to financial losses, penalties and other liabilities if we fail to operate and maintain safe work sites, equipment and facilities, including losses, damages, penalties and other liabilities arising from wildfires, other natural disasters and terrorist activities. We may not be able to recover all these losses from insurance or from ratepayers or may experience delays in obtaining recovery for these losses.

We are also subject to other business risks typical of our business, including:

- Cybersecurity incidents and physical security risks of our infrastructure and data could disrupt our operations and critical systems, increase our expenses, result in liabilities to third parties and damage to our reputation;
- Failure to attract, train, develop and transition key employees with the necessary skills to replace employees who are retiring or otherwise terminate employment or to fill new positions needed to respond to the increase in public utility and environmental regulations;
- Failure to make accurate estimates about financing and accounting matters, and in filing requests for rate increases with the CPUC or requests for price adjustments with the U.S. government or in bids on military base contracts or obtain new task orders from the U.S. government;
- Our ability to finance significant capital expenditures required by our businesses, which could be adversely impacted by general economic and market conditions, delays in receiving decisions from the CPUC on our general rate cases or delays in receiving payment from the U.S. government;

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- Volatility in economic conditions such as changes to inflation, short-term interest rate volatility, and other market conditions may adversely impact our financial performance;
- Changes in accounting, public utility, environmental and tax laws and regulations impacting our business;
- Our inability to comply with debt covenants in our debt agreements; and
- Final determination of our income tax liability by the federal and applicable state governments.

As a holding company, AWR is dependent upon dividends from its subsidiaries to pay dividends to its shareholders. The ability of its subsidiaries to pay dividends is dependent upon compliance with state laws governing the payment of dividends and the terms of the debt agreements with the applicable subsidiary.

Climate Change

Climate change has resulted in increased frequency and duration of droughts, potential degradation of water quality, and changes in demand for services. More frequent and extended California drought conditions may cause increased stress on surface water supplies and groundwater basins, as well as allocations of water from the State Water Project and the Colorado River. Wholesale water suppliers may not have adequate supply during extended periods of drought, which may result in increases in prices for water delivered to us. In addition, GSWC could experience an increased use of reclaimed or recycled water by GSWC customers, in lieu of GSWC supplying potable water to these customers. Reclaimed water generally has lower tariff rates than potable water and may be provided by other companies or government entities in GSWC's service territory. Prolonged droughts may also result in state-ordered mandatory or voluntary conservation efforts by customers, changes in customer conservation patterns and imposition of new regulations impacting such things as landscaping and irrigation patterns.

California has established long-term indoor and outdoor water use standards to address the impact of climate change on California water resources. These standards will require all urban water retailers to meet certain water use standards on a system-by-system basis. The extended drought in the Colorado River watershed has resulted in a short-term agreement between Arizona, California and Nevada and the Bureau of Reclamation to reduce the amount of water taken from the Colorado River by 10% over the next three years (through the end of 2026). The impact to GSWC as a result of the short-term agreement is not known at this time.

Drought conditions have contributed to increases in wildfires, which has resulted in new California legislation requiring electric utilities to adopt and implement wildfire mitigation plans. BVES is incurring increased capital expenditures related to the creation and implementation of these plans. We anticipate that the costs of capital improvements necessary to implement this program will continue to increase. BVES is also required to implement a public safety power shut-off program during high wildfire threat conditions. Shut-offs can reduce BVES's liquidity and decrease customer satisfaction. Abnormal weather patterns created by climate change can also impact electricity demand at BVES. The demand for electricity at our electric segment is greatly affected by winter snow levels. An increase in winter snow levels reduces the use of snow-making machines at ski resorts in the Big Bear area and, as a result, also reduces BVES's liquidity. Likewise, unseasonably warm weather during a skiing season may result in temperatures too high for snow making conditions, which also reduces our liquidity.

More extreme weather events which may result in flash flooding, mudslides and high winds which could damage our infrastructure and our customers' and/or suppliers' property as a result of climate change may increase our cost of maintaining our infrastructure, our ability to provide water or electric service and the demand of our services from customers whose property has been damaged. The cost of damage to our infrastructure may be somewhat mitigated if the CPUC permits us to establish a catastrophic emergency memorandum account enabling us to recover the costs incurred. Furthermore, potential future legislative efforts to ban gas powered power plants as a response to climate change may require us to replace our current 8.4 MW natural gas-powered generator before its useful life is completed.

Risks Associated with Regulated Public Utility and Contracted Services Operations

Our businesses are heavily regulated and, as a result, decisions by regulatory agencies or the U.S. government can significantly affect our businesses

GSWC's and BVES's revenues depend substantially on the rates and fees they charge their customers and their ability to recover costs on a timely basis as authorized by the CPUC, including the ability to recover the costs of purchased water, groundwater assessments, electricity, natural gas, chemicals, water treatment, security at water facilities and preventative maintenance and emergency repairs. Any delays by the CPUC in granting rate relief to cover increased operating and capital costs at our public utilities or delays in obtaining approval of our requests at ASUS for economic price or equitable adjustments for contracted services from the U.S. government may adversely affect our year-over-year financial performance, liquidity and cash flows. We may file for interim rates in California in situations where there may be delays in granting final rate relief during a general rate case proceeding. If the CPUC approves lower rates than the interim rates we were permitted to adopt, the

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CPUC will require us to refund to customers the difference between the interim rates and the rates approved by the CPUC. Similarly, if the CPUC approves rates that are higher than the interim rates, the CPUC may authorize us to recover the difference between the interim rates and the final rates.

Regulatory decisions affecting GSWC and/or BVES may also impact prospective revenues and earnings, affect the timing of the recognition of revenues and expenses, may overturn past decisions used in determining our revenues and expenses, and could result in impairment charges and customer refunds. Negative decisions made by the CPUC may have an adverse effect on GSWC's or BVES's results of operations, financial position or cash flows and affect the ability of the regulated utilities to recover costs and an appropriate return on the capital investments being made.

On August 27, 2020, the CPUC issued a final decision in the first phase of the CPUC's Order Instituting Rulemaking evaluating the low income ratepayer assistance and affordability objectives contained in the CPUC's 2010 Water Action Plan, addressing the continued use of the Water Revenue Adjustment Mechanism ("WRAM") and the Modified Cost Balancing Account ("MCBA") by California water utilities. These mechanisms implemented in 2008 for the purpose of recovering the costs of water would be discontinued for years after 2024. However, on September 30, 2022, the governor of California signed Senate Bill ("SB") 1469. Effective January 1, 2023, SB 1469 allows Class A water utilities, including GSWC, to continue requesting the use of the WRAM in their next general rate case. With the passage of SB 1469, GSWC has requested the continued use of a full revenue decoupling mechanism, similar to the WRAM, in its next general rate case application filed in August 2023 that will establish new rates for the years 2025 – 2027. GSWC's request to continue using a full revenue decoupling mechanism in its next general rate case will be subject to CPUC approval.

Our regulated utilities' ongoing financial results depend on their ability to recover costs from its customers, including costs such as water or electricity purchased for its customers, through rates charged and billed to its customers as approved by the CPUC. Both GSWC's and BVES's financial results depend on its ability to earn a reasonable return on capital, from its credit facilities, long-term debt and equity as well as the recovery of costs such as operations and maintenance expense that are incurred. Our ability to recover costs and earn a reasonable rate of return can be affected by time lags or delays in receiving approvals on general rate case decisions from the CPUC to authorize recovery of customers' rates and differences between authorized rates and the actual costs incurred, due to increased levels of inflation, which each could adversely impact our financial condition and cash flows.

Management continually evaluates the anticipated recovery of regulatory assets, settlement of liabilities and revenues subject to refund and provides for allowances and reserves as deemed necessary. In the event that our assessment of the probability of recovery or settlement through the ratemaking process is incorrect, we will adjust the associated regulatory asset or liability to reflect the change in our assessment or any regulatory disallowances. A change in our evaluation of the probability over the recovery of regulatory assets including a future disallowance of previously granted regulatory mechanisms, or a regulatory disallowance of all or a portion of our costs could have a material adverse effect on our financial results.

We are also, in some cases, required to estimate future expenses and, in others, we are required to incur the expense before receiving approval to recover the costs. As a result, our revenues and earnings may fluctuate depending on the accuracy of our estimates, the timing of our investments or expenses or other factors. If expenses increase significantly over a short period, we may experience delays in recovery of these expenses and the inability to recover the carrying costs for the expenses, which increases risks of regulatory disallowances or write-offs.

Delays in obtaining approval of general rate cases could adversely impact our liquidity

We have been experiencing increasing delays in obtaining CPUC approval of our general rate cases. As a result, we have previously needed, and may need in the future, to undertake capital improvements described in our rate case filings before we receive CPUC approval to recover these costs in rates. BVES is required to file wildfire mitigation plans with OEIS for regulatory approval by the OEIS and the CPUC and, once approved, for BVES to make the capital improvements described in the wildfire mitigation plan. However, the CPUC does not approve recovery of any of the costs of implementing approved wildfire mitigation plans until it approves the next general rate case filed by BVES after the approval of the wildfire mitigation plans. As a result, there may be a delay in recovering costs associated with capital improvements required to be made by wildfire mitigation plans, and the CPUC may not approve all costs incurred in connection with the implementation of these plans that are incurred prior to obtaining CPUC approval of these costs in a general rate case.

Changes in laws, regulations and policies of regulatory agencies can significantly affect our business

Regulatory agencies may also change their rules and policies, which may adversely affect our profitability and cash flows. We are subject to regulations under U.S. federal and state regulations and policies including from the CPUC, Federal Energy Regulatory Commission and other regulatory agencies. Regulations and laws affect almost all aspects of our businesses and changes to such regulations are continuous and ongoing. There can be no assurance that laws, regulations and policies of regulatory agencies will not be changed in ways that will not materially impact our results of operations, financial position or cash flows.

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Changes in policies of the U.S. government may adversely affect one or more of ASUS's subsidiaries. In certain circumstances, the U.S. government may be unwilling or unable to appropriate funds to pay costs mandated by changes in rules and policies of federal or state regulatory agencies. The U.S. government may disagree with the increases that we request and may delay approval of requests for equitable adjustment or economic price adjustments, which could adversely affect our anticipated rates of return at our contracted services business.

We may also be subject to fines or penalties if a regulatory agency or the U.S. government determine that we have failed to comply with laws, regulations or orders applicable to our businesses, unless we successfully appeal such an adverse determination. Regulatory agencies may disallow recovery of certain costs if they determine they may no longer be recovered in rates, or if audit findings determine that we have failed to comply with our policies and procedures for procurement or other practices.

Our assets at our regulated utilities are subject to condemnation

Municipalities and other governmental subdivisions may, in certain circumstances, seek to acquire certain of our assets through eminent domain proceedings. It is generally our practice to contest these proceedings, which may be costly and may temporarily divert the attention of management from the operation of our business. If a municipality or other governmental subdivision succeeds in acquiring our assets, there is a risk that we will not receive adequate compensation for the assets taken or be able to recover all charges associated with the condemnation of such assets. In addition, we would no longer be entitled to any portion of the revenues generated from the use of such assets.

Our costs of obtaining and complying with the terms of franchise agreements are increasing

Cities and counties in which GSWC and BVES operate have granted them franchises to construct, maintain and use pipes, wires and appurtenances in or along public streets and rights of way. The costs of obtaining, renewing and complying with the terms of these franchise agreements have been increasing as cities and counties attempt to regulate our operations within the boundaries of the city or unincorporated areas of the counties in which we operate. Our regulated utilities may also be required from time to time to relocate existing infrastructure in order to accommodate local infrastructure improvement projects. Cities and counties have also been imposing new fees on our operations, including pipeline abandonment fees and road-cut or other types of capital improvement fees. At the same time, there is increasing opposition from consumer groups to rate increases that may be necessary to compensate GSWC and BVES for the increased costs of regulation by local governments. These trends may adversely affect our ability to recover in rates the costs of providing water and electric services and to efficiently manage capital expenditures and operating and maintenance expenses within CPUC-authorized levels.

We have also experienced instances of increased costs and delays in obtaining permits that we need in order to install, maintain, repair, and replace some of our aging water and electric utility infrastructure and upgrades needed to comply with changes in laws and regulations or otherwise necessary to harden our infrastructure as a result of drought, wildfires and increases in the frequency and duration of more extreme weather events due to climate change.

Our liquidity and earnings may be adversely affected by maintenance costs at our regulated utilities

Some of our infrastructure in California is aging. We have experienced leaks and mechanical problems in some of these older systems. In addition, infrastructure maintenance expenses are affected by labor and material costs, inflationary changes impacting such costs, supply chain disruptions and more stringent environmental regulations. Our electrical systems have also required upgrades due to aging and new wildfire safety and other compliance requirements. While we spend significant amounts on maintenance each year, these costs can increase substantially and unexpectedly. There could be an increase in infrastructure damage if California experiences more extreme weather events resulting in damage to our property.

We include estimated increases in maintenance costs for future years in each water and electric general rate case filed by GSWC and BVES, respectively, for possible recovery. To the extent that these estimates understate our actual costs, we may be unable to recover all maintenance costs in rates.

Adverse publicity and reputational risks can lead to increased regulatory oversight or sanctions

As a utility company, we have a large customer base and are therefore, subject to public criticism regarding, among other things, the quality and reliability of our water and electricity services, and the accuracy, timeliness and format of bills that are provided to our customers for such services. Adverse publicity and negative customer sentiment may cause regulatory authorities, including the CPUC, and other governing bodies to view us unfavorably and cause us to be susceptible to increased oversight and more stringent regulations and economic requirements.

Risks Associated with Health, Safety and Liability Matters

Our liquidity and earnings may be adversely affected by wildfires

It is possible that wildfires may occur more frequently, be of longer duration or impact larger areas as a result of drought-damaged plants and trees, lower humidity or higher winds that may occur as result of changing weather patterns. Our

liquidity, earnings and operations may be materially adversely affected by wildfires. We may be required to (i) incur greater costs to relocate lines or increase our trimming of trees and other plants near our electric facilities to avoid wildfires, (ii) make significant additional capital expenditures to fund the projects in BVES's wildfire and safety mitigation plans, and (iii) bear the costs of damages to property or injuries to the public if it is determined that our power lines or other electrical equipment was a cause of such damages or injuries. In addition, wildfires may result in reduced demand if structures are destroyed or unusable following a wildfire and may adversely affect our ability to provide water or electric service in our service areas due to public safety power shutdowns or any of our water or electric utility infrastructure is damaged by a wildfire.

Losses by insurance companies resulting from wildfires in California have caused insurance coverage for wildfire risks to become more expensive and coverage could become unavailable on reasonable terms, and our insurance may be inadequate to recover all our losses incurred in a wildfire. We might not be allowed to recover in our rates any increased costs of wildfire insurance or the costs of any uninsured wildfire losses.

Electric utilities in California are authorized to shut off power for public safety reasons, such as during periods of extreme fire hazard, if the utility reasonably believes that there is an imminent and significant risk that strong winds may topple power lines or cause vegetation to come into contact with power lines leading to increased risk of fire. Shut-offs can reduce BVES's liquidity and decrease customer satisfaction.

These shut-offs can also adversely affect GSWC's water utility operations if the electric utilities that provide electric service to GSWC's water operations shut off power lines that deliver electricity to GSWC's water plant and equipment, thereby adversely affecting its ability to provide water service to its customers.

We may, in certain circumstances, be held strictly liable for damages to property caused by our equipment even if we are not negligent

Utilities in California may be held strictly liable, in certain circumstances, for damages caused by their property, such as mains, fire hydrants, power lines and other equipment, even though they were not negligent in the operation and maintenance of that property, under a doctrine known as inverse condemnation. Our liquidity, earnings and operations may be adversely affected if we are unable to recover the costs of paying claims for damages caused by the non-negligent operation and maintenance of our property from customers or through insurance.

We may be subject to financial losses, penalties and other liabilities if we fail to maintain safe work sites, equipment or facilities

Our safety record is critical to our reputation. We maintain health and safety standards to protect our employees, customers, vendors and the public. Although we aim to comply with such health and safety standards, it is unlikely that we will be able to avoid all accidents or other events resulting in damage to property or the public.

Our business sites, including construction and maintenance sites, often put our employees and others in close proximity with large pieces of equipment, moving vehicles, pressurized water, chemicals and other regulated materials. On many sites, we are responsible for safety and, accordingly, must implement safety procedures. If we fail in any respect to implement such procedures or if the procedures we implement are ineffective or are not followed by our employees or others, our employees and others may be injured or die. Unsafe work sites also have the potential to increase our operating costs. Any of the foregoing could result in financial losses, which could have a material adverse impact on our business, financial condition, and results of operations.

Our operations involve the handling and storage of hazardous chemicals that, if improperly handled, stored or disposed of, could subject us to penalties or other liabilities. We are also subject to regulations dealing with occupational health and safety. Although we maintain functional employee groups whose primary purpose is to ensure that we implement effective health, safety, and environmental work procedures throughout our organization, including construction sites and maintenance sites, a failure to comply with such regulations in any respect could subject us to liability.

The generation, transmission and distribution of electricity are dangerous and involve inherent risks of damage to private property and injury to employees and the general public

Electricity is dangerous for employees and the general public should they come in contact with electrical current or equipment, including through downed power lines, sparking during high-wind events or equipment malfunctions. Injuries and property damage caused by such events may subject BVES to significant liabilities that may not be covered or fully covered by insurance. Additionally, the CPUC has delegated to its staff the authority to issue citations, which carry a fine of $50,000 per-violation per day, to electric utilities subject to its jurisdiction for violations of safety rules found in statutes, regulations, and the General Orders of the CPUC.

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We may sustain losses that exceed or are excluded from our insurance coverage or for which we are not insured

We are, from time to time, parties to legal or regulatory proceedings. These proceedings may pertain to regulatory investigations, employment matters or other disputes. Management periodically reviews its assessment of the probable outcome of these proceedings, the costs and expenses reasonably expected to be incurred, and the availability and extent of insurance coverage. On the basis of this review, management establishes reserves for such matters. We may, however, from time to time be required to pay fines, penalties or damages that exceed our insurance coverage and/or reserves if our estimate of the probable outcome of such proceedings proves to be inaccurate.

We maintain insurance coverage as part of our overall legal and risk management strategy to minimize our potential liabilities. Generally, our insurance policies cover property, workers' compensation, general liability, automobile liability, and other risks. Insurance coverage may not cover certain claims involving punitive damages. Each policy includes deductibles or self-insured retentions and policy limits for covered claims. Our insurance policies also contain exclusions and other limitations that may not cover our potential liabilities. Furthermore, due to insurance market conditions resulting in tighter underwriting and increased premiums along with reductions in capacity, we have experienced increased costs and difficulties in obtaining certain insurance coverages, particularly along the general liability, umbrella and cyber insurance lines. We may experience further increased insurance costs and/or coverage reductions in future years. As a result, we may sustain losses that exceed or that are excluded from our insurance coverage or for which we are not insured.

Uninsured losses and increases in the cost of insurance may not be recoverable or fully recoverable in customer rates. A loss which is not insured or not fully insured or cannot be recovered in customer rates could materially affect our financial condition and results of operations.

We operate in areas subject to natural disasters

We operate in areas that are prone to earthquakes, fires, mudslides, hurricanes, tornadoes, high winds, storms, flooding or other natural disasters. While we maintain insurance policies to help reduce our financial exposure, a significant seismic event in southern California, where our regulated water and electric operations are concentrated, wildfires or other natural disasters in any of the areas that we serve could adversely impact our ability to deliver water and electricity or provide wastewater service, and adversely affect our costs of operations. Any losses not covered by insurance could have an adverse effect on the results of operations, financial position, cash flows and reputation of our regulated utilities. In addition, such events may cause increases to the cost of the applicable insurance. With respect to GSWC and BVES, the CPUC has historically allowed utilities to establish a catastrophic emergency memorandum account ("CEMA") to potentially recover incremental costs not covered in rates caused by catastrophic emergency events. With respect to ASUS's subsidiaries, costs associated with responding to natural disasters have been recoverable through requests for equitable adjustment.

Our operations may be the target of terrorist activities

Terrorists could seek to disrupt service to our customers by targeting our assets through physical or cyber events. We also may be prevented from providing water and/or wastewater services at the military bases we serve in times of military crisis affecting these bases. We have invested in additional security for facilities throughout our regulated service areas to mitigate the risks of terrorist activities. In addition, we continue to increase our investment in information technology to monitor and address cyber threats and attempted cyber-attacks, and to improve our posture in addressing security vulnerabilities.

Water Quality Regulatory Risks

Our costs involved in maintaining water quality and complying with environmental regulation have increased and are expected to continue to increase

Capital and operating costs at GSWC may increase substantially as a result of increases in environmental regulation arising from increases in the cost of upgrading and building new water treatment plants, disposing of residuals from our water treatment plants, handling and storing hazardous chemicals, compliance-monitoring activities and securing alternative supplies when necessary. GSWC may be able to recover these costs from customers through the ratemaking process. We may also be able to recover a portion of these costs from certain third parties under settlement and contractual arrangements. Our capital and operating costs may also increase as a result of changes in laboratory detection capabilities and drinking water notification levels, response levels, and maximum contaminant levels for certain substances, such as perfluoroalkyl substances ("PFAS") used to make certain fabrics and other materials, certain fire suppression agents and used in various industrial processes. Additional information regarding the regulation of PFAS in drinking water is provided in Item 7. "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" under the heading "*Environmental Matters*."

Our operating costs may increase as a result of groundwater contamination

Our operations can be impacted by groundwater contamination in certain service territories. Historically, we have taken a number of steps to address contamination, including the removal of wells from service, decreasing the amount of groundwater pumped

from wells in order to facilitate remediation of plumes of contaminated water, constructing water

treatment facilities and securing alternative sources of supply from other areas not affected by the contamination. In emergency situations, we have supplied our customers with bottled water until the emergency situation has been resolved.

Our ability to recover these types of costs depends upon a variety of factors, including approval of rate increases, the willingness of potentially responsible parties to settle litigation and otherwise address the contamination, and the extent and magnitude of the contamination. We may recover costs from certain third parties that may be responsible, or potentially responsible, for groundwater contamination. However, we often experience delays in obtaining recovery of these costs and incur additional costs associated with seeking recovery from responsible or potentially responsible parties, which may adversely impact our liquidity. In some events, we may be unable to recover all of these costs from third parties due to the inability to identify the potentially responsible parties, the lack of financial resources of responsible parties or the high litigation costs associated with obtaining recovery from responsible or potentially responsible parties.

We can give no assurance regarding the adequacy of any such recovery to offset the costs associated with contamination or the cost of recovery of any legal costs. To date, the CPUC has permitted us to establish memorandum accounts for potential recovery of these types of costs when they have arisen.

Management believes that rate recovery, proper insurance coverage and reserves are in place to appropriately manage these types of contamination issues. However, such issues, if ultimately resolved unfavorably to us, could, in the aggregate, have a material adverse effect on our results of operations and financial condition.

Water Supply Risks

The adequacy of our water supplies depends upon weather and a variety of other uncontrollable factors

The adequacy of our water supplies varies from year to year depending upon a variety of factors, including:

- rainfall, basin replenishment, flood control, snowpack levels in California and the West, reservoir levels and availability of reservoir storage;
- availability of Colorado River water and imported water from the State Water Project;
- the amount of usable water stored in reservoirs and groundwater basins;
- the amount of water used by our customers and others;
- water quality;
- legal limitations on production, diversion, storage, conveyance and use; and
- climate change.

California drought conditions in recent years and historically and changes in weather patterns have caused an increased stress on surface water supplies and groundwater basins. In addition, low or no allocations of water from the State Water Project and court-ordered pumping restrictions on water obtained from the Sacramento-San Joaquin Delta decrease or eliminate the amount of water that the Metropolitan Water District of Southern California ("MWD") and other state water contractors are able to import from northern California.

We have implemented tiered rates and other practices, as appropriate, in order to encourage water conservation. We have also implemented programs to assist customers in complying with water usage reductions. Over the long term, we are acting to secure additional supplies, which may include supplies from desalination and increased use of reclaimed water, where appropriate and feasible. We cannot predict the extent to which these efforts to reduce stress on our water supplies will be successful or sustainable, or the extent to which these efforts will enable us to continue to satisfy all of the water needs of our customers. Water shortages at GSWC may:

- adversely affect our supply mix, for instance, by causing increased reliance upon more expensive water sources;
- adversely affect our operating costs, for instance, by increasing the cost of producing water from more highly contaminated aquifers or requiring us to transport water over longer distances, truck water to water systems or adopt other emergency measures to enable us to continue to provide water service to our customers;
- result in an increase in our capital expenditures over the long term, for example, by requiring future construction of pipelines to connect to alternative sources of supply, new wells to replace those that are no longer in service or are otherwise inadequate to meet the needs of our customers, and other facilities to conserve or reclaim water;
- adversely affect the volume of water sold as a result of such factors as mandatory or voluntary conservation efforts by customers, changes in customer conservation patterns, recycling of water by customers and imposition of new regulations impacting such things as landscaping and irrigation patterns;

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- adversely affect aesthetic water quality if we are unable to flush our water systems as frequently due to water shortages or drought restrictions; and
- result in customer dissatisfaction and harm to our reputation if water service is reduced, interrupted or otherwise adversely affected as a result of drought, water contamination or other causes.

Our liquidity may be adversely affected by changes in water supply costs

We obtain our water supplies for GSWC from a variety of sources, which vary among our water systems. Certain systems obtain all of their supply from water that is pumped from aquifers within our service areas; some systems purchase all of their supply from wholesale suppliers; some systems obtain their supply from treating surface water sources; and other systems obtain their supply from a combination of wells, surface water sources and/or wholesale suppliers. The cost of obtaining these supplies varies, and overall costs can be impacted as use within a system varies from time to time. As a result, our cost of providing, distributing and treating water for our customers' use can vary significantly.

Furthermore, imported water wholesalers, such as MWD, may not always have an adequate supply of water to sell to us. Wholesale water suppliers may increase their prices for water delivered to us based on factors that affect their operating costs. Purchased water rate increases are beyond our control.

Since 2008, GSWC has implemented a modified supply cost balancing account, the MCBA, to track and recover costs from supply mix changes and rate changes by wholesale suppliers, as authorized by the CPUC. However, cash flows from operations can be significantly affected since much of the balance we recognize in the MCBA is collected from or refunded to customers primarily through surcharges or surcredits, respectively, generally over twelve- to twenty-four-months. Beginning 2025, the MCBA will be discontinued and no longer be available to recover costs from supply mix changes and rate changes by wholesale suppliers. However, as SB 1469 was passed in 2022, GSWC and other Class A water utilities are allowed to continue to request the MCBA in future general rate case applications. GSWC has requested for the continued use of a full supply cost balancing account, similar to the MCBA, in its next general rate case application filed in August 2023. GSWC's request to continue using a full supply cost balancing account in its next general rate case will be subject to CPUC approval.

Our liquidity and earnings may be adversely affected by our conservation efforts

Our water utility business is heavily dependent upon revenue generated from rates charged to our customers based on the volume of water used. The rates we charge for water are regulated by the CPUC and may not be adequately adjusted to reflect changes in demand. Declining usage also negatively impacts our long-term operating revenues if we are unable to secure rate increases or if growth in the customer base does not occur to the extent necessary to offset per-customer usage decline.

Conservation by all customer classes at GSWC is a top priority. However, customer conservation will result in lower volumes of water sold. We may experience a decline in per-customer water usage due to factors such as:

- conservation efforts to reduce costs;
- drought conditions resulting in additional water conservation;
- the use of more efficient household fixtures and appliances by customers to save water;
- voluntary or mandatory changes in landscaping and irrigation patterns;
- recycling of water by our customers; and
- mandated water-use restrictions.

These types of changes may result in permanent decreases in demand even if our water supplies are sufficient to meet higher levels of demand after a drought ends. In addition, governmental restrictions on water usage during drought conditions may result in a decreased demand for water, even if our sources of supply are sufficient to serve our customers during such drought conditions. California has established long-term indoor and outdoor water use standards to address the impact of climate change on California water resources and mandate water conservation requirements on all Californians. These standards will require all urban water retailers to meet certain water use standards on a system-by-system basis.

Since 2008, we have implemented the CPUC-approved WRAM at GSWC, which has the effect of stabilizing revenues at the adopted level thereby reducing the potential adverse earnings impact of our customers' conservation efforts. However, cash flows from operations can be significantly affected since much of the balance we recognize in the WRAM account is collected from or refunded to customers generally over twelve-, eighteen- or twenty-four-month periods.

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Electric Segment Operations Risks

Our electric segment operates in a high wildfire risk area

Drought conditions in recent years and historically as well as shifting weather patterns in California as a result of climate change have created dry vegetation and higher risks of wildfire in California. Severe wildfires can pose a material risk for BVES in the event of the occurrence of a wildfire. There is no assurance that losses incurred through a wildfire event will not exceed the coverage limits of BVES's insurance coverage. Any losses not fully insured by BVES's insurance coverage may not be approved by the CPUC for future cost recovery.

BVES is required to adopt and implement a wildfire mitigation plan that is submitted periodically to, and subject to the approval of, the CPUC. In December 2023, the CPUC ratified BVES's 2023-2025 wildfire mitigation plan which was also approved by the Office of Energy Infrastructure Safety in the fourth quarter of 2023. The recovery of costs incurred to implement this plan are not approved by the CPUC at the time of its approval of the wildfire mitigation plan but will only be approved by the CPUC in a subsequent general rate case. We anticipate that the costs of capital improvements necessary to implement this program will increase substantially.

BVES is also required to implement a public safety power shut-off program during high wildfire threat conditions. The CPUC may assess penalties if BVES shuts-down power to its customers and the CPUC determines that the shutdown was not reasonably necessary in the circumstances. As a result of shutting-down power to its customers, BVES's cash flows may be negatively affected due to a reduction in electricity sold. However, BVES has implemented a CPUC-approved revenue decoupling mechanism that mitigates the impact of customer usage fluctuations to earnings.

BVES has also obtained a safety certificate, which must be renewed annually by the CPUC. Even with an approved safety certificate, BVES could be found liable for deaths, injuries and property damage if BVES's electric equipment is found to have caused a catastrophic wildfire and it is determined by the CPUC that BVES did not act reasonably in operating and maintaining its equipment. BVES may not be able to recover the costs of all liabilities from such a wildfire from insurance or from ratepayers.

Our liquidity may be adversely affected by increases in electricity and natural gas prices in California

We purchase most of the electric energy sold to customers in our electric customer service area from others under purchased power contracts. In addition to purchased power contracts, we purchase additional energy from the spot market to meet peak demand and following the expiration of purchased power contracts if there are delays in obtaining CPUC authorization of new purchase power contracts. We may sell surplus power to the spot market during times of reduced energy demand. As a result, our cash flow may be affected by increases in spot market prices of electricity purchased and decreases in spot market prices for electricity sold. However, BVES has implemented a CPUC-approved supply-cost balancing account to mitigate the impact to earnings from fluctuations in supply costs.

Unexpected generator downtime at our 8.4 megawatt natural-gas-fueled generator or a failure to perform by any of the counterparties to our electric and natural gas purchase contracts could further increase our exposure to fluctuating natural gas and electricity prices.

Changes in electricity prices also affect the unrealized gains and losses on our block forward purchased power contracts that qualify as derivative instruments since we adjust the asset or liability on these contracts to reflect the fair market value of the contracts at the end of each month. The CPUC has authorized us to establish a memorandum account to track the changes in the fair market value of our purchased power contracts. As a result, unrealized gains and losses on these types of purchased power contracts do not impact earnings.

We may not be able to procure sufficient renewable energy resources to comply with CPUC rules

We are required to procure a portion of our electricity for BVES from renewable energy resources to meet the CPUC's renewable procurement requirements. We have agreements with third parties to purchase renewable energy credits, which enables us to meet these requirements through 2024. The next RPS compliance period is years 2025-2027. In the event that the third parties fail to perform in accordance with the terms of the agreement, we may not be able to obtain sufficient resources to meet the renewable procurement requirements. We may be subject to fines and penalties by the CPUC if it determines that we are not in compliance with the renewable resource procurement rules.

Utility Privatization Contract Risks

Our contracts for servicing military bases create certain risks that are different from our public utility operations

We have entered into contracts to provide water and/or wastewater services at military bases primarily pursuant to initial 50-year, firm-fixed-priced contracts, additional firm-fixed-price contracts and task order contracts, subject to termination, in whole or in part, for the convenience of the U.S. government. We also from time to time enter into contracts with third party

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prime contractors on military bases. The U.S. government may stop work under the terms of one or more of these contracts, not provide additional task orders, delay performance of our obligations under the contracts, or modify the contracts at its convenience.

Our contract pricing is based on a number of assumptions, including assumptions about the condition and amount of infrastructure at the military bases, prices and availability of labor, equipment and materials. We may be unable to recover all costs if any of these assumptions are inaccurate or if all costs incurred in connection with performing the work were not considered. Our contracts are also subject to annual economic price adjustments, adjustments as task orders are issued or other changes permitted by the terms of the contracts. Prices are also subject to equitable adjustment based upon changes in circumstances, laws or regulations and service-requirement changes to the extent provided in each of the contracts.

We are required to record all costs under our military base contracts as they are incurred. As a result, we may record losses associated with unanticipated conditions that result in higher than estimated costs, higher than anticipated infrastructure levels, and required emergency work at the time such expenses occur. We recognize additional revenue for such work as, and to the extent that, our economic price adjustments and/or requests for equitable adjustments are approved. Delays in obtaining approval of economic price adjustments and/or equitable adjustments can negatively impact our results of operations and cash flows.

Certain payments under these contracts are subject to appropriations by Congress. We may experience delays in receiving payment or delays in price adjustments due to canceled or delayed appropriations specific to our projects, reductions in government spending for the military generally or military-base operations specifically or other delays in Congress approving appropriations. Appropriations and the timing of payment may be influenced by, among other things, the state of the economy, competing political priorities, budget constraints, the timing and amount of tax receipts, government shutdowns and the overall level of government expenditures.

We may experience delays in receiving payments for services rendered in military bases due to delays in Congressional appropriation bills or other factors affecting the available funds to pay contractors.

Our contracts for the construction of infrastructure improvements on military bases create risks that are different from those of our public utility operations and maintenance activities

We have entered into contract modifications with the U.S. government and agreements with third parties for the construction of new water and/or wastewater infrastructure at the military bases on which we operate. Most of these contracts are firm-fixed-price contracts. Under firm-fixed-price contracts, we will benefit from cost savings, but are generally unable (except for changes in scope or circumstances approved by the U.S. government or third party) to recover any cost overruns to the approved contract price. Under most circumstances, the U.S. government or third party has approved increased-cost change orders due to changes in scope of work performed.

We generally recognize contract revenues from these types of contracts over time using input methods to measure progress towards satisfying a performance obligation. The measurement of performance over time is based on cost incurred relative to total estimated costs, or the physical completion of the construction projects. The earnings or losses recognized on individual contracts are based on periodic estimates of contract revenues, costs and profitability as these construction projects progress.

We establish prices for these types of firm-fixed-price contracts and the overall contract taken as a whole, based, in part, on cost estimates that are subject to a number of assumptions, including assumptions regarding future economic conditions. If these estimates prove inaccurate or circumstances change, cost overruns could have a material adverse effect on our contracted business operations and results of operations.

We may be adversely affected by disputes with the U.S. government regarding our performance of contracted services on military bases

Entering into contracts with the U.S. government subjects us to a number of operational and compliance risks over our performance of contracted services on military bases. We are periodically audited or reviewed by the Defense Contract Auditing Agency ("DCAA"), the Defense Contract Management Agency ("DCMA"), the Department of Labor, the Defense Logistics Agency Energy, and/or the Department of Justice for compliance with federal acquisition regulations, cost-accounting standards and other laws, regulations and standards that are not applicable to the operations of GSWC or BVES. During the course of these audits/reviews, the U.S. government may question our incurred project costs or the manner in which we have accounted for such costs and recommend to our U.S. government administrative contracting officer that such costs be disallowed. If there is a dispute with the U.S. government regarding performance under these contracts or the amounts owed to us, the U.S. government may delay, reject or withhold payment, delay price adjustments or assert its right to offset damages against amounts owed to us. If we are unable to collect amounts owed to us on a timely basis or the U.S. government asserts its offset rights, profits and cash flows could be adversely affected.

Moreover, we are subject to potential government investigations of our business practices and compliance with government procurement statutes and security regulations. If we are charged with wrongdoing as a result of an investigation, or if we fail to comply with the terms of one or more of our U.S. government contracts, other agreements with the U.S. government or U.S. government statutes and regulations, our existing contracts could be terminated or we could be suspended or barred from future U.S. government contracts for a period of time, and be subject to possible damages, fines and penalties as well as damage to our reputation in the water and wastewater industry, which could have a material adverse effect on our results of operations and cash flows.

We depend, to some extent, upon subcontractors to assist us in the performance of contracted services on military bases

We rely, to some extent, on subcontractors to assist us in the operation and maintenance of the water and wastewater systems at military bases. The failure of any of these subcontractors to perform services for us in accordance with the terms of our contracts with the U.S. government could result in the termination of our contract to provide water and/or wastewater services at the affected base(s), and/or a loss of revenues, or increases in costs, to correct a subcontractor's performance failures.

We are also required to make a good faith effort to achieve our small business subcontracting plan goals pursuant to U.S. government regulations. If we fail to use good faith efforts to meet these goals, the U.S. government may assess damages against us at the end of the contract. The U.S. government has the right to offset claimed damages against any amounts owed to us.

We also rely on third-party manufacturers, as well as third-party subcontractors, to complete our construction projects. To the extent that we cannot engage subcontractors or acquire equipment or materials, our ability to complete a project in a timely fashion or at a profit may be impaired. If the amount of costs we incur for these projects exceeds the amount we have estimated in our bids, we could experience reduced profits or losses in the performance of these contracts. In addition, if a subcontractor or manufacturer is unable to deliver its services, equipment or materials according to the negotiated terms for any reason, including the deterioration of its financial condition, we may be required to purchase the services, equipment or materials from another source at a higher price. This may reduce the profit to be realized or result in a loss on a project for which the services, equipment or materials were needed.

If subcontractors fail to perform services to be provided to us or fail to provide us with the proper equipment or materials, we may be penalized for their failure to perform; however, our contracts with subcontractors include certain protective provisions, which may include the assessment of liquidated damages. We also mitigate these risks by requiring our subcontractors, as appropriate, to obtain performance bonds and to compensate us for any penalties we may be required to pay as a result of their failure to perform.

We may not be fully reimbursed for all of our construction costs or may only receive payment on a delayed basis

Unlike GSWC and BVES, who recover their capital investments from customers over the life of the assets through annual depreciation and earn a return on such investments through the ratemaking process, ASUS is reimbursed for the cost of ongoing renewal and replacement construction projects plus a profit through the collection of a monthly cash stream under each of the 50-year contracts with the U.S. government. ASUS also receives funding from the U.S. government for initial and other new construction projects at the military bases it serves that, in many cases, are outside the scope of contracts with the U.S. government and are granted through firm-fixed contract modifications. ASUS's subsidiaries expect to continue incurring significant construction costs. Reimbursement by the U.S government for these construction costs may not be fully reimbursable if the costs incurred are greater than the amounts estimated and approved by the U.S. government, or payments may be delayed awaiting government funding and processing, which could significantly affect our cash flows from operations.

Other Contracted Services Segment Risks

Risks associated with wastewater systems are different from those of our water distribution operations

The wastewater-collection-system operations of our ASUS subsidiaries providing wastewater services on military bases are subject to substantial regulation and involve significant environmental risks. If collection, treatment or disposal systems fail, overflow or do not operate properly, untreated wastewater or other contaminants could spill onto nearby properties or into nearby streams and rivers, causing damage to persons or property, injury to aquatic life and economic damages. The cost of addressing such damages may not be recoverable. This risk is most acute during periods of substantial rainfall or flooding, which are common causes of sewer overflows and system failures. These risks may be increased as a result of an increase in the duration and frequency of storms due to climate change. Liabilities resulting from such damage could adversely and materially affect our business, results of operations and financial condition. In the event that we are deemed liable for any damage caused by overflows, our losses may not be recoverable under our contracts with the U.S. government or covered by insurance policies. We may also find it difficult to secure insurance for this business in the future at acceptable rates.

We may have responsibility for water quality at the military bases we serve

While it is the responsibility of the U.S. government to provide the source of water supply to meet ASUS's subsidiaries water distribution system requirements under their contracts with the U.S. government, the ASUS's subsidiaries, as the water system permit holders for most of the bases they serve, are responsible for ensuring the continued compliance of the provided source of supply with all federal, state and local regulations. We believe, however, that the terms of the contracts between ASUS's subsidiaries and the U.S. government provide the opportunity for us to recover costs incurred in the treatment or remediation of any quality issue that arises from the source of water supply.

Our earnings may be affected, to some extent, by weather during different seasons

Seasonal weather conditions, such as hurricanes, heavy rainfall or significant winter storms, occasionally cause temporary office closures and/or result in temporary halts to construction activity at military bases. To the extent that our construction activities are impeded by these events, we will experience a delay in recognizing revenues from these construction projects.

We continue to incur costs associated with the expansion of our military base contract activities

We continue to incur additional costs in connection with the expansion of our contract operations associated with the preparation of bids for new contract operations on prospective and existing military bases. Our ability to recover these costs and to earn a profit on our contract operations will depend upon the extent to which we are successful in obtaining new contracts and recovering these costs and other costs from new contract revenues.

We face intense competition for new military base contracts

An important part of our growth strategy is the expansion of our contracted services business through new contract awards to serve additional military bases for the U.S. government. ASUS competes with other investor-owned utilities, municipalities, and other entities for these contracts.

Additionally, the U.S. government periodically reviews the cost and overall effectiveness of the military privatization program. Should these reviews prompt a decision to curtail or eliminate the issuance of solicitations for future military base contract awards, the potential for growth in this segment could be negatively impacted.

Information Technology Risk Factors

We must successfully maintain and/or upgrade our information technology systems as we are increasingly dependent on the continuous and reliable operation of these systems

We rely on various information technology systems to manage our operations. Such systems require periodic modifications, upgrades and/or replacement, which subject us to inherent costs and risks, including potential disruption of our internal control structure, substantial capital expenditures, additional administrative and operating expenses, retention of sufficiently skilled personnel to implement and operate the new systems, and other risks and costs of delays or difficulties in transitioning to new systems or of integrating new systems into our current systems. In addition, the difficulties with implementing new technology systems may cause disruptions in our business operations and have an adverse effect on our business and operations, if not anticipated and appropriately mitigated.

We rely on our computer, information and communications technology systems in connection with the operation of our business, especially with respect to customer service and billing, accounting and the monitoring and operation of our treatment, storage and pumping facilities. Our computer and communications systems and operations could be damaged or interrupted by weather, natural disasters, telecommunications failures, cyberattacks or acts of war or terrorism or similar events or disruptions. Any of these or other events could cause system interruption, delays and loss of critical data, delay or prevent operations or delay in notification of system failures or emergencies and adversely affect our financial results and could result in liabilities not covered by insurance or recoverable in rates for misappropriation of assets or sensitive information, corruption of data and the impact of operational disruptions on our customers.

Cybersecurity incidents could disrupt our internal operations, and any such disruption could increase our expenses, damage our reputation and adversely affect our stock price

There continues to be an increasing number of cyberattacks on companies around the world, which have caused operational failures or compromised sensitive corporate or customer data. These attacks have occurred over the internet, through malware, viruses or attachments to e-mails, or through persons inside the organization or with access to systems inside the organization and may be heightened with the increased use and prevalence of artificial intelligence. Although we do not believe that our systems are at a materially greater risk of cybersecurity attacks than other similar organizations, our information technology systems remain at risk to damage or interruption from the following among other types of cybersecurity risks:

- Supply Chain Attacks;

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- Malicious Software;
- Credential Loss or Theft;
- Supervisory Control and Data Acquisition System Takeover;
- Equipment Theft;
- Ransomware;
- Actions of Employees (Intentional or Accidental);
- Phishing Attacks;
- Identity-Based Attacks; and
- Denial-of-Service Attacks.

We believe a breach of customer personally identifiable information is one of the most significant financial risks to us as the costs incurred could exceed the amount of our cybersecurity insurance coverage and these costs may increase if we fail to comply with federal and state privacy regulations such as the California Consumer Privacy Act ("CCPA"), a state statute that became effective January 1, 2020, which enhances the privacy rights and consumer protections for California residents. Among other things, the CCPA establishes statutory damages for victims of data security breaches, and provides additional rights for consumers to obtain their data from any business that has their personally identifying information. Any actual or perceived failure to comply with the CCPA could lead to investigations, claims, and proceedings by governmental entities and private parties, damages for breach, and other significant costs, penalties, and other liabilities, as well as harm to our reputation.

We have implemented security measures and will continue to devote significant resources to improve our security posture to address any security vulnerabilities in an effort to prevent cyberattacks. Despite our efforts, due to the evolving nature of cyberattacks and vulnerabilities, we cannot be assured that a cyberattack will not cause water, wastewater or electric system problems, disrupt service to our customers, compromise important data or systems or result in unintended release of customer or employee information. Moreover, if a security breach affects our systems or results in the unauthorized release of sensitive data, our reputation could be materially damaged. We may not discover any security breach and loss of information for a significant period of time after the security breach. We could also be exposed to a risk of loss or litigation and possible liability. Pursuant to U.S. government regulations regarding cybersecurity of government contractors, we might be subject to fines, penalties or other actions, including debarment, with respect to current contracts or with respect to future contract opportunities.

We maintain cybersecurity insurance to provide coverage for a portion of the losses and damages that may result from a security breach, but such insurance is subject to a number of exclusions and may not cover the total loss caused by a breach. Other costs associated with cyber incidents may not be covered by insurance or recoverable in rates. The market for cybersecurity insurance continues to evolve and may affect the future availability of cyber insurance at reasonable rates.

Human Capital Management Risks

Failure to attract, retain, train, motivate, develop and transition key employees could adversely affect our business

In order to be successful, we must attract, retain, train, motivate, and develop key employees, including those in managerial, operational, financial, regulatory, business-development and information-technology support positions. Our regulated business and contracted services operations are complex. Attracting and retaining high quality staff allows us to minimize the cost of providing quality service. In order to attract and retain key employees in a competitive marketplace, we must provide a competitive compensation package and be able to effectively recruit qualified candidates. This is especially challenging for us since approximately 30% of our employees will be eligible to retire in the next five years. The failure to successfully hire key employees or the loss of a material number of key employees could have a significant impact on the quality of our operations in the short term. Further, changes in our management team may be disruptive to our business, and any failure to successfully transition key new hires or promoted employees could adversely affect our business and results of operations.

Failure of our employees to maintain required certifications and licenses or to complete required compliance training could adversely impact our ability to operate and maintain our utility systems and provide services to our customers

Many of our employees must have specialized certifications and licenses in order to perform their duties and periodically complete required compliance training. Our business could be adversely affected if our employees do not maintain their certifications and licenses or we are unable to attract employees with the necessary certifications and licenses.

Other Business Risk Factors

The accuracy of our judgments and estimates about financial and accounting matters will impact our operating results and financial condition

The quality and accuracy of estimates and judgments used have an impact on our operating results and financial condition. If our estimates are not accurate, we will be required to make an adjustment in a future period. We make certain estimates and judgments in preparing our financial statements regarding, among others:

- timing of recovering WRAM, MCBA and BRRAM regulatory assets;
- amounts to set aside for uncollectible accounts receivable, inventory obsolescence and uninsured losses;
- our legal exposure and the appropriate accrual for claims, including general liability and workers' compensation claims;
- future costs and assumptions for pensions and other post-retirement benefits;
- regulatory recovery of deferred items; and
- possible tax uncertainties.

Market conditions and demographic changes may adversely impact the value of our benefit plan assets and liabilities

Market factors can affect assumptions we use in determining funding requirements with respect to our pension and other post-retirement benefit plans. For example, a relatively modest change in our assumptions regarding discount rates can materially affect our calculation of funding requirements. To the extent that market data compels us to reduce the discount rate used in our assumptions, our benefit obligations could materially increase, which could adversely affect our financial position and cash flows. Further, changes in demographics, such as increases in life expectancy assumptions may also increase the funding requirements of our obligations related to our pension and other post-retirement benefit plans.

Market conditions also affect the values of the assets that are held in trusts to satisfy significant future obligations under our pension and other post-retirement benefit plans. These assets are subject to market fluctuations, which may cause investment returns to fall below our projected rates of return. A decline in the market value of our pension and other post-retirement benefit plan assets will increase the funding requirements under these plans if future returns on these assets are insufficient to offset the decline in value. Future increases in pension and other post-retirement costs as a result of the reduced value of plan assets may not be fully recoverable in rates, and our results of operations and financial position could be negatively affected. These risks are mitigated to some extent by the two-way pension balancing accounts authorized by the CPUC, which permits us to track differences between forecasted annual pension expense adopted in water and electric rates and actual pension expenses for future recovery or refund to customers.

Our business requires significant capital expenditures and our inability to access the capital or financial markets could affect our ability to meet our liquidity needs and long-term commitments, which could adversely impact our operations and financial results

The utility business is capital intensive. We spend significant sums of money for additions to, or replacement of, our property, plant and equipment at our water and electric regulated utilities. We obtain funds for these capital projects from operations, contributions by developers and others, and refundable advances from developers (which are repaid over a period of time). We periodically borrow money or issue equity or debt securities for these purposes. In addition, we have revolving credit facilities that are used for capital expenditure programs with our utilities and operations. We cannot provide assurance that these sources will continue to be adequate or that the cost of funds will remain at levels permitting us to earn a reasonable rate of return.

As our capital investment program continues to increase, coupled with the elimination of bonus depreciation for regulated utilities due to tax reform, we will need access to external financing more often, which increases our exposure to market conditions. In addition to cash flow from operations, we rely primarily on our credit facilities and long-term debt to satisfy our liquidity needs. We also may from time to time issue Common Shares to support our capital investment program. Changes in market conditions, including events beyond our control such as recent increases to interest rates, could limit our ability to access capital on terms favorable to us or at all, including obtaining credit facilities with the borrowing capacities needed as well as issuing equity or debt securities. As a result, the amount of capital available may not be sufficient to meet all our liquidity needs at a reasonable cost at all of our subsidiaries.

Payment of our debt may be accelerated if we fail to comply with restrictive covenants in our debt agreements

Our failure to comply with restrictive covenants in our debt agreements could result in an event of default. If the default is not cured or waived, we may be required to repay or refinance the debt before it becomes due. Even if we are able to obtain waivers from our creditors, we may only be able to do so on unfavorable terms. Our ability to comply with the financial

covenants in our debt agreements may be adversely affected by delays in obtaining CPUC approval of our general rate case filings.

The price of our Common Shares may be volatile and may be affected by market conditions beyond our control

The trading price of our Common Shares may fluctuate in the future because of the volatility of the stock market and a variety of other factors, many of which are beyond our control. Factors that could cause fluctuations in the trading price of our Common Shares include: changes in interest rates; regulatory developments, decisions and delays; general economic conditions and trends; price and volume fluctuations in the overall stock market; actual or anticipated changes or fluctuations in our results of operations; actual or anticipated changes in the expectations of investors or securities analysts; actual or anticipated developments in other utilities' businesses or the competitive landscape generally; litigation involving us or our industry; major catastrophic events, or sales of large blocks of our stock.

AWR is a holding company that depends on cash flow from its subsidiaries to meet its financial obligations and to pay dividends on its Common Shares

As a holding company, our subsidiaries conduct substantially all operations and our only significant assets are investments in our subsidiaries. This means that we are dependent on distributions of funds from our subsidiaries to meet our debt service obligations and to pay dividends on our Common Shares.

Our subsidiaries are separate and distinct legal entities and generally have no obligation to pay any amounts due on AWR's credit facility. Our subsidiaries only pay dividends if and when declared by the respective subsidiary board. Moreover, GSWC and BVES are obligated to give first priority to their own capital requirements and to maintain capital structures consistent with those determined to be reasonable by the CPUC in its most recent decisions on capital structure for both GSWC and BVES in order for customers to not be adversely affected by the holding company structure. Furthermore, our right to receive cash or other assets in the unlikely event of liquidation or reorganization of any of our subsidiaries is generally subject to the prior claims of creditors of that subsidiary. If we are unable to obtain funds from a subsidiary in a timely manner, we may be unable to meet our financial obligations, make additional investments or pay dividends.

The final determination of our income tax liability may be materially different from our income tax provision

Significant judgment is required in determining our provision for income taxes. Our calculation of the provision for income taxes is subject to our interpretation of applicable tax laws in the jurisdictions in which we file. In addition, our income tax returns are subject to periodic examination by the Internal Revenue Service and other taxing authorities.

Although we believe our income tax estimates are appropriate, there is no assurance that the final determination of our current taxes payable will not be materially different, either higher or lower, from the amounts reflected in our financial statements. In the event we are assessed additional income taxes, our financial condition and cash flows could be adversely affected.

Our operations are geographically concentrated in California

Although we operate water and wastewater facilities in a number of states under our contracted services business, our regulated water and electric operations are concentrated in California, particularly Southern California. As a result, our financial results are largely subject to political, water supply, labor, utility cost and regulatory risks, economic conditions, natural disasters (which may increase as a result of climate change) and other risks affecting California. Our financial results may also be impacted by population growth or decline in our service areas.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Cyberattacks represent a threat to water, wastewater and electric utility systems. There have also been increasing threats to the information that companies maintain that have resulted in unauthorized disclosure of private customer, employee, director and corporate financial information.

Threats can come from many sources, including, but not limited to, ransomware, malicious software, credential loss or theft, supervisory control and data acquisition ("SCADA") system takeover, equipment theft, supply chain attacks, phishing attacks, identity-based attacks, denial-of-service attacks or the actions of employees either intentional or accidental. Ransomware whereby hackers take control of a company's systems and/or data has been identified as the most significant threat to Registrant's critical infrastructure systems and is getting harder to detect and encrypted files are becoming harder to recover. Threat actors using ransomware have also increased their use of data, not only for direct ransom and data destruction, but also to release the data to the public. Registrant believes a breach of customer personally identifiable information is one of the most significant financial risks to it as the costs incurred could exceed the amount of its cybersecurity insurance coverage.

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Nevertheless, in order to continue meeting Registrant's technological business needs and as more vendors build solutions in the cloud, Registrant expects to further expand its use of cloud-computing environments. As such, Registrant expects risks from cyberattacks and data breaches to increase due to the growth of its technological footprint in the cloud environments.

Registrant expects to continue to increase its investment in information technology to monitor and address cyber threats and attempted cyber-attacks, and to improve its posture in addressing security vulnerabilities. In addition, Registrant has dedicated employees with cybersecurity technical expertise and also leverages outside cybersecurity firms. Registrant has adopted multi-layered safeguards and educational measures to protect its operations, assets and digital information. Registrant conducts mandatory quarterly cybersecurity training for all employees. Registrant also conducts specialized training for ASUS employees annually on protecting certain types of information relating to the work ASUS and its subsidiaries do with the U.S. government to comply with U.S. government contracting requirements. In addition, Registrant conducts periodic and unannounced phishing tests with all employees and vulnerability assessment and penetration tests.

Registrant has adopted a cybersecurity incident response policy, plan and set of specific instructions, which are annually reviewed by the IT cybersecurity team members. Registrant is also taking actions intended to strengthen its cybersecurity posture and to improve its cybersecurity incident response plans and operating procedures. Despite the actions Registrant has taken and is taking and the fact that, to its knowledge, it has yet to experience a cybersecurity incident, there can be no assurance that Registrant will not experience a cybersecurity incident.

Risk management, oversight and response

Cyber risk management is an ongoing iterative process that requires continuous identification, assessment and management of possible cyber threats and has become a vital part of Registrant's overall risk management efforts. Registrant's cybersecurity team assesses ongoing cybersecurity threats and vulnerabilities to prioritize and implement mitigation factors and defense to help contain and combat identified risks.

To ensure threat and vulnerability information is up-to-date, the cybersecurity team subscribes to multiple national and state-level threat and vulnerability information disclosure services, both general-purpose and industry-specific in nature. Updates from these sources include general information delivered on a daily basis and more threat-specific information delivered as required. Tools are in place within Registrant's environment to monitor for anomalous behavior and provide alerting and, in some cases, automated responses to threats. Registrant's cybersecurity team meets regularly with product vendors for these tools to ensure optimal configurations are in place to protect its environment.

To determine the risk to Registrant's systems, it engages in a continuous vulnerability management lifecycle process to identify and remediate vulnerable systems and system configurations. In this regard, Registrant leverages the National Institute of Standards and Technologies cybersecurity framework. To supplement Registrant's internal process, the cybersecurity team regularly contracts consultants to assess system configurations, both passively through exercises such as configuration review and actively through penetration testing, and response procedures, such as tabletop exercises, to identify areas for improvement. In addition, Registrant supplements its day-to-day operations with around the clock identification, assessment and mitigation of cyber risks with third-party security services as well. Registrant is working on implementing across AWR and its subsidiaries a comprehensive, risk-based approach to identify and oversee cybersecurity risks presented by third parties, including vendors, service providers and other external users of its systems and data, as well as the systems of third parties that could adversely impact Registrant's business in the event of a cybersecurity incident affecting those third-party systems.

Cybersecurity updates are provided periodically to Registrant's senior management, including its CEO, CFO and senior vice presidents of Registrant's operations, and to the senior management of Registrant's subsidiaries. Cybersecurity risk management extends beyond Registrant's and its subsidiaries' senior management teams. Registrant's Board of Directors ("the Board") oversees enterprise risk management, or ERM, performed under the direction of Registrant's senior management team. Cybersecurity updates, including recent findings, changes to processes or personnel changes, are provided to the ERM liaison to the Board, who is a member of the Board, and to the full Board on a quarterly basis or more frequently if needed. Cybersecurity is one component of an overall ERM framework that involves Registrant's Board. The Board satisfies its oversight responsibility by obtaining information from the ERM liaison and senior management of Registrant, with input from the senior management of Registrant's subsidiaries as necessary. On a quarterly basis, Registrant's senior management will discuss the implementation status of plans to mitigate cybersecurity risks with the ERM liaison. The ERM liaison and Registrant's senior management will then provide a report to the full Board regarding the critical cybersecurity risks discussed, mitigation plans and implementation of the ERM program that addresses cybersecurity risks.

In addition, Registrant's plans require members of its senior management, such as its CEO and CFO, as well as members of management from its, and its subsidiaries', Operations, Information Technology, Human Capital Management, Accounting and Legal teams participate in Registrant's Cybersecurity Incident Response Team ("CIRT") to be kept current on all aspects related to a cyber-attack, if a cybersecurity incident were to occur.

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Responses to cyber-attacks are fast-moving and dynamic and would require an assessment of actual or potential damage performed by Registrant's cybersecurity team. If a cyber-attack were to occur, continuous engagement, communication and collaboration between Registrant's cybersecurity team and members of its CIRT as well as third parties would likely be necessary in order to gather accurate and complete information, perform a comprehensive evaluation and assessment of the cyber-attack, manage and contain the cybersecurity threat, and develop and execute a remediation and recovery plan. Members of its CIRT team would work together to determine whether a cybersecurity breach is material and required to be reported to the Board and publicly under applicable law.

To ensure that members of Registrant's Board are informed of material cyber-attacks, Registrant's CFO and IT Director have been designated as key members of management that will provide current updates to Registrant's ERM liaison and the Board. The communication will include but not be limited to, the nature and status of the cyber-attack and Registrant's plan to contain and mitigate the cyber threat and ultimately the remediation and recovery plan to return to "business as usual" state. Registrant's CFO has over 15 years overseeing the Company's risk management area. Registrant's IT Director has over 25 years in Information Technology designing, implementing and supporting various cybersecurity and technical solutions, along with ensuring compliance with multiple cybersecurity regulations.

Cybersecurity threats, including as a result of any previous cybersecurity incidents, have not materially affected and are not reasonably likely to materially affect Registrant, including its business strategy, results of operations or financial condition. However, the risk of cybersecurity threats could be significant if the cyber-attack disrupts Registrant's critical operations, service or financial systems. See "Information Technology Risk Factors" under Item 1A. In addition, any unauthorized access to sensitive information or data breaches could be detrimental to Registrant's operations, critical corporate information and reputation and relationships with its customers, vendors, employees, directors and could negatively affect the future of contract awards at ASUS and could result in a termination of one or more of its existing contracts or the assessment of penalties. The cost of responding to a cyber-attack could be significant depending on the severity of the cyber-attack and could go beyond financial costs as operations and services provided by Registrant could be delayed and coordinated resources in response could be significant. Registrant could also be assessed penalties if it is determined that applicable data privacy laws have been violated.

Item 2. Properties

Water Properties

As of December 31, 2023, GSWC's physical properties consisted of water transmission and distribution systems, which included 2,878 miles of pipeline together with services, meters and fire hydrants, and approximately 450 parcels of land generally less than 1 acre each, on which are located wells, pumping plants, reservoirs and other water utility facilities, including five surface water treatment plants. GSWC also has franchises, easements and other rights of way for the purpose of accessing wells and tanks and constructing and using pipes and appurtenances for transmitting and distributing water. All of GSWC's properties are located in California.

As of December 31, 2023, GSWC owned 239 wells, of which 167 are active with an aggregate production capacity of approximately 164 million gallons per day. GSWC has 59 connections to the water distribution facilities of the MWD, and other municipal water agencies. GSWC's storage reservoirs and tanks have an aggregate capacity of approximately 119 million gallons. GSWC owns no dams. The following table provides, in greater detail, information regarding the water utility plant of GSWC:

Pumps		Distribution Facilities			Reservoirs		
Well	Booster	Mains*	Services	Hydrants	Tanks	Capacity*	
239	387	2,878	264,097	26,852	145	119	(1)

* Reservoir capacity is measured in millions of gallons. Mains are in miles.

(1) GSWC has additional capacity in its Bay Point system, through an exclusive capacity right to use 4.4 million gallons per day from a treatment plant owned by Contra Costa Water District. GSWC also has additional reservoir capacity through an exclusive right-to-use all of one 8 million gallon reservoir, one-half of another 8 million gallon reservoir, and one-half of a treatment plant's capacity, all owned by Three Valleys Municipal Water District.

Electric Properties

BVES's properties are located in the Big Bear area of San Bernardino County, California. As of December 31, 2023, BVES owned and operated approximately 87.8 miles of overhead 34.5 kilovolt (kv) sub-transmission lines (17.43 circuit miles are insulated), 6.49 miles of underground 34.5 kv sub-transmission lines, 493.41 miles of overhead 4.16 kv or 2.4 kv distribution lines (36.2 circuit miles are insulated), 114.22 miles of underground cable, 13 sub-stations and a natural gas-fueled 8.4 MW peaking generation facility. BVES also has franchises, easements and other rights of way for the purpose of constructing and using poles, wires and other appurtenances for transmitting electricity.

Adjudicated and Other Water Rights

GSWC owns groundwater and surface water rights in California. Groundwater rights are further subject to classification as either adjudicated or unadjudicated rights. Adjudicated rights have been established through comprehensive litigation in the courts, and the annual extraction quantities and use of the adjudicated rights are often subject to the provisions of the judgment for that particular groundwater basin. Additionally, as a result of the adjudication, many of these groundwater basins are managed by a watermaster that is charged with enforcing the provisions of the judgment, which may include determining operating safe yields based on the water supply conditions of the groundwater basin.

GSWC actively manages its adjudicated groundwater rights portfolio with the goal of optimizing and making this source of supply sustainable. Unadjudicated rights are subject to further regulation by the State Water Resources Control Board ("SWRCB") and the California Department of Water Resources. Surface water rights are quantified and managed by the SWRCB, unless the surface water rights originated prior to 1914. As of December 31, 2023, GSWC had adjudicated groundwater rights and surface water rights of 69,409 and 11,335 acre-feet per year, respectively. GSWC also has a number of unadjudicated groundwater rights, which have not been quantified, but are typically measured by historical usage.

Office Buildings

GSWC owns its general headquarters facility in San Dimas, California. GSWC also owns and leases customer service offices and office space throughout California. BVES owns office space in California. ASUS leases office facilities in Virginia and North Carolina, and owns service centers in Florida, Maryland, South Carolina, Virginia, Texas, North Carolina and Kansas.

Mortgage and Other Liens

As of December 31, 2023, neither AWR, GSWC, BVES, ASUS, nor any of its subsidiaries, had any mortgage debt or liens securing indebtedness outstanding. Under the terms of certain debt instruments, AWR, GSWC and BVES are prohibited from issuing any secured debt, without providing equal and ratable security to the holders of this existing debt.

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Condemnation of Properties

The laws of the state of California provide for the acquisition of public utility property by governmental agencies through their power of eminent domain, also known as condemnation, where doing so constitutes a more necessary use. In addition, these laws provide that the owner of utility property (i) may contest whether the condemnation is actually necessary, and (ii) is entitled to receive the fair market value of its property if the property is ultimately taken.

Item 3. Legal Proceedings

Registrant is subject to ordinary routine litigation incidental to its business, some of which may include claims for compensatory and punitive damages. Management believes that rate recovery, proper insurance coverage and reserves are in place to insure against, among other things, property, general liability, employment, and workers' compensation claims incurred in the ordinary course of business. Insurance coverage may not cover certain claims involving punitive damages.

Item 4. Mine Safety Disclosure

Not applicable.

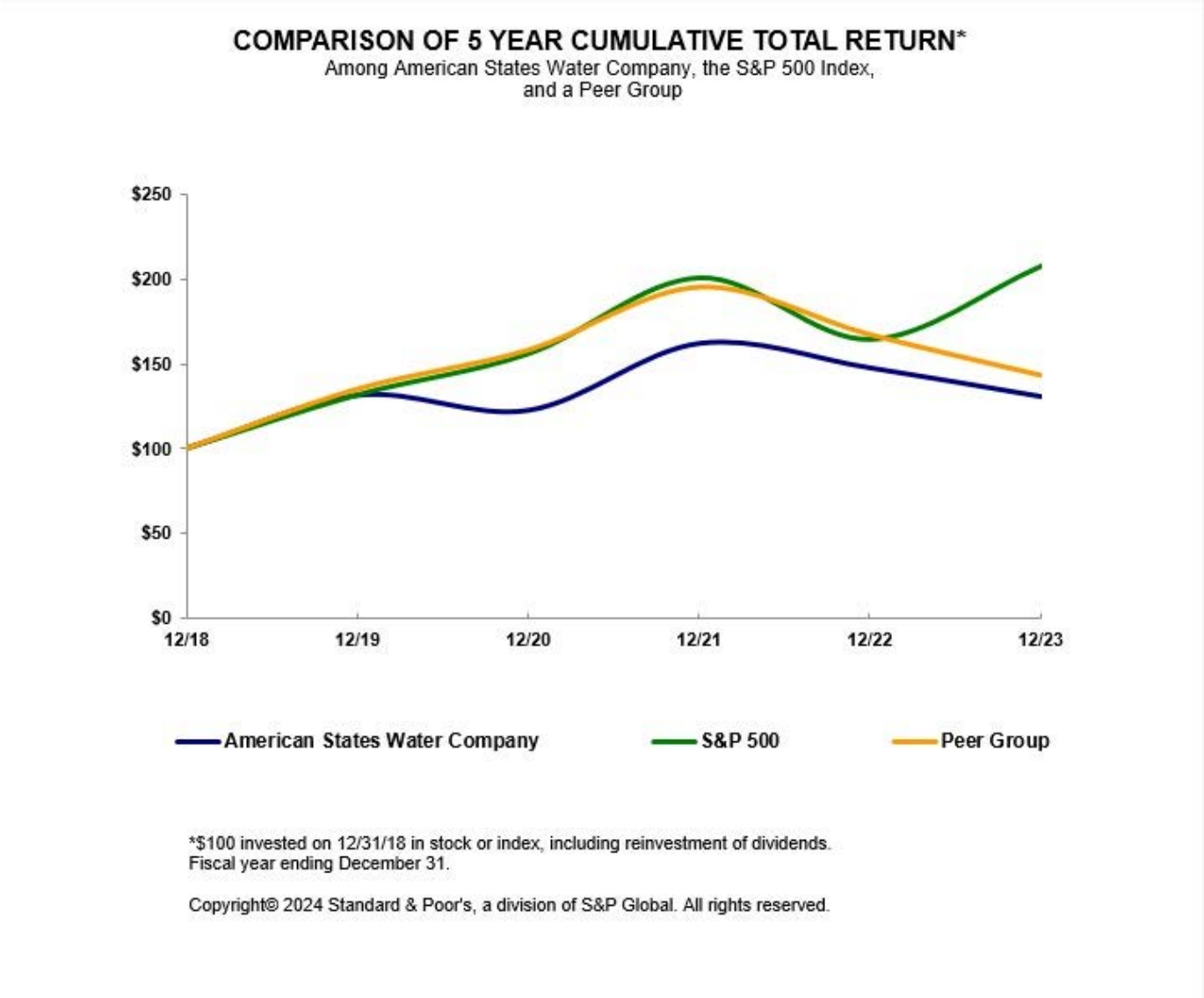
PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Stock Performance Graph

The graph below compares the cumulative 5-Year total return of American States Water Company's Common Shares with the cumulative total returns of the S&P 500 index and a customized peer group of seven water utilities that includes: American Water Works Company Inc., Essential Utilities Inc., Artesian Resources Corporation, California Water Service Group, Middlesex Water Co., York Water Co. and SJW Group. In accordance with SEC guidance, the returns of the seven utilities included in the peer group are weighted according to their respective market capitalizations.

An investment of $100 (with reinvestment of all dividends) is assumed to have been made in our Common Shares, and in the common stock in the index and in the peer group on December 31, 2018. Relative performance is tracked through December 31, 2023.



	12/2018	12/2019	12/2020	12/2021	12/2022	12/2023
American States Water Company	**$ 100.00**	**$ 131.19**	**$ 122.32**	**$ 161.78**	**$ 147.31**	**$ 130.43**
S&P 500	**$ 100.00**	**$ 131.49**	**$ 155.68**	**$ 200.37**	**$ 164.08**	**$ 207.21**
Peer Group	**$ 100.00**	**$ 134.93**	**$ 157.90**	**$ 194.95**	**$ 166.87**	**$ 142.93**

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Market Information Relating to Common Shares

Common Shares of American States Water Company are traded on the New York Stock Exchange ("NYSE") under the symbol "AWR."

GSWC is a wholly-owned subsidiary of AWR. As a result, there is no public trading market in its common shares.

Approximate Number of Holders of Common Shares

As of February 20, 2024, there were 1,854 holders of record of the 36,988,764 outstanding Common Shares of American States Water Company. AWR owns all of the outstanding common shares of GSWC, BVES and ASUS. ASUS owns all of the outstanding stock of its subsidiaries.

Frequency and Amount of Any Dividends Declared and Dividend Restrictions

For the last two years, AWR has paid dividends on its Common Shares on or about March 1, June 1, September 1 and December 1. The following table lists the amounts of dividends paid on Common Shares of American States Water Company:

	2023	2022
First Quarter	$ 0.3975	$ 0.3650
Second Quarter	$ 0.3975	$ 0.3650
Third Quarter	$ 0.4300	$ 0.3975
Fourth Quarter	$ 0.4300	$ 0.3975
Total	$ 1.6550	$ 1.5250

AWR's ability to pay dividends is subject to the requirement in its revolving credit facility to maintain compliance with all covenants described in *Note 9 Bank Debt* included in Part II, Item 8, in the *Notes to Consolidated Financial Statements*. GSWC is prohibited under the terms of its senior notes from paying dividends if, after giving effect to the dividend, its total indebtedness to capitalization ratio (as defined) would be more than 0.6667-to-1. GSWC would have to issue additional debt of $716.3 million to invoke this covenant as of December 31, 2023.

Under California law, AWR, GSWC, BVES and ASUS are each permitted to distribute dividends to its shareholders and repurchase its shares so long as the Board of Directors determines, in good faith, that either: (i) the value of the corporation's assets equals or exceeds the sum of its total liabilities immediately after the dividend, or (ii) its retained earnings equals or exceeds the amount of the distribution.

Under the least restrictive of the California tests, approximately $776.1 million was available to pay dividends to AWR's common shareholders and repurchase shares from AWR's common shareholders at December 31, 2023. Approximately $703.8 million was available for GSWC to pay dividends to AWR at December 31, 2023, and approximately $72.3 million was available for BVES to pay dividends to AWR at December 31, 2023. BVES has a separate revolving credit facility, and its ability to pay dividends is subject to the requirement in the credit agreement to maintain compliance with all covenants described in *Note 9 Bank Debt*.

ASUS's ability to pay dividends to AWR is dependent upon the ability of each of its subsidiaries to pay dividends to ASUS under applicable state law as well as ASUS's ability to pay dividends under California law.

AWR paid $61.2 million in dividends to shareholders for the year ended December 31, 2023, as compared to $56.4 million for the year ended December 31, 2022. GSWC paid dividends of $55.4 million and $27.0 million to AWR in 2023 and 2022, respectively. BVES did not pay dividends to AWR in 2023 and paid dividends of $14.7 million to AWR in 2022. ASUS paid dividends of $16.0 million and $14.7 million to AWR in 2023 and 2022, respectively.

Other Information

The shareholders of AWR have approved the material features of all equity-compensation plans under which AWR directly issues equity securities. AWR did not issue any unregistered equity securities during 2023.

The following table provides information about AWR repurchases of its Common Shares during the fourth quarter of 2023:

Period	Total Number of Shares Purchased		Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Number of Shares That May Yet Be Purchased under the Plans or Programs (1)(3)
October 1 - 31, 2023	468		$ 77.22	—	—
November 1 - 30, 2023	203		$ 80.11	—	—
December 1 - 31, 2023	3,086		$ 79.55	—	—
Total	3,757	(2)	$ 79.29	—	

(1) None of the Common Shares were repurchased pursuant to any publicly announced stock repurchase program.

(2) Of these amounts, zero Common Shares were acquired on the open market for employees pursuant to the 401(k) plan. The remainder of the shares were acquired on the open market for participants in the DRP.

(3) Neither the 401(k) plan nor the Common Share Purchase and DRP contains a maximum number of Common Shares that may be purchased in the open market.

Item 6. (Reserved)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis provides information on AWR's consolidated operations and assets, and includes specific references to AWR's individual segments and its subsidiaries (GSWC, BVES, and ASUS and its subsidiaries), and AWR (parent) where applicable.

Included in the following analysis is a discussion of Registrant's operations in terms of earnings per share by business segment and AWR (parent), which equals each business segment's earnings divided by AWR's weighted average number of diluted Common Shares. The gains and losses generated on the investments held to fund one of the Company's retirement plans during the years ended December 31, 2023 and 2022 have been excluded when communicating the results to help facilitate comparisons of AWR's performance from period to period. In addition, both the impact of retroactive rates related to the full year 2022 recorded during the year ended December 31, 2023 resulting from the final decision on the water general rate case, and the impact from the estimates of revenues subject to refund recorded in 2022 and changes to estimates recorded in 2023 following the receipt of a final cost of capital decision in June 2023 have been excluded when communicating AWR's consolidated and water segment results for the years ended December 31, 2023 and 2022 to help facilitate comparisons of the Company's performance from period to period.

All of the measures discussed above are derived from consolidated financial information of Registrant, but are not presented in our financial statements that are prepared in accordance with Generally Accepted Accounting Principles in the United States ("GAAP"). These items constitute "non-GAAP financial measures" under Securities and Exchange Commission rules, which supplement our GAAP disclosures but should not be considered as an alternative to the respective GAAP measures. Furthermore, the non-GAAP financial measures may not be comparable to similarly titled non-GAAP financial measures of other registrants.

AWR uses earnings per share by business segment, a non-GAAP financial measure, as an important measure in evaluating its operating results and believes it provides investors with clarity surrounding the performance of its segments. AWR reviews this measurement regularly and compares it to historical periods and to its operating budget. A reconciliation to AWR's consolidated diluted earnings per share prepared in accordance with GAAP is included in the discussion under the section titled "*Summary Results by Segment*."

Overview

Factors affecting our financial performance are summarized under the Overview section in *Item 1. Business* and *Item 1A. Risk Factors*.

Water and Electric Segments:

GSWC's and BVES's revenues, operating income, and cash flows are earned primarily through delivering potable water to homes and businesses in California and electricity in the Big Bear area of San Bernardino County, California, respectively. Rates charged to GSWC and BVES customers are authorized by the CPUC. These rates are intended to allow recovery of operating costs and a reasonable rate of return on invested capital. GSWC and BVES plan to continue seeking additional rate increases in future years from the CPUC to recover operating and supply costs, and receive reasonable returns on invested capital. Capital expenditures in future years at GSWC and BVES are expected to remain at substantially higher levels than depreciation expense. When necessary, GSWC and BVES may obtain funds from external sources in the capital markets and through bank borrowings.

General Rate Case Filings and Other Matters:

Water General Rate Case for the years 2025–2027:

On August 14, 2023, GSWC filed a general rate case application for all its water regions and the general office. This general rate case will determine new water rates for the years 2025 – 2027. Among other things, GSWC requested capital budgets of approximately $611.4 million for the three-year capital cycle. GSWC also requested the continuation of mechanisms to accommodate fully decoupled revenues and sales, and track differences between recorded and CPUC-authorized supply-related expenses. In an August 2020 decision, the CPUC discontinued the use of the WRAM and the MCBA by water utilities, which GSWC implemented in 2008, but would be discontinued for GSWC after 2024. However, on September 30, 2022, the governor of California signed Senate Bill ("SB") 1469 and effective January 1, 2023, SB 1469 allows Class A water utilities, including GSWC, to continue requesting the use of a revenue decoupling mechanism in their next general rate case. With the passage of SB 1469, GSWC's request to continue using a revenue decoupling mechanism will be subject to CPUC approval. As of the filing date of this Form 10-K, a proposed decision in the water general rate case is scheduled for the fourth quarter of 2024, with new rates to become effective January 1, 2025.

Water General Rate Case for years 2022 - 2024:

On June 29, 2023, the CPUC adopted a final decision in GSWC's general rate case application for all its water regions and its general office that determined new water rates for the years 2022–2024 retroactive to January 1, 2022. Among other things, the final decision (i) adopted the full settlement agreement between GSWC and the Public Advocates Office at the CPUC ("Public Advocates") that resolved all issues related to the 2022 annual revenue requirement in the general rate case application and authorized GSWC to invest approximately $404.8 million in capital infrastructure over the three-year capital cycle (excluding advice letter projects), and (ii) allowed for additional increases in adopted revenues for 2023 and 2024 subject to an earnings test and inflationary index values at the time of filing for implementation of the new rates. The impact of retroactive rates for the full year of 2022 as well as second-year rate increases for 2023 have been reflected in the results of operations for the year ended December 31, 2023.

As a result of receiving the final decision that approved the settlement agreement in its entirety, the net impact of retroactive new rates for the full year of 2022 was $0.38 per share and has been reflected in the year ended December 31, 2023 results, which consisted primarily of the increase in 2022's annual revenue requirement (excluding advice letter projects) that, among other things, incorporated an increase in supply costs, and which combined is a net increase of approximately $0.40 per share; partially offset by the approval of new operating expense levels related to 2022 that resulted in an increase in recorded depreciation expense of approximately $790,000, or $0.02 per share, resulting from updated composite depreciation rates adopted in the final decision, and which are reflected in the 2022 adopted revenue requirement.

The second-year rate increases for 2023, which were retroactive to January 1, 2023, have also been reflected in the year ended December 31, 2023 results. Excluding the impact of retroactive rates for 2022 discussed above, there was an increase in recorded water operating revenues of $48.1 million largely as a result of the second-year rate increases for 2023 that, among other things, incorporated the increase in recorded supply costs of $10.0 million, which combined is an increase of $0.74 per share. Upon receiving the final decision, GSWC filed for the implementation of new 2023 rate increases that went into effect on July 31, 2023. Due to the delay in finalizing the water general rate case, water revenues billed to customers for the year ended December 31, 2022 and for the period from January 1, 2023 to July 30, 2023 were based on 2021 adopted rates. In October 2023, GSWC also filed with the CPUC to recover all retroactive rate amounts accumulated in memorandum accounts for the full 2022 year and for 2023 through July 30, 2023. Surcharges were implemented to recover the cumulative retroactive rate differences over 36 months. As of December 31, 2023, there is an aggregate cumulative balance of $52.8 million in CPUC-approved general rate case memorandum accounts that have been recognized as regulatory assets with a corresponding increase in water revenues.

Cost of Capital ("COC") Proceedings:

2024 COC Application:

Investor-owned water utilities serving California are required to file their cost of capital applications on a triennial basis. GSWC's next cost of capital application was scheduled to be filed on May 1, 2024 effective for the years 2025 - 2027. However, GSWC, along with three other Class A investor-owned water utilities in California, filed a joint request with the CPUC to defer the filing deadline of the next cost of capital applications by one year, which was approved on February 2, 2024. The joint request asked that the utilities keep the cost of capital currently authorized for 2024 in effect through 2025, and file new cost of capital applications by May 1, 2025 to set the cost of debt, return on equity and capital structure starting January 1, 2026. GSWC's current authorized rate of return on rate base is 7.93% effective January 1, 2024, which will continue in effect through December 31, 2025. Additionally, GSWC's Water Cost of Capital Adjustment Mechanism ("WCCM") will remain active through the one year deferral period.

2021 COC Application:

GSWC filed its last cost of capital application with the CPUC in May 2021. On June 29, 2023, the CPUC adopted a final decision that, among other things, (i) adopted GSWC's requested capital structure of 57% equity and 43% debt; (ii) adopted a cost of debt of 5.1% for GSWC as compared to 6.6% previously authorized; (iii) adopted a return on equity of 8.85% for GSWC as compared to 8.9% previously authorized; (iv) allowed for the continuation of the WCCM through December 31, 2024; and (v) adopted the new cost of capital for the three-year period commencing January 1, 2022 through December 31, 2024. Based on the final decision issued in June 2023, all adjustments to rates are prospective and not retroactive. GSWC filed an advice letter that implemented the new cost of capital effective July 31, 2023.

Following the receipt of the final decision in the cost of capital proceeding, management updated its analysis and reassessed the accounting estimates recorded to date related to GSWC's lower cost of debt. Accordingly, during the second quarter of 2023, GSWC recorded a change in estimate that resulted in an increase to water revenues in the amount of $6.4 million, or approximately $0.13 per share, as a result of reversing its regulatory liability for revenues subject to refund that it had recorded during 2022.

The WCCM adjusts the return on equity and rate of return on rate base between the three-year cost of capital proceedings only if there is a positive or negative change of more than 100 basis points in the average of the Moody's Aa utility bond rate as measured over the period October 1 through September 30. If there is a positive or negative change of more than

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100 basis points, the return on equity is adjusted by one half of the difference. For the period from October 1, 2021 through September 30, 2022, the Moody's Aa utility bond rate increased by 102.8 basis points from the benchmark, which triggered the WCCM adjustment. GSWC recognized revenues for the period from January 1 through July 30, 2023 and all of 2022 based on the previously authorized return of equity of 8.9% that had also been billed to water customers through the same period. On June 30, 2023, GSWC filed an advice letter to establish the WCCM for 2023, which increased GSWC's 8.85% adopted return on equity in the decision to 9.36% effective July 31, 2023. Additionally, for the period from October 1, 2022 through September 30, 2023, the Moody's Aa utility bond rate increased by 139.7 basis points from the benchmark, which triggered another WCCM adjustment. On October 12, 2023, GSWC filed an advice letter to establish the WCCM for 2024, which has been approved by the CPUC and increased GSWC's 9.36% adopted return on equity to 10.06% effective January 1, 2024.

Final Decision in the First Phase of the Low-Income Affordability Rulemaking:

In August 2020, the CPUC issued a final decision in the first phase of the CPUC's Order Instituting Rulemaking evaluating the low income ratepayer assistance and affordability objectives contained in the CPUC's 2010 Water Action Plan. This decision also addressed other issues, including mandating discontinuance of the WRAM and the MCBA. The MCBA is a full-cost balancing account used to track the difference between adopted and actual water supply costs (including the effects of changes in both rates and volume). Based on the final decision, any general rate case application filed by GSWC and the other California water utilities after August 27, 2020 may not include a proposal to continue the use of the WRAM or MCBA, but may instead include a proposal to use a limited price adjustment mechanism and an incremental supply cost balancing account. The discontinuation of the WRAM and MCBA for GSWC would be effective for years after 2024. However, on September 30, 2022, the governor of California signed Senate Bill ("SB") 1469. Effective January 1, 2023, SB 1469 allows Class A water utilities, including GSWC, to continue requesting the use of a full revenue decoupling mechanism in their general rate case. With the passage of SB 1469, GSWC was able to request the continued use of a full revenue decoupling mechanism, similar to the WRAM in its general rate case application filed on August 14, 2023 that establishes new rates for the years 2025 – 2027. GSWC's request to continue using a full revenue decoupling mechanism in its general rate case is subject to CPUC approval. Since its implementation in 2008, the WRAM and MCBA have helped mitigate fluctuations in GSWC's earnings due to changes in water consumption by its customers or changes in water supply mix. Replacing them with mechanisms recommended in the final decision will likely result in more volatility in GSWC's future earnings and could result in less than, or more than, full recovery of its authorized revenue and supply costs.

In October 2020, GSWC, three other investor-owned water utilities ("IOWUs") operating in California, and the California Water Association ("CWA") filed applications with the CPUC for rehearing on the discontinuation of the WRAM and MCBA, which the CPUC denied in September 2021. GSWC, the three other IOWUs and CWA each separately filed a petition with the California Supreme Court to review the CPUC's decision revoking prior authorization of the WRAM and MCBA. In May 2022, the Court granted the petition for writ of review. The Court ordered GSWC, along with the other IOWUs and CWA, to file opening briefs, which were filed on September 1, 2022. The CPUC's answer to the opening briefs was originally due by November 15, 2022 and reply briefs were due by December 15, 2022. However, as a result of SB 1469, in October 2022 the CPUC filed a motion to dismiss the IOWUs and CWA's petition with the Court, and also requested that the Court suspend the proceeding schedule until it rules on the motion to dismiss. The Court granted the CPUC's request to suspend the proceeding schedule. In November 2022, the Supreme Court denied the CPUC's motion to dismiss and established a new proceeding schedule whereby the CPUC filed their answer brief on December 9, 2022 and the IOWUs filed their reply brief on January 13, 2023. At this time, management cannot predict the final outcome of this matter.

Electric General Rate Case for the years 2023–2026:

On August 30, 2022, BVES filed a general rate case application that will determine new electric rates for the years 2023 – 2026. In February 2023, a scoping memo and ruling that set the final schedule and scope of issues in BVES's general rate case proceeding was issued by the CPUC. Electric revenues billed to customers for 2023 were based on 2022 adopted rates and will remain in effect until finalization of the pending general rate case application. On December 15, 2022, the CPUC approved a decision for BVES to establish a general rate case memorandum account that makes the new 2023 rates effective and retroactive to January 1, 2023. When a decision is issued in the electric general rate case, cumulative adjustments will be recorded at that time.

Among other things, BVES requested (i) capital budgets of approximately $62.0 million for the four-year rate cycle, and another $6.2 million for a large line replacement capital project to be filed for revenue recovery through an advice letter when the project is completed, and (ii) a capital structure for BVES of 61.8% equity and 38.2% debt, a return on equity of 11.25%, an embedded cost of debt of 5.51%, and a return on rate base of 9.05%. Included in the general rate case application is a request for recovery of all capital expenditures and other incremental costs incurred over the last few years in connection with BVES's wildfire mitigation plans that are currently not included in customer rates. These costs will be subject to review by the CPUC during the general rate case proceeding.

Contracted Services Segment:

ASUS's revenues, operating income and cash flows are earned by providing water and/or wastewater services, including operation and maintenance services and construction of facilities for the water and/or wastewater systems at various military installations, pursuant to an initial 50-year, firm-fixed-price contract, additional firm-fixed-price contracts, task order agreements and subcontracts with third party prime contractors on military bases. Currently, ASUS has one subsidiary that has entered into a task order agreement with the U.S. government that has a term of 15 years. The contract price for each of the contracts and recurring task order agreements is subject to annual economic price adjustments. Additional revenues generated by contract operations are primarily dependent on annual economic price adjustments, and new construction activities under contract modifications with the U.S. government or agreements with other third-party prime contractors. ASUS's subsidiaries continue to enter into U.S. government-awarded contract modifications and agreements with third-party prime contractors for new construction projects at the military bases served.

During 2023, excluding the first task order of Joint Base Cape Cod ("JBCC") and the new contract for Naval Air Station Patuxent River, ASUS was awarded approximately $24.1 million in new construction projects for completion beginning in 2023 through 2026. Earnings and cash flows from modifications to the initial 50-year contracts, additional contracts thereafter with the U.S. government and agreements with third-party prime contractors for additional construction projects may or may not continue in future periods.

On August 15, 2023, ASUS was awarded a new 50-year contract by the U.S. government to operate, maintain, and provide construction management services for the water distribution and wastewater collection and treatment facilities at Naval Air Station Patuxent River, a United States Navy air station located in Maryland. The initial firm-fixed-price value of the contract is estimated at $349 million over a 50-year period and is subject to annual economic price adjustments. This initial value is also subject to adjustment based on the results of a joint inventory of assets to be performed during the transition period and will be finalized during the first year of operations.

On September 29, 2023, ASUS was awarded a new 15-year contract by the U.S. government, that is different than ASUS's other existing 50-year contracts, to operate, maintain, and provide construction management services for the water distribution and wastewater collection and treatment facilities at JBCC located in Massachusetts. Under this contract, ASUS will have the opportunity to perform work at JBCC through the periodic issuance of task orders by the U.S. government for up to a maximum initial firm-fixed-price value of $45.0 million over a 15-year period, subject to adjustments as task orders are issued. In September 2023, the first task order was issued with a value of $2.3 million to perform an evaluation, construction and transition services that are scheduled for completion in 2024.

Entering into contracts with the U.S. government subjects ASUS to potential government audits or investigations of its business practices and compliance with government procurement statutes and regulations. ASUS had been under a civil government investigation over bidding and estimating practices used in certain capital upgrade projects. In July 2023, ASUS and the U.S. government entered into an agreement that settles civil and monetary claims by the U.S. government. This settlement did not have a material impact on Registrant's financial statements.

Summary Results by Segment

The table below sets forth a comparison of the diluted earnings per share by business segment and for the parent company:

	Diluted Earnings per Share		
	Year Ended		
	12/31/2023	12/31/2022	CHANGE
Water	$ 2.77	$ 1.45	$ 1.32
Electric	0.20	0.24	(0.04)
Contracted services	0.50	0.46	0.04
AWR (parent)	(0.10)	(0.04)	(0.06)
Consolidated diluted earnings per share, as recorded (GAAP)	3.36	2.11	1.25
Adjustments to GAAP measure:			
Impact of retroactive rates related to the full year of 2022 from the final decision in the water general rate case*	(0.38)	—	(0.38)
Impact related to the final cost of capital decision*	(0.13)	0.13	(0.26)
Consolidated diluted earnings per share, as adjusted (Non-GAAP)*	$ 2.85	$ 2.24	$ 0.61
Water diluted earnings per share, as adjusted (Non-GAAP)*	$ 2.26	$ 1.58	$ 0.68

Note: Certain amounts in the table above may not foot or crossfoot due to rounding.

* All adjustments to recorded diluted earnings per share relate to the water segment. The water segment's adjusted earnings for 2023 exclude the impact of retroactive rates related to the full year of 2022 resulting from the final CPUC decision in the general rate case previously discussed, and for 2023 and 2022 they exclude the impact of changes in estimates resulting from revenues subject to refund related to the cost of capital proceeding, both shown separately in the table above.

For the year ended December 31, 2023, AWR's recorded consolidated diluted earnings were $3.36 per share, as compared to $2.11 per share for 2022, an increase of $1.25 per share, which includes: (i) the impact of retroactive new rates related to the full 2022 year of $0.38 per share as a result of receiving a final decision in the water general rate case as previously discussed and shown separately in the table above, and (ii) a net favorable variance of $0.26 per share, also shown separately in the table above, related to the impact of the final cost of capital decision that resulted in the reversal during 2023 of revenues subject to refund of $6.4 million, or $0.13 per share, due to a change in estimate from what had been recorded during 2022. Excluding these items from both periods, for the year ended December 31, 2023 and 2022, adjusted consolidated diluted earnings were $2.85 per share and $2.24 per share, respectively, an adjusted increase of $0.61 per share. Also, included in the results for 2023 were gains totaling $5.0 million, or approximately $0.10 per share, on investments held to fund one of the Company's retirement plans, as compared to losses of $5.2 million, or approximately $0.10 per share, for 2022, both due to financial market conditions.

Excluding the gains and losses on the retirement plan investments from both periods, the impact of retroactive rates recorded in 2023 related to the full year of 2022, and the impact of changes in estimates from the cost of capital proceeding from both periods, adjusted consolidated diluted earnings for the year of 2023 would be $2.75 per share as compared to adjusted diluted earnings of $2.34 per share for 2022, an adjusted increase of $0.41 per share or a 17.5% increase, largely due to new 2023 water rates approved in GSWC's final decision in its general rate case proceeding.

The following is a computation and reconciliation of diluted earnings per share from the measure of operating income by business segment as disclosed in Note 17 to the Consolidated Financial Statements, to AWR's consolidated fully diluted earnings per common share for the year ended December 31, 2023 and 2022:

	Water		Electric		Contracted Services		AWR (Parent)		Consolidated (GAAP)	
In 000's except per share amounts	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Operating income (Note 17)	$ 159,177	$ 92,455	$ 11,196	$ 11,740	$ 26,151	$ 22,449	$ 216	$ (8)	$ 196,740	$ 126,636
Other (income) and expense	20,780	22,339	2,202	425	1,446	(273)	5,792	2,085	30,220	24,576
Income tax expense (benefit)	35,689	16,346	1,515	2,439	6,109	5,476	(1,714)	(597)	41,599	23,664
Net income (loss)	$ 102,708	$ 53,770	$ 7,479	$ 8,876	$ 18,596	$ 17,246	$ (3,862)	$ (1,496)	$ 124,921	$ 78,396
Weighted Average Number of Diluted Shares	37,077	37,039	37,077	37,039	37,077	37,039	37,077	37,039	37,077	37,039
Diluted earnings per share	$ 2.77	$ 1.45	$ 0.20	$ 0.24	$ 0.50	$ 0.46	$ (0.10)	$ (0.04)	$ 3.36	$ 2.11

Note: Certain amounts in the table above may not foot or crossfoot due to rounding.

Water Segment:

For the year ended December 31, 2023, recorded diluted earnings from the water utility segment were $2.77 per share, as compared to $1.45 per share for 2022, an increase of $1.32 per share, which includes: (i) the impact of retroactive new rates related to the full 2022 year of $0.38 per share (shown separately in the Summary Results by Segment table above), (ii) a net favorable variance of $0.26 per share (shown separately in the Summary Results by Segment table above) from the impact of the final cost of capital decision that resulted in the reversal of $6.4 million, or $0.13 per share, due to a change in estimate from what had been recorded during 2022, and (iii) a net favorable variance of $0.20 per share from gains totaling $5.0 million, or $0.10 per share, recorded during 2023 on investments held to fund a retirement plan, as compared to losses of $5.2 million, or $0.10 per share, recorded in 2022.

Excluding the gains and losses on the retirement plan investments from both periods, the impact of retroactive rates recorded in 2023 related to the full year of 2022, and the impact of changes in estimates from the cost of capital proceeding from both periods, adjusted diluted earnings for 2023 at the water segment were $2.16 per share as compared to adjusted diluted earnings of $1.68 per share for 2022, an adjusted net increase at the water segment of $0.48 per share, or a 28.6% increase, due primarily to the following items:

- An increase in the water operating revenues of $48.1 million largely as a result of the second-year rate increases for 2023 that are retroactive to January 1, 2023 and have been reflected in the results for the year ended December 31, 2023, partially offset by the impact of the prospective change in the new cost of capital effective July 31, 2023. GSWC filed for the implementation of new 2023 rates upon receiving the final decisions in June 2023 in both its general rate case and cost of capital proceedings. The increase in water revenues during 2023 represents the difference from the 2023 second-year rate increases and the 2021 adopted rates in place and recorded during 2022.
- An increase in water supply costs of $10.0 million, which consist of purchased water, purchased power for pumping, groundwater production assessments and changes in the water supply cost balancing accounts. Adopted supply costs for the year of 2023 were based on 2023 authorized amounts approved in the final CPUC decision in the water general rate case as compared to 2021 authorized amounts in place during 2022. Actual water supply costs are tracked and passed through to customers on a dollar-for-dollar basis by way of the CPUC-approved water supply cost balancing accounts. The increase in water supply costs results in a corresponding increase in water operating revenues and has no net impact on the water segment's profitability.
- An overall increase in operating expenses of $3.4 million (excluding supply costs), which negatively impacted earnings and was mainly due to increases in (i) overall labor costs and other employee-related benefits, (ii) administrative and general expenses resulting from higher legal and other outside-services costs, (iii) depreciation and amortization expenses resulting from additions to utility plant and higher composite depreciation rates based on a revised depreciation study approved in the water general rate case, and (iv) franchise fees resulting from higher water revenues. These increases were partially offset by a decrease in water treatment costs, and bad debt expense as a result of additional state relief funds expected to be received for unpaid water bills accumulated during the COVID-19 pandemic period.
- An overall increase in interest expense (net of interest and other income) of $4.8 million resulting primarily from an increase in interest rates, as well as an overall increase in total borrowing levels to support, among other things, the capital expenditure programs at GSWC; partially offset by higher interest income earned on regulatory assets bearing interest at the current 90-day commercial-paper rate, which increased compared to 2022's rates, as well as an increase in the level of regulatory assets recorded resulting, in large part, from the decision on the water general rate case that had been delayed.
- An overall increase in other expense (net of other income) of $4.6 million due largely to a net increase in the non-service cost components related to GSWC's benefit plans resulting from changes in actuarial assumptions recorded during the year ended December 31, 2023 as compared to 2022. However, as a result of GSWC's two-way pension balancing accounts authorized by the CPUC, changes in total net periodic benefit costs related to the pension plan have no material impact to earnings, which accounts for the majority of the increase in non-service costs.
- Changes in certain flowed-through income taxes and permanent items included in GSWC's income tax expense for the twelve months ended December 31, 2023 as compared to the same period in 2022 that unfavorably impacted the water segment's earnings. As a regulated utility, GSWC treats certain temporary differences as being flowed-through in computing its income tax expense consistent with the income tax method used in its CPUC-jurisdiction rate making. Changes in the magnitude of flowed-through items either increase or decrease tax expense, thereby affecting diluted earnings per share.

Electric Segment:

Diluted earnings from the electric utility segment decreased $0.04 per share for the year ended December 31, 2023 as compared to 2022, largely resulting from not having new rates in 2023 while awaiting the processing of the pending electric general rate case that will set new rates for 2023 – 2026, while also experiencing continued increases in overall operating expenses and interest costs, partially offset by favorable changes in certain flowed-through income taxes. When a decision is issued in the electric general rate case, new rates are expected to be retroactive to January 1, 2023 and cumulative adjustments will be recorded at that time.

Contracted Services Segment:

Diluted earnings from the contracted services segment increased $0.04 per share for the year ended December 31, 2023 as compared to 2022, largely due to an increase in management fee revenues resulting from the resolution of various economic price adjustments and an increase in construction activity, partially offset by higher overall operating expenses (excluding construction expenses) and interest costs as compared to 2022.

AWR (Parent):

For the year ended December 31, 2023, the diluted loss from AWR (parent) increased $0.06 per share compared to 2022 due primarily to an increase in interest expense resulting from higher short-term interest rates and higher borrowings made under AWR's revolving credit facility, as well as changes in state unitary taxes.

The following discussion and analysis for the years ended December 31, 2023 and 2022 provide information on AWR's consolidated operations and assets and, where necessary, includes specific references to AWR's individual segments and subsidiaries: GSWC, BVES and ASUS and its subsidiaries.

Consolidated Results of Operations — Years Ended December 31, 2023 and 2022 (amounts in thousands, except per share amounts):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
OPERATING REVENUES				
Water	$ 433,473	$ 340,602	$ 92,871	27.3 %
Electric	41,832	39,986	1,846	4.6 %
Contracted services	120,394	110,940	9,454	8.5 %
Total operating revenues	595,699	491,528	104,171	21.2 %
OPERATING EXPENSES				
Water purchased	72,864	75,939	(3,075)	-4.0 %
Power purchased for pumping	12,829	11,861	968	8.2 %
Groundwater production assessment	20,850	19,071	1,779	9.3 %
Power purchased for resale	13,275	15,039	(1,764)	-11.7 %
Supply cost balancing accounts	12,118	(12,000)	24,118	-201.0 %
Other operation	40,271	38,095	2,176	5.7 %
Administrative and general	88,273	86,190	2,083	2.4 %
Depreciation and amortization	42,403	41,315	1,088	2.6 %
Maintenance	14,218	13,392	826	6.2 %
Property and other taxes	24,046	22,894	1,152	5.0 %
ASUS construction	57,912	53,171	4,741	8.9 %
Gain on sale of assets	(100)	(75)	(25)	33.3 %
Total operating expenses	398,959	364,892	34,067	9.3 %
OPERATING INCOME	196,740	126,636	70,104	55.4 %
OTHER INCOME AND EXPENSES				
Interest expense	(42,762)	(27,027)	(15,735)	58.2 %
Interest income	7,416	2,326	5,090	218.8 %
Other, net	5,126	125	5,001	*
	(30,220)	(24,576)	(5,644)	23.0 %
INCOME FROM OPERATIONS BEFORE INCOME TAX EXPENSE	166,520	102,060	64,460	63.2 %
Income tax expense	41,599	23,664	17,935	75.8 %
NET INCOME	$ 124,921	$ 78,396	$ 46,525	59.3 %
Basic earnings per Common Share	$ 3.37	$ 2.12	$ 1.25	59.0 %
Fully diluted earnings per Common Share	$ 3.36	$ 2.11	$ 1.25	59.2 %

* not meaningful

Operating Revenues

General

GSWC and BVES rely upon approvals by the CPUC of rate increases to recover operating expenses and to provide for a return on invested and borrowed capital used to fund utility plant. ASUS relies on economic price and equitable adjustments by the U.S. government in order to recover operating expenses and provide a profit margin for ASUS. Current operating revenues and earnings may be negatively impacted if ASUS's subsidiaries do not receive adequate price adjustments in a timely manner. ASUS's earnings are also impacted by the level of construction projects at its subsidiaries, which may or may not continue at current levels in future periods.

Water

For the year ended December 31, 2023, revenues from water operations increased by $92.9 million to $433.5 million, compared to 2022. The increase in water revenues was largely because of the adoption in June 2023 of a final decision in the water general rate case that included the impact of retroactive rates associated with the increase in 2022's annual revenue requirement (excluding advice letter projects), as well as the second-year rate increases for 2023, partially offset by the impact of the prospective change in the new cost of capital effective July 31, 2023. In addition, because of receiving a final decision in the cost of capital proceeding in June 2023, in which the CPUC made adjustments to rates prospective, GSWC recorded a change in estimate that resulted in an increase to water revenues in 2023 totaling $6.4 million as a result of reversing its regulatory liability for revenues subject to refund that it had recorded during 2022.

Billed water consumption for the year ended December 31, 2023 was lower by 7.8% compared to 2022 due primarily to overall above average rainfall in California during the year of 2023 compared to 2022. Currently, changes in consumption generally do not have a significant impact on recorded revenues due to the CPUC-approved WRAM that is in place in all but one small rate-making area. GSWC records the difference between what it bills its water customers and that which is authorized by the CPUC in the WRAM accounts as regulatory assets or liabilities.

Electric

Electric revenues for the year ended December 31, 2023 increased $1.8 million to $41.8 million due, in large part, to the final decision adopted in the water general rate case proceeding that updates the costs allocated from the general corporate office to the electric segment. The final decision authorizes an increase in the allocation ratio to the electric segment. The increase in general corporate office expenses allocated to the electric segment also includes a corresponding and offsetting increase in adopted electric revenues as provided in BVES's last general rate case proceeding, resulting in no impact to earnings. There was also an increase in electric revenues from an advice letter filing related to a completed capital project.

Electric usage for the year ended December 31, 2023 was lower by 2.9% compared to 2022. Due to the CPUC-approved Base Revenue Requirement Adjustment Mechanism, which adjusts certain revenues to adopted levels authorized by the CPUC, changes in usage do not have a significant impact on earnings.

Contracted Services

Revenues from contracted services are composed of construction revenues (including renewal and replacements) and management fees for operating and maintaining the water and/or wastewater systems at various military bases. For the year ended December 31, 2023, revenues from contracted services increased $9.5 million to $120.4 million as compared to $110.9 million for 2022. The increase was largely due to higher construction activity and an increase in management fee revenue from annual economic price adjustments as compared to 2022.

ASUS's subsidiaries continue to enter into U.S. government-awarded contract modifications and agreements with third-party prime contractors for new construction projects at the military bases served. During 2023, excluding the first task order of JBCC and the new contract for Naval Air Station Patuxent River, ASUS was awarded approximately $24.1 million in new construction projects for completion in 2023 through 2026. Earnings and cash flows from modifications to the initial 50-year contracts and additional contracts with the U.S. government and agreements with third-party prime contractors for additional construction projects may or may not continue in future periods.

Operating Expenses:

Supply Costs

Total supply costs at the regulated utilities comprise the largest segment of total consolidated operating expenses. Supply costs accounted for 33.1% and 30.1% of total operating expenses for the years ended December 31, 2023 and 2022, respectively.

Water segment supply costs

Two of the principal factors affecting water supply costs are the amount of water produced and the source of the water. Generally, the variable cost of producing water from wells is less than the cost of water purchased from wholesale suppliers. The overall actual percentages for purchased water for the years ended December 31, 2023 and 2022 were 43% and 45%, as compared to the adopted percentages of 41% and 34% for 2023 and 2022. The higher actual percentage of purchased water as compared to adopted resulted from a higher volume of purchased water costs due to several wells being out of service.

Under the current CPUC-approved MCBA, GSWC tracks adopted and actual expense levels for purchased water, power purchased for pumping and pump taxes. GSWC records the variances (which include the effects of changes in both rate and volume) between adopted and actual purchased water, purchased power and pump tax expenses as a regulatory asset or liability. GSWC recovers from, or refunds to, customers the amount of such variances. GSWC tracks these variances individually for each water ratemaking area.

Supply costs for the water segment consist of purchased water, purchased power for pumping, groundwater production assessments and changes in the water supply cost balancing accounts. For the years ended December 31, 2023 and 2022, water supply costs consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water purchased	$ 72,864	$ 75,939	$ (3,075)	-4.0 %
Power purchased for pumping	12,829	11,861	968	8.2 %
Groundwater production assessment	20,850	19,071	1,779	9.3 %
Water supply cost balancing accounts *	13,839	(8,643)	22,482	-260.1 %
Total water supply costs	$ 120,382	$ 98,228	$ 22,154	22.6 %

* The sum of water and electric supply-cost balancing accounts are shown on AWR's Consolidated Statements of Income and totaled $12.1 million and $(12.0) million for 2023 and 2022, respectively.

Purchased water costs for the year ended December 31, 2023 decreased to $72.9 million as compared to $75.9 million for 2022 primarily due to decreases in water consumption and production that were driven by overall above-average rainfall in 2023 and from overall improvements in drought conditions in 2023 as compared to 2022, partially offset by increases in wholesale water costs. The increase in power purchased for pumping was due to increases in electricity provider rates. Groundwater production assessments increased due to increases in pump tax rates during 2023 as compared to 2022.

For the year ended December 31, 2023, the water supply cost balancing account had a $13.8 million over-collection as compared to an $8.6 million under-collection in 2022. The change in water supply cost balancing accounts was primarily due to updated adopted supply costs from the final decision in the water general rate case proceeding received in June 2023. This increase includes the full year impact of 2022 to reflect newly adopted supply costs retroactive to January 1, 2022, with a corresponding and offsetting increase in adopted water revenues, resulting in no impact to earnings.

Electric segment supply costs

Supply costs for the electric segment consist primarily of purchased power for resale, the cost of natural gas used by BVES's generating unit, the cost of renewable energy credits and changes in the electric supply cost balancing account. For the years ended December 31, 2023 and 2022, electric supply costs consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Power purchased for resale	$ 13,275	$ 15,039	$ (1,764)	-11.7 %
Electric supply cost balancing account *	(1,721)	(3,357)	1,636	-48.7 %
Total electric supply costs	$ 11,554	$ 11,682	$ (128)	-1.1 %

* The sum of water and electric supply-cost balancing accounts are shown on AWR's Consolidated Statements of Income and totaled $12.1 million and $(12.0) million for 2023 and 2022, respectively.

For the year ended December 31, 2023, the cost of power purchased for resale to BVES's customers decreased to $13.3 million as compared to $15.0 million for 2022 primarily due to a decrease in customer usage and lower average price per megawatt-hour ("MWh"). The average price per MWh, including fixed costs, decreased to $79.80 per MWh in 2023 from $97.89 per MWh in 2022. The lower customer usage resulted in a lower under-collection of $1.7 million recorded in the electric supply balancing account in 2023 when compared to an under-collection of $3.4 million during 2022.

Other Operation

The primary components of other operation expenses include payroll costs, materials and supplies, chemicals and water treatment costs, and outside service costs of operating the regulated water and electric systems, including the costs associated with transmission and distribution, pumping, water quality, meter reading, billing, and operations of district offices. Registrant's contracted services operations incur many of the same types of expenses. For the years ended December 31, 2023 and 2022, other operation expenses by business segment consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 29,064	$ 28,117	$ 947	3.4 %
Electric Services	4,057	3,311	746	22.5 %
Contracted Services	7,150	6,667	483	7.2 %
Total other operation	$ 40,271	$ 38,095	$ 2,176	5.7 %

For the year ended December 31, 2023, the increase in other operation expenses at the water segment was due primarily to higher operation-related labor, transportation and outside-service costs, partially offset by lower water treatment costs and bad debt expense. As a result of receiving the final decision in the water general rate case, the increase at the water segment also included a cumulative depreciation adjustment for 2022 of $212,000 on GSWC's transportation equipment, which is recorded in other operation expenses.

The increases at the electric and contracted services segments were due primarily to higher operation-related labor and outside-services costs.

Administrative and General

Administrative and general expenses include payroll related to administrative and general functions, all employee-related benefits, insurance expenses, outside legal and consulting fees, regulatory utility commission expenses, expenses associated with being a public company and general corporate expenses charged to expense accounts. For the years ended December 31, 2023 and 2022, administrative and general expenses by business segment, including AWR (parent), consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 59,313	$ 58,358	$ 955	1.6 %
Electric Services	8,745	7,901	844	10.7 %
Contracted Services	20,431	19,923	508	2.5 %
AWR (parent)	(216)	8	(224)	*
Total administrative and general	$ 88,273	$ 86,190	$ 2,083	2.4 %

* not meaningful

Administrative and general expenses increased at the water segment due, in large part, to an increase in legal and other outside-service costs, labor and employee-related expenses, partially offset by a decrease in the service cost component of GSWC's defined-benefit pension plan. Due to GSWC's two-way pension balancing accounts authorized by the CPUC, changes in total net periodic benefit costs related to the pension plan have no material impact to earnings. In addition, there was a reduction of approximately $447,000 to reflect the final decision in the water general rate case that authorized the one-time recovery of previously incurred administrative and general expenses that were being tracked in CPUC-authorized memorandum accounts.

Administrative and general expenses increased at the electric segment due, in part, to an increase in labor costs and a higher allocation of costs from the general corporate office because of the updated allocation ratio authorized in the final decision on the water general rate case. The increase in general corporate office expenses allocated to the electric segment also includes a corresponding and offsetting increase in adopted electric revenues, resulting in no impact on earnings.

Administrative and general expenses increased at the contracted services segment due to an increase in outside service, labor, and employee-related benefit costs.

Administrative and general expenses at AWR (parent) during the year ended December 31, 2023 reflect the reversal of a previous accrual for a matter that was favorably resolved.

Depreciation and Amortization

For the years ended December 31, 2023 and 2022, depreciation and amortization expense by segment consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 35,886	$ 34,805	$ 1,081	3.1 %
Electric Services	3,256	2,792	464	16.6 %
Contracted Services	3,261	3,718	(457)	-12.3 %
Total depreciation and amortization	$ 42,403	$ 41,315	$ 1,088	2.6 %

The water general rate case final decision approved an overall higher composite depreciation rates based on a revised depreciation study. The increase in composite depreciation rates increases the adopted water revenue requirement, with a corresponding increase in adopted depreciation expense, resulting in no impact to net earnings. The overall increase in depreciation and amortization expenses at the water segment included the retroactive impact for the full year of 2022 of $576,000. In addition, the increase to depreciation and amortization expense was also attributed to additions to utility plant and other fixed assets at both regulated utilities.

Maintenance

For the years ended December 31, 2023 and 2022, maintenance expense by segment consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 9,906	$ 9,559	$ 347	3.6 %
Electric Services	924	723	201	27.8 %
Contracted Services	3,388	3,110	278	8.9 %
Total maintenance	$ 14,218	$ 13,392	$ 826	6.2 %

Maintenance expense increased at each of the business segments due to higher planned and unplanned maintenance activities as compared to the same period in 2022.

Property and Other Taxes

For the years ended December 31, 2023 and 2022, property and other taxes by segment, consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 19,845	$ 19,080	$ 765	4.0 %
Electric Services	2,100	1,837	263	14.3 %
Contracted Services	2,101	1,977	124	6.3 %
Total property and other taxes	$ 24,046	$ 22,894	$ 1,152	5.0 %

Property and other taxes increased at the water segment primarily due to an increase in franchise fees resulting from higher water revenues, partially offset by favorable property tax adjustments resulting from changes in property tax assessments for certain counties. In addition, there was an increase in property taxes at the electric segment resulting from an increase in capital additions and higher assessed values, and an increase in gross receipts taxes at the contracted services segment from higher construction activity.

ASUS Construction

For the year ended December 31, 2023, construction expenses for contracted services were $57.9 million, increasing by $4.7 million compared to 2022 primarily due to an increase in construction activity as compared to 2022.

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Interest Expense

For the years ended December 31, 2023 and 2022, interest expense by segment, including AWR (parent), consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 31,283	$ 22,742	$ 8,541	37.6 %
Electric Services	3,298	1,225	2,073	169.2 %
Contracted Services	2,127	743	1,384	186.3 %
AWR (parent)	6,054	2,317	3,737	161.3 %
Total interest expense	$ 42,762	$ 27,027	$ 15,735	58.2 %

AWR's borrowings consist of bank notes under revolving credit facilities, while GSWC and BVES borrowings consist of revolving credit facilities and long-term debt issuances. Consolidated interest expense increased as compared to 2022 resulting from an overall increase in total borrowing levels to support, among other things, the capital expenditures programs at the regulated utilities, as well as overall increases in average interest rates both short- and long-term. On January 13, 2023, GSWC issued $130.0 million unsecured notes in a private placement consisting of $100.0 million in aggregate notes at a coupon rate of 5.12% due January 31, 2033, and $30.0 million in aggregate notes at a coupon rate of 5.22% due January 31, 2038. Also, in April 2022, BVES issued $35.0 million in unsecured notes in a private placement consisting of 10 and 15 year term notes bearing interest at 4.548% and 4.949%, respectively.

Interest Income

For the years ended December 31, 2023 and 2022, interest income by business segment, including AWR (parent), consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 5,557	$ 1,083	$ 4,474	*
Electric Services	1,060	394	666	169.0 %
Contracted Services	806	875	(69)	-7.9 %
AWR (parent)	(7)	(26)	19	-73.1 %
Total interest income	$ 7,416	$ 2,326	$ 5,090	218.8 %

* not meaningful

The overall increase in interest income was due primarily to higher interest income earned on regulatory assets at the regulated utilities bearing interest at the current 90-day commercial-paper rates, which have increased since 2022, as well as an overall increase in regulatory assets recorded as a result of the final decision in the water general rate case, partially offset by lower interest income recognized on certain construction projects at the contracted services segment as compared to 2022.

Other Income and (Expense), net

For the years ended December 31, 2023 and 2022, other income and (expense) by business segment, including AWR (parent), consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 4,946	$ (680)	$ 5,626	*
Electric Services	36	406	(370)	-91.1 %
Contracted Services	(125)	141	(266)	-188.7 %
AWR (parent)	269	258	11	4.3 %
Total interest income	$ 5,126	$ 125	$ 5,001	*

* not meaningful

For the year ended December 31, 2023, other income (net of other expense) increased mostly because of gains of $5.0 million recorded on investments held to fund one of the Company's retirement plans, as compared to losses of $5.2 million incurred in 2022, both due to financial market conditions. This was partially offset by an increase in the non-service cost components of net periodic benefit costs related to the Company's defined-benefit pension plan and other retirement benefits. However, as a result of GSWC's and BVES's two-way pension balancing accounts authorized by the CPUC, changes in total net periodic benefit costs related to the pension plan have no material impact to earnings.

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Income Tax Expense

For the years ended December 31, 2023 and 2022, income tax expense by segment, including AWR (parent), consisted of the following amounts (in thousands):

	Year Ended 12/31/2023	Year Ended 12/31/2022	$ CHANGE	% CHANGE
Water Services	$ 35,689	$ 16,346	$ 19,343	118.3 %
Electric Services	1,515	2,439	(924)	-37.9 %
Contracted Services	6,109	5,476	633	11.6 %
AWR (parent)	(1,714)	(597)	(1,117)	187.1 %
Total income tax expense	$ 41,599	$ 23,664	$ 17,935	75.8 %

Consolidated income tax expense for the year ended December 31, 2023 increased by $17.9 million primarily due to an increase in pretax income as compared to 2022. AWR's ETRs were 25.0% and 23.2% for the years ended December 31, 2023 and 2022, respectively. GSWC's ETR was 25.8% for the year ended December 31, 2023 as compared to 23.3% for 2022. The increase in GSWC's ETR was also primarily due to the effect of the increase in its pretax income. The increase in AWR (parent)'s tax benefit was primarily due to an increase in pretax loss resulting from higher interest expense, as well as changes in state unitary taxes.

Information comparing the consolidated results of operations for fiscal years 2022 and 2021 can be found under Item 7, Management's Discussion and Analysis under the headings *"Summary Results by Segment"* and *"Consolidated Results of Operations-Years Ended December 31, 2022 and 2021"* in AWR's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the SEC.

Critical Accounting Policies and Estimates

Critical accounting policies and estimates are those that are important to the portrayal of AWR's financial condition, results of operations and cash flows, and require the most difficult, subjective or complex judgments of AWR's management. The need to make estimates about the effect of items that are uncertain is what makes these judgments difficult, subjective and/or complex. Management makes subjective judgments about the accounting and regulatory treatment of many items. The following are accounting policies and estimates that are critical to the financial statements of AWR. For more information regarding the significant accounting policies of Registrant, see Note 1 of "*Notes to Financial Statements*" included in Part II, Item 8, in Financial Statements and Supplementary Data.

Accounting for Rate Regulation — Because GSWC and BVES operate extensively in regulated businesses, they are subject to the authoritative guidance for accounting for the effects of certain types of regulation. Application of this guidance requires accounting for certain transactions in accordance with regulations adopted by the regulatory commissions of the states in which rate-regulated operations are conducted. Utility companies defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that those costs and credits will be recognized in the ratemaking process in a period different from the period in which they would have been reflected in income by an unregulated company. These deferred regulatory assets and liabilities are then reflected in the income statement in the period in which the same amounts are reflected in the rates charged for service.

Regulation and the effects of regulatory accounting have the most significant impact on the financial statements of GSWC and BVES. When either files for adjustments to rates, the capital assets, operating costs and other matters are subject to review, and disallowances may occur. In the event that a portion of either GSWC's or BVES's operations are no longer subject to the accounting guidance for the effects of certain types of regulation, they are required to write-off related regulatory assets that are not specifically recoverable and determine if other assets might be impaired. If the CPUC determines that a portion of either GSWC's or BVES's assets are not recoverable in customer rates, management is required to determine if it has suffered an asset impairment that would require a write-down in the asset valuation. Management continually evaluates the anticipated recovery, settlement or refund of regulatory assets, liabilities, and revenues subject to refund and provides for allowances and/or reserves that it believes to be necessary. In the event that management's assessment as to the probability of the inclusion in the ratemaking process is incorrect, the associated regulatory asset or liability will be adjusted to reflect the change in assessment or the impact of regulatory approval of rates. Reviews by the CPUC may also result in additional regulatory liabilities to refund previously collected revenues to customers if the CPUC disallows costs included in the ratemaking process.

Registrant also reviews its utility plant in-service for possible impairment in accordance with accounting guidance for regulated entities for abandonments and disallowances of plant costs.

Revenue Recognition — GSWC and BVES record water and electric utility operating revenues when the service is provided to customers. Operating revenues include unbilled revenues that are earned (i.e., the service has been provided) but not billed by the end of each accounting period. Unbilled revenues are calculated based on the number of days and total usage from each customer's most recent billing record that was billed prior to the end of the accounting period and is used to estimate unbilled consumption as of the year-end reporting period. Unbilled revenues are recorded for both monthly and bi-monthly customers.

In 2008, the CPUC granted GSWC the authority to implement revenue decoupling mechanisms through the adoption of the WRAM. With the adoption of this alternative revenue program, GSWC adjusts revenues in the WRAM for the difference between what is billed to its water customers and that which is authorized by the CPUC. GSWC's request to continue using a revenue decoupling mechanism, similar to the WRAM, in its next general rate case is subject to CPUC approval. The CPUC also granted BVES a revenue decoupling mechanism through the BRRAM. BVES adjusts revenues in the BRRAM for the difference between what is billed to its electric customers and that which is authorized by the CPUC.

As required by the accounting guidance for alternative revenue programs, GSWC and BVES are required to collect their WRAM and BRRAM balances, respectively, within 24 months following the year in which they are recorded. The CPUC has set the recovery period for under-collected balances that are up to 15% of adopted annual revenues at 18 months or less. For net WRAM under-collected balances greater than 15%, the recovery period is 19 to 36 months. As a result of the accounting guidance and CPUC-adopted recovery periods, Registrant must estimate if any WRAM and BRRAM revenues will be collected beyond the 24-month period. This can affect the timing of when such revenues are recognized.

ASUS's firm-fixed-price contracts with the U.S. government are considered service concession arrangements under ASC 853 *Service Concession Arrangements*. Accordingly, the services under these contracts are accounted for under Topic 606 *Revenue from Contracts with Customers* and the water and/or wastewater systems are not recorded as Property, Plant and Equipment on AWR's consolidated balance sheet. Revenues for ASUS's operations and maintenance contracts are recognized when services have been rendered to the U.S. government pursuant to the initial 50-year contract and additional contracts thereafter. Revenues from construction activities are recognized as performance obligations are satisfied. Performance obligations related to firm-fixed-price contracts are satisfied over time as the ASUS's performance typically creates or enhances

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an asset that the U.S. government controls. ASUS recognizes revenue on its firm-fixed-price contracts as performance obligations are satisfied and control of the promised good and/or service is transferred to the U.S. government by measuring the progress toward complete satisfaction of the performance obligation(s) using an input method. Revenues for construction activities are recognized over time, with progress toward completion measured based on the input method using costs incurred relative to the total estimated costs (cost-to-cost method). Due to the nature of these construction projects, ASUS has determined the cost-to-cost input measurement to be the best method to measure progress towards satisfying its construction contract performance obligations, as compared to using an output measurement such as units produced. Changes in job performance, job conditions, change orders and estimated profitability, including those arising from any contract penalty provisions, and final contract settlements may result in revisions to costs and income, and are recognized in the period in which the revisions are determined. Unbilled receivables from the U.S. government represent amounts to be billed for construction work completed and/or for services rendered pursuant to the initial 50-year contract and additional contracts with the U.S government, which are not presently billable but which will be billed under the terms of the contracts.

Income Taxes — Registrant's income tax calculations require estimates due principally to the regulated nature of the operations of GSWC and BVES, the multiple states in which Registrant operates, and potential future tax rate changes. Registrant uses the asset and liability method of accounting for income taxes under which deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which these temporary differences are expected to be recovered or settled. Changes in regulatory treatment, or significant changes in tax-related estimates, assumptions or law, could have a material impact on the financial position and results of operations of Registrant.

As regulated utilities, GSWC and BVES treat certain temporary differences as flowed-through adjustments in computing their income tax expense consistent with the income tax approach approved by the CPUC for ratemaking purposes. Flowed-through adjustments increase or decrease tax expense in one period, with an offsetting decrease or increase occurring in another period. Giving effect to these temporary differences as flowed-through adjustments typically results in a greater variance between the effective tax rate and the statutory federal income tax rate in any given period than would otherwise exist if GSWC or BVES were not required to account for their income taxes as regulated enterprises. As of December 31, 2023, Registrant's total amount of unrecognized tax benefits was zero.

Pension Benefits — Registrant's pension benefit obligations and related costs are calculated using actuarial concepts within the framework of accounting guidance for employers' accounting for pensions and post-retirement benefits other than pensions. Two critical assumptions, the discount rate and the expected return on plan assets, are important elements of expense and/or liability measurement. We evaluate these critical assumptions annually. Other assumptions include employee demographic factors such as retirement patterns, mortality, turnover and rate of compensation increase. The discount rate enables Registrant to state expected future cash payments for benefits as a present value on the measurement date. The guideline for setting this rate is a high-quality, long-term corporate bond rate. Registrant's discount rates were determined by considering the average of pension yield curves constructed using a large population of high-quality corporate bonds. The resulting discount rates reflect the matching of plan liability cash flows to the yield curves. A lower discount rate increases the present value of benefit obligations and increases periodic pension expense. Conversely, a higher discount rate decreases the present value of benefit obligations and decreases periodic pension expense. To determine the expected long-term rate of return on the plan assets, Registrant considers the current and expected asset allocation, as well as historical and expected returns on each plan asset class. A lower expected rate of return on plan assets will increase pension expense. The long-term expected return on the pension plan's assets was 5.75% for 2023 and 2022.

For the pension plan obligation, Registrant decreased the discount rate to 5.16% as of December 31, 2023 from 5.41% as of December 31, 2022 to reflect market interest-rate conditions at December 31, 2023. A hypothetical 25-basis point decrease in the assumed discount rate would have decreased total net periodic pension expense for 2023 by approximately $46,000, which includes an increase in service cost that was more than offset by the decrease in interest cost, and would have increased the projected benefit obligation and accumulated benefit obligation at December 31, 2023 by a total of $6.1 million. A 25-basis point decrease in the long-term return on pension-plan-asset assumption would have increased 2023 pension cost by approximately $456,000.

In addition, changes in the fair value of plan assets will impact future pension cost and the Plan's funded status. Changes in market conditions can affect the value of plan assets held to fund future long-term pension benefits. Any reductions in the value of plan assets will result in increased future expense, an increase in the underfunded position, and increase the required future contributions.

The CPUC has authorized GSWC and BVES to each maintain a two-way balancing account to track differences between their forecasted annual pension expenses adopted in rates and the actual annual expense to be recorded in accordance with the accounting guidance for pension costs. As of December 31, 2023, GSWC has a $1.1 million over-collection in its two-

way pension balancing account for the general office and water regions. As of December 31, 2023, BVES has a $277,000 over-collection in its two-way pension balancing account.

Funding requirements for qualified defined benefit pension plans are determined by government regulations. In establishing the contribution amount, Registrant has considered the potential impact of funding-rule changes under the Pension Protection Act of 2006. Registrant contributes the minimum required contribution as determined by government regulations or the forecasted annual pension cost authorized by the CPUC and included in customer rates, whichever is higher. In accordance with this funding policy, for 2024, the pension contribution is expected to be approximately $3.3 million. Any differences between the forecasted annual pension costs in rates and the actual pension costs are included in the two-way pension balancing accounts. Additionally, market factors can affect assumptions we use in determining funding requirements with respect to our pension plan. For example, a relatively modest change in our assumptions regarding discount rates can materially affect our calculation of funding requirements. To the extent that market data compels us to reduce the discount rate used in our assumptions, our benefit obligations could materially increase.

Changes in demographics, including increased numbers of retirees or increases in life expectancy assumptions may also increase the funding requirements of our obligations related to the pension plan. Mortality assumptions are a critical component of benefit obligation amounts and a key factor in determining the expected length of time for annuity payments. Assuming no changes in actuarial assumptions or plan amendments, the costs over the long term are expected to decrease due to the closure of Registrant's defined benefit pension plan to new employees as of January 1, 2011. Employees hired or rehired after December 31, 2010 are eligible to participate in a defined contribution plan instead of the pension plan.

Liquidity and Capital Resources

AWR

AWR's regulated business is capital intensive and requires considerable capital resources. A portion of these capital resources is provided by internally generated cash flows from operations. AWR anticipates that interest expense will increase in future periods due to the need for additional external capital to fund construction programs at its regulated utilities and if market interest rates increase. In addition, as the capital investment program continues to increase, AWR and its subsidiaries anticipate they will need to access external financing more often.

AWR funds its operating expenses and pays dividends on its outstanding Common Shares primarily through dividends from its wholly owned subsidiaries. The ability of GSWC and BVES to pay dividends to AWR is restricted by California law. Under these restrictions, approximately $703.8 million was available for GSWC to pay dividends to AWR on December 31, 2023. Approximately $72.3 million was available for BVES to pay dividends to AWR as of December 31, 2023. ASUS's ability to pay dividends to AWR is dependent upon state laws in which each ASUS Subsidiary operates, as well as ASUS's ability to pay dividends under California law.

When necessary, AWR obtains funds from external sources through the capital markets and from bank borrowings. Access to external financing on reasonable terms depends on the credit ratings of AWR and GSWC and current business conditions, including that of the water utility industry in general as well as conditions in the debt or equity capital markets.

On June 28, 2023, AWR and GSWC each executed new credit agreements with terms of five years provided by a syndicate of banks and financial institutions for total combined unsecured revolving credit facilities of $350.0 million. These syndicated credit facilities replaced AWR's previous credit agreement with a sole bank. AWR previously borrowed under a revolving credit facility with a borrowing capacity of $280.0 million and provided funds to both GSWC and ASUS in support of their operations through intercompany borrowing agreements on terms that are similar to that of the credit facility. AWR's new credit agreement was for a $150.0 million unsecured revolving credit facility to support AWR (parent) and its contracted services subsidiary, while GSWC's credit agreement is a $200.0 million unsecured revolving credit facility to support its water operations and capital expenditures. AWR (parent) may also from time to time borrow under its credit facility in order to make equity contributions to GSWC and BVES. Both credit facilities may be expanded up to an additional $75.0 million, subject to the lenders' approval. On November 6, 2023, AWR's credit facility was amended to increase the borrowing capacity from $150.0 million to $165.0 million to provide additional support to AWR (parent) and its contracted services subsidiary. In connection with the increase in borrowing capacity, the amendment also provides for the addition of a new bank to the existing syndicate group participating in AWR's credit facility. AWR's and GSWC's outstanding borrowings under the new credit facilities were $141.5 million and $150.0 million, respectively, as of December 31, 2023.

BVES has a separate revolving credit facility without a parent guaranty, which was amended on June 16, 2023, to increase BVES's borrowing capacity from $35.0 million to $50.0 million. The amendment to BVES's credit agreement also included (i) the extension of the term of the credit facility to July 1, 2026, (ii) conversion of the interest rate on new borrowings to the benchmark rate Secured Overnight Financing Rate ("SOFR"), and (iii) an option to increase the facility by an additional $25.0 million, subject to lender approval. On February 15, 2024, BVES increased the borrowing capacity from $50.0 million to $65.0 million. The CPUC requires BVES to completely pay off all borrowings under its revolving credit facility within a 24-month period. BVES's pay-off period for its credit facility ends in August 2024. Accordingly, the $42.0 million outstanding under BVES's credit facility has been classified as a current liability in AWR's Consolidated Balance Sheet as of December 31, 2023.

Our primary sources of liquidity to fund operations continue to be from the recovery of costs charged to customers at our regulated utilities and the collection of payments from the U.S government. We believe that capital investment costs associated with our capital programs at our regulated utilities will continue to be recovered through water and electric rates charged to customers, as well as funds from credit facilities from our regulated utilities. In addition, AWR's credit facility will continue to be used to support ASUS's operations and AWR (parent). The long-term capital-intensive nature of our regulated utilities have required us to continually seek future financing opportunities beyond the short-term. Future long-term financing at GSWC and BVES will consist of both long-term debt and equity issuances in order to manage to the CPUC-authorized capital structure. Under the current financing applications authorized by the CPUC, GSWC and BVES have $105.0 million and $40.0 million, respectively, remaining available that provides for long-term financing and which are expected to be used over the next 6-18 months to pay down portions of the outstanding borrowings under the respective credit facilities. On January 22, 2024, GSWC filed a new financing application with the CPUC, pending approval, that requests the authorization for the issuance and sale of additional long-term debt and equity securities of up to $750.0 million. On June 13, 2023, BVES filed a new financing application with the CPUC that is also pending approval, and that requests the authorization for the issuance and sale of additional long-term debt and equity securities of up to $120.0 million. The CPUC issued a ruling on January 8, 2024 in BVES's pending financing application stating that a proposed decision is expected to be received no later than 90 days from the date of the ruling. In addition, AWR intends to seek $150.0 million to $200.0 million of additional capital over the next three years through equity offerings, which may include an at-the-market program. AWR could use the net proceeds from equity offerings for, but not limited to, equity contributions to its wholly owned subsidiaries.

Management believes that AWR's and GSWC's sound capital structures and strong credit ratings, combined with its financial discipline, will enable AWR to access the debt and equity markets. However, unpredictable financial market conditions in the future may limit its access or impact the timing of when to access the market, in which case AWR may choose to temporarily reduce its capital spending.

AWR's ability to pay cash dividends on its Common Shares outstanding depends primarily upon cash flows from its subsidiaries. AWR intends to continue paying quarterly cash dividends on or about March 1, June 1, September 1 and December 1, subject to earnings and financial conditions, regulatory requirements and such other factors as the Board of Directors may deem relevant. On February 6, 2024, AWR's Board of Directors approved a first quarter dividend of $0.43 per share on AWR's Common Shares. Dividends on the Common Shares will be paid on March 1, 2024 to shareholders of record at the close of business on February 20, 2024. AWR has paid common dividends every year since 1931, and has increased the dividends received by shareholders each calendar year for 69 consecutive years, which places it in an exclusive group of companies on the New York Stock Exchange that have achieved that result. AWR's quarterly dividend rate has grown at a compound annual growth rate of 9.4% over the last five years. AWR's current policy is to achieve a compound annual growth rate in the dividend of more than 7% over the long-term.

Cash Flows from Operating Activities:

Cash flows from operating activities have generally provided sufficient cash to fund operating requirements, including a portion of construction expenditures at GSWC and BVES, and construction expenses at ASUS, and to pay dividends. AWR's future cash flows from operating activities are expected to be affected by a number of factors, including utility regulation; changes in tax law; maintenance expenses; inflation; compliance with environmental, health and safety standards; production costs; customer growth; per-customer usage of water and electricity; weather and seasonality; conservation efforts; compliance with local governmental requirements, including mandatory restrictions on water use; the lingering effects of the COVID-19 pandemic on its customers' ability to pay utility bills; and required cash contributions to pension and post-retirement plans. Future cash flows from contracted services subsidiaries will depend on new business activities, existing operations, the construction of new and/or replacement infrastructure at military bases, timely economic price and equitable adjustment of prices, and timely collection of payments from the U.S. government and other prime contractors operating at the military bases, and any adjustments arising out of an audit or investigation by federal governmental agencies.

ASUS funds its operating expenses primarily through internal operating sources, which include U.S. government funding under long-term contracts with the U.S. government for operations and maintenance costs and construction activities, as well as investments by, or loans from, AWR. ASUS, in turn, provides funding to its subsidiaries. ASUS's subsidiaries may also from time to time provide funding to ASUS or other subsidiaries of ASUS.

Cash flows from operating activities are primarily generated by net income, adjusted for non-cash expenses such as depreciation and amortization, and deferred income taxes. Cash generated by operations varies during the year. Net cash provided by operating activities of AWR was $67.7 million for 2023 as compared to $117.8 million for the same period in 2022. During 2022, GSWC and BVES received $9.5 million and $473,000, respectively, in COVID-19 relief funds from the state of California to provide assistance to customers for delinquent water and electric customer bills incurred during the pandemic. There were no similar relief funds received during 2023.

The decrease in operating cash flow was also due to a 7.8% decrease in billed water consumption, as well as the delay in receiving the water general rate case final decision as billed water revenues in 2022 and 2023 through July 30, 2023 were based on 2021 adopted rates pending a final CPUC decision, while operating expenses continued to rise primarily due to inflation. A final decision from the CPUC was received on June 29, 2023 on the water general rate case with 2022 and 2023 rates retroactive to January 1, 2022 and 2023, respectively. GSWC filed for the implementation of the CPUC-approved rate increases that went into effect on July 31, 2023. In addition, GSWC filed for the recovery of retroactive rate amounts accumulated through July 30, 2023 related to the CPUC approved rate increases for 2022 and 2023, and surcharges were implemented in October 2023 to recover the cumulative retroactive rate differences over 36-months.

Furthermore, the decrease in operating cash flows was due to differences in the timing of vendor payments and the timing of billing of and cash receipts for construction work at military bases. The billings (and cash receipts) for this construction work generally occur at completion of the work or in accordance with a billing schedule contractually agreed to with the U.S. government and/or other prime contractors. Thus, cash flow from construction-related activities may fluctuate from period to period with such fluctuations representing timing differences of when the work is being performed and when the cash is received for payment of the work.

The timing of cash receipts and disbursements related to other working capital items also affected the change in net cash provided by operating activities.

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Cash Flows from Investing Activities:

Net cash used in investing activities was $188.8 million for the year ended December 31, 2023 as compared to $167.1 million for the same period in 2022, which is mostly related to capital expenditures at the regulated utilities. AWR invests capital to provide essential services to its regulated customer base, while working with the CPUC to have the opportunity to earn a fair rate of return on investment. AWR's infrastructure investment plan consists of both infrastructure renewal programs (to replace infrastructure, including those to mitigate wildfire risk) and major capital investment projects (to construct new water treatment, supply and delivery facilities). The regulated utilities may also be required from time to time to relocate existing infrastructure in order to accommodate local infrastructure improvement projects. Projected capital expenditures and other investments are subject to periodic review and revision.

During 2024, the water and electric segments' company-funded capital expenditures are estimated to be approximately $160 – $200 million, barring any delays resulting from changes in capital improvement schedules due to unfavorable weather conditions and supply chain issues.

Cash Flows from Financing Activities:

AWR's financing activities include primarily: (i) the issuance and repayment of long-term debt and notes payable to banks, (ii) the proceeds from unsecured new or existing revolving credit facilities for AWR, GSWC and BVES, and (iii) the payment of dividends on Common Shares. In order to finance new infrastructure, GSWC also receives customer advances (net of refunds) for, and contributions in aid of, construction. Borrowings on AWR's new credit facility is used to support AWR (parent) and its contracted services subsidiary and borrowings on GSWC's and BVES's credit facilities are used to fund GSWC and BVES capital expenditures, respectively, until long-term financing is arranged. AWR (parent) may also from time to time make equity contributions to GSWC and BVES. Overall debt levels are expected to increase to fund a portion of the costs of the capital expenditures that will be made by the regulated utilities.

Net cash provided by financing activities was $129.2 million for the year ended December 31, 2023 as compared to cash provided of $50.3 million for 2022. The increase in cash provided by financing activities in 2023 was due primarily to an increase in total borrowing levels necessary to support operations affected by a decrease in cash flows from operating activities and to support, among other things, the capital expenditures program at the regulated utilities. In January 2023, GSWC issued $130.0 million of unsecured notes in a private placement and used the proceeds to pay down the majority of its outstanding intercompany borrowings from AWR, which in turn used the proceeds to pay down outstanding borrowings under the AWR credit facility at that time.

On June 28, 2023, AWR and GSWC each executed new unsecured syndicated credit facilities to replace AWR's previous credit agreement with a sole bank. During the year ended December 31, 2023, AWR had a net increase in borrowings on its credit facilities of $54.6 million to support operations and capital expenditures. During 2022, AWR had a net increase in borrowings on its credit facilities of $72.0 million.

GSWC

GSWC funds its operating expenses, payments on its debt, dividends to AWR on its outstanding common shares, and a portion of its construction expenditures through internal sources. Internal sources of cash flow are provided primarily by retention of a portion of earnings from operating activities. Internal cash generation is influenced by factors such as weather patterns, conservation efforts, environmental regulation, litigation, changes in tax law and deferred taxes, changes in supply costs and regulatory decisions affecting GSWC's ability to recover these supply costs, timing of rate relief, increases in maintenance expenses and capital expenditures, surcharges authorized by the CPUC to enable GSWC to recover expenses previously incurred from customers, and CPUC requirements to refund amounts previously charged to customers. Internal cash flows have also been impacted by delays in receiving payments from GSWC customers due to the lingering effects of the COVID-19 pandemic.

GSWC may, at times, utilize external sources for long-term financing, as well as obtain funds from equity investments from its parent, AWR, to help fund a portion of its operations and construction expenditures. On June 28, 2023, GSWC executed its own separate credit agreement that provides for a $200.0 million unsecured revolving credit facility to support GSWC's operations and capital expenditures. GSWC's borrowing capacity under this credit agreement may be expanded up to an additional $75.0 million, subject to the lenders' approval. Previously, AWR borrowed under a revolving credit facility and provided funds to GSWC in support of its operations under intercompany borrowing arrangements.

In January 2023, GSWC issued (i) one common share to AWR for $10.0 million, and (ii) $130.0 million in unsecured long-term notes in a private placement. GSWC used the proceeds from both the issuance of equity and long-term debt to pay-off all intercompany borrowings from AWR. On June 28, 2023, GSWC borrowed for the first time under its new syndicated credit facility and used the proceeds to again pay-off its short-term intercompany borrowings due to AWR. The CPUC requires GSWC to pay-off all intercompany borrowings it has from AWR within a 24-month period. GSWC's borrowings under its new

credit facility will also be required to be paid-off in full within a 24-month period. GSWC's next pay-off period ends in June 2025. Under the current financing application authorized by the CPUC, GSWC has $105.0 million remaining available that provides for long-term financing and which are expected to be used over the next 6-18 months to pay down portions of the outstanding borrowings under GSWC's credit facility. On January 22, 2024, GSWC filed a new financing application with the CPUC, pending approval, that requests the authorization for the issuance and sale of additional long-term debt and equity securities of up to $750.0 million.

In addition, GSWC receives advances and contributions from customers, home builders and real estate developers to fund construction necessary to extend service to new areas. Advances for construction are generally refundable at a rate of 2.5% in equal annual installments over 40 years. Utility plant funded by advances and contributions is excluded from rate base. GSWC amortizes contributions in aid of construction at the same composite rate of depreciation for the related property.

Cash Flows from Operating Activities:

Net cash provided by operating activities was $54.3 million for the year ended December 31, 2023 as compared to $94.5 million for 2022. During the first quarter of 2022, GSWC received $9.5 million in COVID-19 relief funds from the state of California to provide assistance to customers for delinquent water customer bills incurred during the pandemic. There were no similar relief funds received during 2023. The decrease in operating cash flow was also due to a 7.8% decrease in billed water consumption, as well as the delay in receiving the water general rate case final decision as billed water revenues in 2022 and 2023 through July 30, 2023 were based on 2021 adopted rates pending a final CPUC decision, while operating expenses continued to rise primarily due to inflation. A final decision from the CPUC was received on June 29, 2023 on the water general rate case with 2022 and 2023 rates retroactive to January 1, 2022 and 2023, respectively. GSWC filed for the implementation of new 2023 rate increases that went into effect on July 31, 2023. In addition, GSWC filed for the recovery of retroactive rate amounts accumulated through July 30, 2023 related to the new 2022 and 2023 rates, and surcharges were implemented in October 2023 to recover the cumulative retroactive rate differences over 36-months. The decrease in operating cash flow was also due to the timing of vendor payments. The timing of cash receipts and disbursements related to other working capital items also affected the change in net cash provided by operating activities.

Cash Flows from Investing Activities:

Net cash used in investing activities was $162.2 million for the year ended December 31, 2023 as compared to $147.7 million for 2022, which is mostly related to spending under GSWC's infrastructure investment plans that are consistent with capital budgets authorized in its general rate cases.

Cash Flows from Financing Activities:

Net cash provided by financing activities was $110.6 million for the year ended December 31, 2023 as compared to $53.1 million for 2022. The increase in net cash provided by financing activities in 2023 was due primarily to an increase in total borrowing levels necessary to support water operations affected by a decrease in cash flows from operating activities and to support, among other things, the capital expenditures program at GSWC.

In January 2023, GSWC issued $130.0 million of unsecured notes in a private placement and $10.0 million of equity to AWR. GSWC used the proceeds from both issuances to pay-off all of its outstanding intercompany borrowings from AWR at that time. On June 28, 2023, GSWC entered into an unsecured revolving credit facility. GSWC used the proceeds from the borrowings under the new credit facility to again pay-off all of its intercompany borrowings owed to AWR. The CPUC requires GSWC to fully pay-off all intercompany borrowings from AWR within a 24-month period. GSWC's borrowings under its new credit facility will also be required to be paid-off in full within a 24-month period.

Contractual Obligations and Commitments

Registrant has various contractual obligations, which are recorded as liabilities in the consolidated financial statements. Other items, such as certain purchase commitments, are not recognized as liabilities in the consolidated financial statements but are required to be disclosed. In addition to contractual maturities, Registrant has certain debt instruments that contain annual sinking funds or other principal payments. Registrant believes that it will be able to refinance debt instruments at their maturity through public issuance or private placement of debt or equity. Annual payments to service debt are generally made from cash flows from operations.

The following table reflects Registrant's contractual obligations and commitments to make future payments pursuant to contracts as of December 31, 2023. The table reflects only financial obligations and commitments. Therefore, performance obligations associated with our initial 50-year, firm-fixed-price contract and additional firm-fixed-price contracts with the U.S. government at our contracted services segment are not included in the amounts below. Registrant believes that it will be able to refinance debt instruments at their maturity through public issuance or private placement of debt or equity. Annual payments to service debt are generally made from cash flows from operations.

	Payments/Commitments Due (1)	
($ in thousands)	**Total**	**Less than 1 Year**
Notes/Debentures (2)	$ 187,000	$ —
Private Placement Notes (3)	380,000	—
Tax-Exempt Obligations (4)	9,459	121
Other Debt Instruments (5)	2,588	232
Total AWR Long-Term Debt	$ 579,047	$ 353
Credit Facilities (6)	$ 333,500	$ 42,000
Interest on Long-Term Debt (7)	275,444	28,587
Advances for Construction (8)	71,109	3,678
Renewable Energy Credit Agreement (9)	8,948	131
Purchased Power Contracts (10)	45,801	4,685
Capital Expenditures (11)	105,165	102,865
Water Purchase Agreements (12)	2,732	491
Operating Leases (13)	9,290	2,161
Employer Contributions (14)	3,300	3,300
SUB-TOTAL	855,289	187,898
Other Commitments (15)	11,399	—
TOTAL	$ 1,445,735	$ 188,251

(1) Excludes dividends and facility fees.

(2) The notes and debentures have been issued by GSWC under an Indenture dated September 1, 1993, as amended in December 2008. The notes and debentures do not contain any financial covenants that Registrant believes to be material or any cross-default provisions.

(3) Consists of GSWC senior private placement notes of $345.0 million and BVES unsecured private placement notes of $35.0 million, issued in April 2022, totaling $380.0 million issued to various banks, including $160.0 million of unsecured private placement notes issued in July 2020 by GSWC and $130.0 million of unsecured private placement notes in January 2023 by GSWC. Under the terms of each of the senior notes, GSWC may not incur any additional debt or pay any distributions to its shareholders if, after giving effect thereto, it would have a debt to capitalization ratio in excess of 0.6667-to-1 or a debt to earnings before interest, taxes, depreciation and amortization ratio of more than 8-to-1. GSWC is in compliance with all of its covenant provisions as of December 31, 2023. GSWC does not currently have any outstanding mortgages or other liens on indebtedness on its properties.

(4) Consists of obligations at GSWC related to (i) a loan agreement supporting $7.7 million in outstanding debt issued by the California Pollution Control Financing Authority, and (ii) $1.7 million of obligations with respect to GSWC's 500 acre-foot entitlement to water from the State Water Project ("SWP"). These obligations do not contain any financial covenants believed to be material to Registrant or any cross-default provisions. In regard to its SWP entitlement, GSWC has entered into agreements with various developers for a portion of its 500 acre-foot entitlement to water from the SWP.

(5) Consists of the outstanding debt portion of funds received under the American Recovery and Reinvestment Act for reimbursements of capital costs related to the installation of meters for conversion of non-metered service to metered service in GSWC's Arden-Cordova District.

(6) Credit facilities consists of (i) a $165.0 million revolving credit facility under AWR, of which $141.5 million was outstanding as of December 31, 2023; (ii) a $200.0 million revolving credit facility under GSWC, of which $150.0 million was outstanding as of December 31, 2023; and (iii) a $50.0 million revolving credit facility under BVES, of which $42.0 million was outstanding as of December 31, 2023.

(7) Consists of expected interest expense payments based on the assumption that GSWC's long-term debt remains outstanding until maturity.

(8) Advances for construction represent contract refunds mostly from GSWC to developers for the cost of water systems paid for by the developers. The advances are generally refundable in equal annual installments over 40-year periods.

(9) Consists of an agreement by BVES to purchase renewable energy credits through 2035. These renewable energy credits are used to meet California's renewables portfolio standard.

(10) Consists of BVES fixed-cost purchased power contracts executed (i) in September 2019 with Morgan Stanley Capital Group Inc., and (ii) in July 2023 with Shell Energy North America (US), L.P.

(11) Consists primarily of capital expenditures estimated to be required under signed contracts at GSWC and BVES as of December 31, 2023.

(12) Water purchase agreements consist of (i) a remaining amount of $1.3 million under an agreement expiring in 2028 to use water rights from a third party, and (ii) an aggregate amount of $1.4 million of other water purchase commitments with other third parties, which expire between 2025 through 2038.

(13) Reflects future minimum payments under noncancelable operating leases for both GSWC and ASUS.

(14) Consists of expected contributions to Registrant's defined benefit pension plan for the year 2024. Contributions to the pension plan are expected to be the higher of the minimum required contributions under the Employee Retirement Income Security Act ("ERISA") or the amounts that are recovered in customer rates and approved by the CPUC. These amounts are estimates and are subject to change based on, among other things, the limits established for federal tax deductibility (pension plan) and the significant impact that returns on plan assets and changes in discount rates have on such amounts.

(15) Other commitments consist primarily of (i) $10.5 million in asset retirement obligations of GSWC that reflect the retirement of wells by GSWC, which by law need to be properly capped at the time of removal; (ii) irrevocable letters of credit in the amount of $874,600 for the deductible in Registrant's business automobile insurance policies; and (iii) a $15,000 irrevocable letter of credit issued on behalf of GSWC pursuant to a franchise agreement with the City of Rancho Cordova. All of the letters of credit are issued pursuant to AWR's revolving credit facility.

Information comparing the liquidity and capital resources for fiscal years 2022 and 2021 can be found under Item 7, Management's Discussion and Analysis under the heading "*Liquidity and Capital Resources*" in AWR's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the SEC.

BVES Power-Supply Arrangements

BVES purchases power pursuant to purchase power contracts approved by the CPUC. Prior to 2023, BVES had entered into purchase power contracts with three- and five-year terms depending on the amount of power and the period during which the power is purchased under the contracts. These remaining contracts will expire in 2024. In July 2023, the CPUC approved a new power purchase agreement between BVES and a third party to procure renewable portfolio standard eligible energy and renewable energy credits as a bundled product. BVES will begin taking power under this long-term contract during the fourth quarter of 2024 to replace the existing expiring contracts. The new contract provides for the purchase of electricity during a delivery period from November 1, 2024 through December 31, 2035. In addition to the purchased power contracts, BVES buys additional energy to meet peak demand as needed and sells surplus power when necessary. BVES is pursuing short- and long-term renewable energy contracts to replace any power purchase agreements that have expired in addition to satisfying its requirements related to its resource portfolio for the next compliance period (2021-2024) and beyond. The average price per MWh, including fixed costs, decreased to $79.80 per MWh in 2023 from $97.89 per MWh in 2022. BVES has an electric-supply-cost balancing account, as approved by the CPUC, to alleviate any impacts to earnings.

Construction Program

GSWC maintains an ongoing water distribution main replacement program throughout its customer service areas based on the age and type of distribution-system materials, priority of leaks detected, remaining productive life of the distribution system and an

underlying replacement schedule. In addition, GSWC and BVES upgrade their facilities in

accordance with industry standards, local and CPUC requirements and new legislation. California requires investor-owned electric utilities to submit an annual wildfire mitigation plan to the CPUC for approval, and requires all electric utilities to prepare plans on constructing, maintaining, and operating their electrical lines and equipment to minimize the risk of catastrophic wildfires.

As of December 31, 2023, GSWC and BVES have unconditional purchase obligations for capital projects of approximately $105.2 million. During the years ended December 31, 2023, 2022 and 2021, GSWC and BVES had capital expenditures of $182.7 million, $174.3 million and $150.6 million, respectively. A portion of these capital expenditures was funded by developers through contributions in aid of construction, which are not required to be repaid, and refundable advances. During the years ended December 31, 2023, 2022 and 2021, capital expenditures funded by developers were $7.0 million, $6.9 million and $8.0 million, respectively. During 2024, the water and electric segments' company-funded capital expenditures are estimated to be approximately $160 – $200 million, barring any delays resulting from changes in capital improvement schedules due to unfavorable weather conditions and supply chain issues. These amounts include approximately $16.7 million estimated to be spent by BVES on wildfire mitigation projects.

Contracted Services

Under the terms of the contracts with the U.S. government, each contract's price is subject to an economic price adjustment ("EPA") on an annual basis. In the event that ASUS (i) is managing more assets at specific military bases than were included in the U.S. government's request for proposal, (ii) is managing assets that are in substandard condition as compared to what was disclosed in the request for proposal, (iii) prudently incurs costs not contemplated under the terms of the contract, and/or (iv) becomes subject to new regulatory requirements, such as more stringent water-quality standards, ASUS is permitted to file, and has filed, requests for equitable adjustment ("REAs"). The timely filing for and receipt of EPAs and/or REAs continues to be critical in order for ASUS's subsidiaries to recover increasing costs of operating, maintaining, renewing and replacing the water and/or wastewater systems at the military bases it serves.

During sequestration or automatic spending cuts, the subsidiaries of ASUS did not experience any earnings impact to their existing operations and maintenance and renewal and replacement services, as utility privatization contracts are an "excepted service." With the expiration of sequestration, similar issues including further sequestration pursuant to the Balanced Budget and Emergency Deficit Control Act may arise as part of the fiscal uncertainty and/or future debt-ceiling limits imposed by Congress. Any future impact on ASUS and its operations through its subsidiaries will likely be limited to (a) the timing of funding to pay for services rendered, (b) delays in the processing of EPAs and/or REAs, (c) the timing of the issuance of contract modifications for new construction work not already funded by the U.S. Government, and/or (d) delays in solicitation for and/or awarding of new contracts under the Department of Defense contracting programs.

At times, the DCAA and/or the DCMA may, at the request of a contracting officer, perform audits/reviews of contractors for compliance with certain government guidance and regulations, such as the Federal Acquisition Regulations and Defense Federal Acquisition Regulation Supplements. Certain audit/review findings, such as system deficiencies for government-contract-business-system requirements, may result in delays in the resolution of filings submitted to and/or the ability to file new proposals with the U.S. government.

Below is a summary of current and projected EPA filings for price adjustments to operations and maintenance fees and renewal and replacement fees for ASUS's subsidiaries in fiscal 2024.

Military Base	EPA period	Filing Date
Fort Bliss (FBWS)	October 2023 - September 2024	Third Quarter 2023
Fort Gregg-Adams (ODUS)	February 2024 - January 2025	Fourth Quarter 2023
Joint Base Langley Eustis and Joint Expeditionary Base Little Creek Fort Story (ODUS)	April 2024 - March 2025	First Quarter of 2024
Joint Base Andrews (TUS)	February 2024 - January 2025	Fourth Quarter 2023
Fort Jackson (PSUS)	February 2024 - January 2025	Fourth Quarter 2023
Fort Liberty (ONUS)	March 2024 - February 2025	First Quarter 2024
Eglin Air Force Base (ECUS)	June 2024 - May 2025	Second Quarter 2024
Fort Riley (FRUS)	July 2024 - June 2025	Second Quarter 2024

Regulatory Matters

A discussion on various regulatory matters is included in the section titled *"Overview"* in this Form 10-K's *"Management's Discussion and Analysis of Financial Condition and Results of Operations."* The discussion below focuses on other regulatory matters and developments.

Certificates of Public Convenience and Necessity

GSWC and BVES hold Certificates of Public Convenience and Necessity ("CPCN") granted by the CPUC in each of the ratemaking areas they serve. ASUS subsidiaries are regulated, if applicable, by the state in which it primarily conducts water and/or wastewater operations. FBWS holds a CPCN from the Public Utilities Commission of Texas. The Virginia State Corporation Commission exercises jurisdiction over ODUS as a public service company. The Maryland Public Service Commission approved the right of TUS to operate as a water and wastewater utility at Joint Base Andrews, Maryland, based on certain conditions and is expected to approve the right of PRUS to operate as a water and wastewater utility at Naval Air Station Patuxent River, Maryland when operations begin. The South Carolina Public Service Commission exercises jurisdiction over PSUS as a public service company. ONUS is regulated by the North Carolina Public Service Commission. ECUS, FRUS and BSUS are not subject to regulation by their respective states' utility commissions.

GSWC and BVES are subject to regulation by the CPUC which has broad authority over service and facilities, rates, classification of accounts, valuation of properties, the purchase, disposition and mortgaging of properties necessary or useful in rendering public utility service, the issuance of securities, the granting of certificates of public convenience and necessity as to the extension of services and facilities and various other matters.

Rates that GSWC and BVES are authorized to charge are determined by the CPUC in general rate cases and are derived using rate base, cost of service and cost of capital, as projected for a future test year. Rates charged to customers vary according to customer class and rate jurisdiction and are generally set at levels allowing for recovery of prudently incurred costs, including a fair return on rate base. Rate base generally consists of the original cost of utility plant in service, plus certain other assets, such as working capital and inventory, less accumulated depreciation on utility plant in service, deferred income tax liabilities and certain other deductions.

GSWC is required to file a water general rate case application every three years according to a schedule established by the CPUC. General rate cases typically include an increase in the test year with inflation-rate adjustments for expenses in the second and third years of the rate case cycle. For capital projects, there are two test years. Rates are based on a forecast of expenses and capital costs for each test year. GSWC's cost of capital is determined in a separate proceeding. Investor-owned water utilities serving California are required to file their cost of capital applications on a triennial basis. BVES's general rate cases are typically filed every four years, which also includes a determination of BVES's cost of capital. Rates may also be increased by offsets for certain expense increases, including, but not limited to, supply-cost offset and balancing-account amortization, advice letter filings related to certain plant additions and other operating cost increases.

Neither the operations of AWR nor the operations and rates of ASUS are directly regulated by the CPUC. The CPUC does, however, regulate certain transactions between GSWC, BVES and ASUS and between GSWC and BVES and AWR.

General Rate Cases and Other Regulatory Matters

Water Segment

Recent Changes in Rates:

Rates that GSWC is authorized to charge are determined by the CPUC in general rate cases. Water revenues billed to customers for the year ended December 31, 2022 and from January 1, 2023 through July 30, 2023 were based on 2021 adopted rates. On June 29, 2023, GSWC received a final decision on its water general rate case application that determined new rates for 2022 and 2023 and are effective and retroactive to January 1, 2022 and January 1, 2023, respectively. The impact of retroactive rates for the full year of 2022 and the second-year 2023 rate increases have been reflected in the results for 2023. GSWC filed for the implementation of new 2023 rate increases effective on July 31, 2023. In October 2023, GSWC also filed for the recovery of all retroactive amounts for 2022 and 2023 accumulated up to the effective date of the new 2023 rates, July 30, 2023. Surcharges were implemented in October 2023 to recover these cumulative retroactive rate differences over 36 months, which through December 31, 2023 totaled $52.8 million and were included in CPUC-authorized general rate case memorandum accounts recognized as regulatory assets.

Water General Rate Case for the years 2025–2027:

On August 14, 2023, GSWC filed a general rate case application for all its water regions and the general office. This general rate case will determine new water rates for the years 2025 – 2027. Among other things, GSWC requested capital budgets of approximately $611.4 million for the three-year capital cycle. GSWC also requested the continuation of mechanisms to accommodate fully decoupled revenues and sales and track differences between recorded and CPUC-authorized supply-related expenses. GSWC has requested the CPUC to permit it to continue using a revenue decoupling mechanism. As

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of the filing date of this Form 10-K, a proposed decision in the water general rate case is scheduled for the fourth quarter of 2024, with new rates to become effective January 1, 2025.

Cost of Capital Proceeding for the years 2022–2024:

On June 29, 2023, a final decision was adopted by the CPUC in the cost of capital proceeding that, among other things, (i) adopts GSWC's requested capital structure; (ii) adopts a cost of debt of 5.1% for GSWC as compared to 6.6% previously authorized; (iii) adopts a return on equity of 8.85% for GSWC as compared to 8.9% previously authorized; (iv) allows for the continuation of the WCCM through December 31, 2024; and (v) adopts the new cost of capital for the three-year period commencing January 1, 2022 through December 31, 2024. Based on the final decision issued in June, all adjustments to rates were prospective and not retroactive. GSWC filed an advice letter that implemented the new cost of capital effective July 31, 2023.

On June 30, 2023, GSWC filed an advice letter to establish the WCCM for 2023, which increased the 8.85% adopted return on equity in the decision to 9.36% effective July 31, 2023. Additionally, on October 12, 2023, GSWC filed an advice letter to establish the WCCM for 2024, which has been approved by the CPUC, and increased GSWC's 9.36% adopted return on equity to 10.06% effective January 1, 2024.

2024 COC Application:

Investor-owned water utilities serving California are required to file their cost of capital applications on a triennial basis. GSWC's next cost of capital application was scheduled to be filed on May 1, 2024 effective for the years 2025 - 2027. However, GSWC, along with three other Class A investor-owned water utilities in California, filed a joint request with the CPUC to defer the filing deadline of the next cost of capital applications by one year, which was approved on February 2, 2024. The joint request asked that the utilities keep the cost of capital currently authorized for 2024 in effect through 2025, and file new cost of capital applications by May 1, 2025 to set the cost of debt, return on equity and capital structure starting January 1, 2026. GSWC's current authorized rate of return on rate base is 7.93% effective January 1, 2024, which will continue in effect through December 31, 2025. Additionally, GSWC's WCCM will remain active through the one year deferral period.

San Juan Oaks Mutual Acquisition:

In August 2023, GSWC entered into an agreement to purchase the water and wastewater system assets from San Juan Oaks Mutual Water Company ("SJO Mutual") in San Benito County, California. The new master-planned community, known as San Juan Oaks, will serve up to an estimated 1,300 customers once the community is built as planned. The transaction is subject to CPUC approval. In December 2023, GSWC filed an application to establish the new service area and to set water and sewer rates for the San Juan Oaks service area in San Benito County, California.

Electric Segment

Recent Changes in Rates:

On August 30, 2022, BVES filed a new general rate case application with the CPUC to determine new rates for the years 2023–2026. Electric revenues billed to customers for 2023 were based on 2022 adopted rates and will remain in effect until finalization of the pending general rate case application. On December 15, 2022, the CPUC approved a decision for BVES to establish a general rate case memorandum account that makes the new 2023 rates effective and retroactive to January 1, 2023. Because new rates are expected to be retroactive to January 1, 2023, when a decision is issued in the electric general rate case, cumulative adjustments will be recorded at that time.

Vegetation Management, Wildfire Mitigation Plans and Legislation:

The CPUC adopted regulations intended to enhance the fire safety of overhead electric power lines. Those regulations included increased minimum clearances around electric power lines. BVES was authorized to track incremental costs incurred to implement the regulations in a fire hazard prevention memorandum account for the purpose of obtaining cost recovery in a future general rate case. The August 2019 final decision also authorized BVES to record incremental costs related to vegetation management, such as costs for increased minimum clearances around electric power lines, in the CPUC-approved memorandum account for future recovery. As of December 31, 2023, BVES had approximately $11.8 million in incremental vegetation management costs recorded as a regulatory asset. As part of its general rate case application filing with the CPUC in August 2022, BVES requested recovery of the costs accumulated in this memorandum account as of March 31, 2022.

California legislation enacted in September 2018 requires all investor-owned electric utilities to have a wildfire mitigation plan ("WMP") approved by the OEIS and ratified by the CPUC. The WMP must include a utility's plans on constructing, maintaining, and operating its electrical lines and equipment to minimize the risk of catastrophic wildfire. In May 2023, BVES submitted its WMP covering the three-year period 2023-2025 to OEIS for approval prior to going to the CPUC for ratification. In the fourth quarter of 2023, OEIS issued a final decision of approval and the CPUC ratified BVES's 2023-2025 WMP. As of December 31, 2023, BVES has approximately

$5.9 million related to expenses accumulated in its WMP memorandum accounts that have been recognized as regulatory assets for future recovery. All capital expenditures and other

costs incurred through December 31, 2023 as a result of BVES's WMPs are not currently in rates and have been filed for future recovery in BVES's general rate case application in August 2022.

Additionally, the governor of California approved AB 1054 in July 2019 that, among other things, changed the burden of proof applicable in CPUC proceedings in which an electric utility with a valid safety certification seeks to recover wildfire costs. Previously, an electric utility seeking to recover costs had the burden to prove that it acted reasonably. Under AB 1054, if an electric utility has a valid safety certification, it will be presumed to have acted reasonably unless a party to the relevant proceeding creates a "serious doubt" as to the reasonableness of the utility's conduct. In December 2023, OEIS issued a renewal of the safety certification for BVES for 12 months.

For more information regarding significant regulatory matters, see Note 3 of "*Notes to Financial Statements*" included in Part II, Item 8, in Financial Statements and Supplementary Data.

Environmental Matters

AWR's subsidiaries are subject to stringent environmental regulations. GSWC is required to comply with the safe drinking water standards established by the United States Environmental Protection Agency ("USEPA") and the Division of Drinking Water ("DDW"), under the SWRCB. The USEPA regulates contaminants that may have adverse health effects that are known or likely to occur at levels of public health concern, and the regulation of which will provide a meaningful opportunity for health risk reduction. The DDW, acting on behalf of the USEPA, administers the USEPA's program in California. Similar state agencies administer these rules in the other states in which Registrant operates.

GSWC currently tests its water supplies and water systems according to, among other things, requirements listed in the Federal Safe Drinking Water Act ("SDWA"). GSWC works proactively with third parties and governmental agencies to address issues relating to known contamination threatening GSWC water sources. GSWC also incurs operating costs for testing to determine the levels, if any, of the constituents in its sources of supply, and additional expense to treat contaminants in order to meet the federal and state maximum contaminant level standards and consumer demands. GSWC expects to incur additional capital costs as well as increased operating costs to maintain or improve the quality of water delivered to its customers in light of anticipated stress on water resources associated with watershed and aquifer pollution, drought impacts, as well as to meet future water quality standards and consumer expectations. The CPUC ratemaking process provides GSWC with the opportunity to recover prudently incurred capital and operating costs in future filings associated with achieving water quality standards. Management believes that such incurred and expected future costs should be authorized for recovery by the CPUC.

Drinking Water Notification Levels

In July 2018, DDW issued drinking water notification levels for certain fluorinated organic chemicals used to make certain fabrics and other materials, and used in various industrial processes. These chemicals were also present in certain fire suppression agents. These chemicals are referred to as PFAS. Notification levels are health-based advisory levels established for contaminants in drinking water for which maximum contaminant levels have not been established. The USEPA has also established health advisory levels for these compounds. Notification to consumers and stakeholders is required when the advisory levels or notification levels are exceeded. Assembly Bill 756, signed into law in July 2019 and effective in January 2020, requires, among other things, additional notifications by water systems when they detect levels of PFAS above response levels.

GSWC is in the process of collecting and analyzing samples for PFAS. GSWC has removed some wells from service, and expects to incur additional costs to treat impacted wells. GSWC has provided customers with information regarding PFAS detection and provides updated information via its website. In February 2020, DDW established new response levels for two of the PFAS compounds: 10 parts per trillion ("ppt") for perfluorooctanoic acid ("PFOA") and 40 ppt for perfluorooctanesulfonic acid ("PFOS"). In March 2021, DDW issued drinking-water notification and response levels of 0.5 parts per billion ("ppb") and 5 ppb, respectively, for perfluorobutane sulfonic acid ("PFBS"). In June 2022, the USEPA issued interim updated drinking-water health advisories for PFOA and PFOS, and also issued final health advisories for PFBS and other compounds known as GenX chemicals. In October 2022, DDW issued drinking-water notification and response levels of 3 ppt and 20 ppt, respectively, for perfluorohexane sulfonic acid ("PFHxS"). Lower MCL levels are expected to be promulgated in 2024 and depending on how low the levels are set, these new requirements will likely increase GSWC's water treatment and other operating costs.

Drinking Water Proposed Maximum Contaminant Levels

In March 2023, the USEPA proposed maximum contaminant levels ("MCLs") for six PFAS compounds in drinking water. When finalized, the proposed regulation will require public water systems to monitor and treat water for these chemicals. It will also require water systems to notify its customers and reduce the levels if it exceeds the regulatory standards. The USEPA anticipates finalizing and adopting this rule in early 2024. Once the rule is finalized, water systems will be required to comply with the MCLs after a specified implementation period, which is currently anticipated to be three years from the rule-adoption date. These proposed MCLs, once finalized, are expected to increase GSWC's water treatment and other operating

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costs. The CPUC has authorized GSWC to track incremental costs, including laboratory testing and monitoring costs, customer and public notification costs, and chemical and operating treatment costs, incurred as a result of PFAS contamination in a memorandum account to be filed with the CPUC for future recovery.

Matters Relating to Environmental Cleanup

GSWC has been involved in environmental remediation and cleanup at one of its plant sites that contained an underground storage tank which was used to store gasoline for its vehicles. This tank was removed from the ground in July 1990 along with the dispenser and ancillary piping. Since then, GSWC has been involved in various remediation activities at this site.

As of December 31, 2023, the total amount spent to clean up and remediate GSWC's plant facility was approximately $6.3 million, of which $1.5 million has been paid by the State of California Underground Storage Tank Fund. Amounts paid by GSWC have been included in rate base and approved by the CPUC for recovery. As of December 31, 2023, GSWC has a regulatory asset and an accrued liability for the estimated remaining cost of $1.3 million to complete the cleanup at the site. The estimate includes costs for continued activities of groundwater cleanup and monitoring, future soil treatment, and site closure related activities. The ultimate cost may vary as there are many unknowns in remediation of underground gasoline spills and this is an estimate based on currently available information. Management also believes it is probable that the estimated additional costs will continue to be approved in rate base by the CPUC.

Lead and Copper Rule Revisions

On December 16, 2021, the USEPA announced the Lead and Copper Rule Revisions under an executive order with a compliance date of October 16, 2024. Additionally, the USEPA announced its intention to develop a new proposed rule, the Lead and Copper Rule Improvements ("LCRI") that will further strengthen the regulatory framework prior to the October 2024 compliance date. There are still many unknowns regarding the implementation of the rule. The details of the requirements will be better understood over the next year once the LCRI is published and a final rule is approved.

Matters Relating to Military Base Contracts

Each of the ASUS's subsidiaries is responsible for testing the water and wastewater systems on the military bases on which it operates in accordance with applicable law.

Each of the ASUS's subsidiaries has the right to seek an equitable adjustment to its contract in the event that there are changes in environmental laws, a change in the quality of water used in providing water service or wastewater discharged by the U.S. government, or contamination of the air or soil not caused by the fault or negligence of ASUS's Subsidiary. These changes can impact operations and maintenance and renewal and replacement costs under the contracts. The U.S. government is responsible for environmental contamination due to its fault or negligence and for environmental contamination that occurred prior to the execution of a contract.

Security Issues

We have physical and information security policies throughout our operations. Training on these matters begins during employee orientation and is ongoing through a series of training courses in addition to periodic, unannounced training exercises. We collaborate with various agencies, associations and third parties regarding information on possible threats and security measures for our operations. Risk assessments are conducted periodically to evaluate the effectiveness of existing security controls. These assessments provide areas for additional security focus, new controls, and policy changes.

Both GSWC and BVES have security systems and infrastructure in place intended to prevent unlawful intrusion, service disruption and cyber-attacks. GSWC and BVES utilize a variety of physical security measures to protect their facilities. These measures consider advances in security and emergency preparedness technology and relevant industry developments in developing their respective capital-improvement plans, and both intend to seek approval of the CPUC to recover any additional costs that either may incur in enhancing the security, reliability and resiliency of their utility systems.

On October 23, 2018, America's Water Infrastructure Act ("AWIA") became law. GSWC must now conduct additional risk and resilience assessments and develop emergency response plans for each of its water systems. These assessments and plans include natural hazards as well as malevolent acts. The first such assessments were completed in 2020. They will be reviewed and must be resubmitted every five years.

ASUS's subsidiaries operate facilities within the boundaries of military bases, which provide limited access to the general public. To further enhance security, in prior years, certain upgrades were completed at various military bases through contract modifications funded by the U.S. government.

Registrant has evaluated its cyber-security systems and continues to address identified areas of improvement with respect to U.S. government regulations regarding cyber-security of government contractors. These improvements include the physical security at

all of the office and employee facilities it operates.

Despite its efforts, Registrant cannot guarantee that intrusions, cybersecurity incident or other attacks will not cause water, wastewater or electric system problems, disrupt service to customers, compromise important data or systems or result in unintended release of customer or employee information.

Water Supply

GSWC

During 2023, GSWC delivered approximately 54.3 million hundred cubic feet ("ccf") of water to its customers, which is an average of about 342 acre-feet per day or 111 million gallons per day (an acre-foot is approximately 435.6 ccf or 326,000 gallons). Approximately 53% of GSWC's supply came from groundwater produced from wells situated throughout GSWC's service areas. GSWC supplemented its groundwater production with wholesale purchases from MWD member agencies and regional water suppliers (roughly 43% of total demand) and with authorized diversions from rivers (roughly 4%) under agreements with the United States Bureau of Reclamation and the Sacramento Municipal Utility District. GSWC also utilizes recycled water supplies to serve recycled water customers in several service areas. GSWC continually assesses its water rights and groundwater storage assets to maximize use of lower cost groundwater sources where available.

Groundwater

GSWC has a diverse water supply portfolio which includes adjudicated groundwater rights, surface water rights, and a number of unadjudicated water rights to help meet supply requirements. The productivity of GSWC's groundwater resources varies from year to year depending upon a variety of factors, including natural replenishment from snow-melt or rainfall, the availability of imported replenishment water, the amount of water previously stored in groundwater basins, natural or man-made contamination, legal production limitations, and the amount and seasonality of water use by GSWC's customers and others. GSWC actively participates in efforts to protect groundwater basins from over-use and from contamination. In some periods, these efforts may require reductions in groundwater pumping and increased reliance on alternative water resources. GSWC also participates in the implementation of California's Sustainable Groundwater Management Act.

From time to time, GSWC may purchase or temporarily use water rights from others for delivery to customers. GSWC has contracts to purchase water or water rights for an aggregate amount of $2.7 million as of December 31, 2023. Included in the $2.7 million is a remaining commitment of $1.3 million under an agreement with the City of Claremont to lease water rights that were ascribed to the City as part of the Six Basins adjudication. The initial term of the agreement expires in 2028. GSWC may exercise an option to renew this agreement for ten additional years. The remaining $1.4 million is for commitments for purchased water with other third parties, which expire through 2038.

Imported Water

GSWC also manages a portfolio of water supply arrangements with water wholesalers who may import water from outside the immediate service area. For example, GSWC has contracts with various governmental entities and other parties to purchase water through a total of 59 connections for distribution to customers, in addition to numerous emergency connections. MWD is a public agency organized and managed to provide a supplemental, imported supply to its member public agencies. There are 26 such member agencies, consisting of 14 cities, 11 municipal water districts and one county water authority. GSWC has 45 connections to MWD's water distribution facilities and those of member agencies. GSWC purchases MWD water through six separate member agencies aggregating 43,810 acre-feet annually. MWD sources its supplies from Northern California via the State Water Project and the Colorado River through the Colorado River Aqueduct, which it owns and operates, and from local programs and transfer arrangements.

MWD currently has supply levels of 1.14 million acre-feet ("MAF") with annual demands of approximately 1.54 MAF resulting in a supply gap of 399 thousand acre feet. MWD has available access to store more than 1.65 MAF of water in Lake Mead as part of an intentionally created surplus program developed under a 2007 Interim Shortage agreement and is available for use during dry years. In addition, MWD, along with the seven other Basin states which use water from the Colorado River, developed and agreed to the Drought Contingency Plan in 2019 where each lower Basin state which diverts water from the Colorado River below Lees Ferry agrees to store defined amounts of water in Lake Mead to prevent both Lake Mead and Lake Powell from reaching critically low levels. California is a lower Basin state. On December 1, 2023, the Department of Water Resources set the initial allocation for the water year to 10% due to the possibility that 2024 may be a dry year.

Drought Impact

In May 2018, the California Legislature passed two bills that provide a framework for long-term water-use efficiency standards and drought planning and resiliency. The initial steps in implementation of this legislation have been laid out in a summary document by the California Department of Water Resources ("DWR") and SWRCB. A notable milestone is the establishment of an indoor water use standard of 55 gallons per capita per day ("gpcd") until 2025. Legislation signed by the Governor into law in September 2022 has set more stringent indoor standard targets than initially set forth in the 2018 legislation. The indoor standard will now be set at 47 gpcd in

2025 and then reduced to 42 gpcd in 2030 (previously had been set at 52.5 gpcd and 50 gpcd, respectively). The SWRCB released a draft of the Conservation Regulation in mid-year 2023.

The SWRCB is expected to consider the adoption of the regulation by October 2024. Water suppliers including GSWC have provided extensive comments to date on the draft regulation and will work with state agencies on the final regulation and its implementation.

California's recent period of multi-year drought has resulted in reduced recharge to the state's groundwater basins. GSWC utilizes groundwater from numerous groundwater basins throughout the state. Several of these basins, especially smaller basins, experienced lower groundwater levels because of the drought. Several of GSWC's service areas rely on groundwater as their only source of supply. Given the critical nature of the groundwater levels in California's Central Coast area, GSWC implemented mandatory water restrictions in certain service areas in accordance with CPUC procedures. In the event of water supply shortages from the locally available supply, GSWC would need to transport additional water from other areas, increasing the cost of water supply.

After a very wet 2023, California could still potentially be entering into a dry 2024 even with the recent storm events in California in January and February 2024. Since the start of the water year, both the Sierra snowpack and precipitation has been below normal. The southern Sierra snowpack was at 52% of normal and the 5-station precipitation index was at 71% of normal on February 12, 2024. However, a series of atmospheric storm events in late January and early February are providing a promising outlook to the State's supply conditions. As of February 13, 2024, the U.S. Drought Monitor reported that none of California was in drought with only 7% identified as "abnormally dry" as compared to a year ago when 85% was in "moderate drought."

Prolonged drought conditions also exist on the Colorado River System, which is experiencing historically low reservoir levels in Lake Mead and Lake Powell. Urgent action to reduce water demand on the lower river by 2 to 4 million acre feet annually has been requested by the US Bureau of Reclamation (the "Bureau"). In December 2023, several California water agencies signed agreements with the Bureau to conserve up to 643,000 Acre-feet of water in Lake Mead through 2025. This includes contracts with the Coachella Valley Water District, the Quechan Indian Tribe and the Imperial Irrigation District. Additional contracts are expected to be signed by Palo Verde Irrigation District in cooperation with MWD in 2024. GSWC will continue to monitor developments related to the Colorado River System and assess its impact on GSWC.

Military Base Operations

The U.S. government is responsible for providing the source of supply for all water on each of the bases served by ASUS's subsidiaries at no cost to ASUS's subsidiaries. Once received from the U.S. government, ASUS's subsidiaries are responsible for ensuring the continued compliance of the provided source of supply with all federal, state and local regulations. Furthermore, ASUS's subsidiaries are responsible for ensuring compliance with the reduction and/or removal of all constituents required under its wastewater treatment plant operating permits. ASUS works closely with state regulators and industry associations to stay current with emergent issues and proactively addresses any change in wastewater treatment regulation to ensure permit compliance.

New Accounting Pronouncements

Registrant is subject to newly issued accounting requirements as well as changes in existing requirements issued by the Financial Accounting Standards Board. See *Note 1* of *Notes to Consolidated Financial Statements.*

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Registrant is exposed to certain market risks, including fluctuations in interest rates, and commodity price risk primarily relating to changes in the market price of electricity. Market risk is the potential loss arising from adverse changes in prevailing market rates and prices.

Interest Rate Risk

A significant portion of Registrant's capital structure is comprised of fixed-rate debt consisting of notes and debentures. Market risk related to our fixed-rate debt is deemed to be the potential increase in fair value resulting from a decrease in interest rates. At December 31, 2023, the fair value of Registrant's long-term debt was $556.2 million. A hypothetical ten percent change in market interest rates would result in an increase or decrease of approximately $21.8 million in the fair value of Registrant's long-term debt.

Registrant is also exposed to risk resulting from changes in interest rates as a result of its issuances of short-term debt through unsecured revolving credit facilities. At December 31, 2023, Registrant had outstanding consolidated borrowings under its credit facilities of $333.5 million that are exposed to variable short-term interest rate risk. The impact of a 100-basis point change in interest rates on pretax income is approximately $3.3 million as of December 31, 2023.

Commodity/Derivative Risk

BVES is exposed to commodity price risk primarily relating to changes in the market price of electricity. To manage its exposure to energy price risk, BVES from time to time executes purchased power contracts that qualify or have elements of the contract that qualify as derivative instruments, requiring mark-to-market derivative accounting under the accounting guidance for derivatives.

BVES has entered into long-term fixed price contracts to purchase power over three and five-year terms. These long-term contracts will expire during the fourth quarter of 2024 and are subject to the accounting guidance for derivatives and require mark-to-market derivative accounting. In July 2023, the CPUC approved a new power purchase agreement between BVES and a third party to procure renewable portfolio standard eligible energy and RECs as a bundled product. BVES will begin taking power under this long-term contract during the fourth quarter of 2024 to replace the existing expiring contracts. The new contract provides for the purchase of electricity during a delivery period from November 1, 2024 through December 31, 2035. Under this contract, there is an embedded derivative that also requires mark-to-market accounting.

The CPUC authorized the use of a regulatory asset and liability memorandum account to offset the mark-to-market entries required by the accounting guidance. Accordingly, all unrealized gains and losses generated from derivative instruments in purchase power contracts are deferred on a monthly basis into a non-interest-bearing regulatory memorandum account that tracks the changes in fair value of the derivative throughout the terms of the contracts. As a result, these unrealized gains and losses do not impact Registrant's earnings. As of December 31, 2023, there was a $2.4 million derivative liability at fair value for the derivatives in the purchase power contracts, with a corresponding regulatory asset recorded in the derivative instrument memorandum account as a result of overall fixed prices under BVES's purchase power contracts being higher than future energy prices.

Except as discussed above, Registrant has had no other derivative financial instruments, financial instruments with significant off-balance sheet risks or financial instruments with concentrations of credit risk.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of American States Water Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets and statements of capitalization of American States Water Company and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, of changes in common shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Rate Regulation

As described in Notes 1 and 3 to the consolidated financial statements, the Company records regulatory assets, which represent probable future recovery of costs from customers through the ratemaking process, and regulatory liabilities, which represent probable future refunds that are to be credited to customers through the ratemaking process. Accounting for such costs and credits as regulatory assets and liabilities is in accordance with the guidance for accounting for the effects of certain types of regulation. In determining the probability of costs being recognized in other periods, management considers regulatory rules and decisions, past practices and other facts or circumstances that would indicate if recovery is probable. As of December 31, 2023, there were $151 million of regulatory assets and $82 million of regulatory liabilities.

The principal considerations for our determination that performing procedures relating to accounting for the effects of rate regulation is a critical audit matter are the significant judgment by management in the accounting for regulatory assets and liabilities related to assessing the probability that costs will be recovered or that amounts will be refunded, the timing of recognition of regulatory assets and liabilities as a result of established practice, new or changes in regulatory and legislative proceedings, or other relevant facts and circumstances. This in turn led to significant auditor judgment, subjectivity and effort in performing audit procedures and evaluating audit evidence obtained relating to management's accounting for regulatory assets and liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment and consideration of regulatory and legislative proceedings and other evidence informing the probability that costs will be recovered, and amounts will be refunded, and the timing of the inclusion of these deferrals in rates as well as the disclosure impacts. These procedures also included, among others, evaluating the reasonableness of management's judgments regarding the probability and timing of recovery of regulatory assets and refund of regulatory liabilities based on the Company's correspondence with regulators, status of regulatory proceedings, past practices, and other relevant information; evaluating the related accounting and disclosure implications; and calculating regulatory assets and liabilities balances based on provisions and formulas outlined in rate orders and other correspondence with the Company's regulator.

/s/ PricewaterhouseCoopers LLP

Los Angeles, California
February 21, 2024

We have served as the Company's auditor since 2002.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholder of Golden State Water Company

Opinion on the Financial Statements

We have audited the accompanying balance sheets and statements of capitalization of Golden State Water Company (the "Company") as of December 31, 2023 and 2022, and the related statements of income, of changes in common shareholder's equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Rate Regulation

As described in Notes 1 and 3 to the financial statements, the Company records regulatory assets, which represent probable future recovery of costs from customers through the ratemaking process, and regulatory liabilities, which represent probable future refunds that are to be credited to customers through the ratemaking process. Accounting for such costs and credits as regulatory assets and liabilities is in accordance with the guidance for accounting for the effects of certain types of regulation. In determining the probability of costs being recognized in other periods, management considers regulatory rules and decisions, past practices and other facts or circumstances that would indicate if recovery is probable. As of December 31, 2023, there were $121 million of regulatory assets and $75 million of regulatory liabilities.

The principal considerations for our determination that performing procedures relating to accounting for the effects of rate regulation is a critical audit matter are the significant judgment by management in the accounting for regulatory assets and liabilities related to assessing the probability that costs will be recovered or that amounts will be refunded, the timing of recognition of regulatory assets and liabilities as a result of established practice, new or changes in regulatory and legislative proceedings, or other relevant facts and circumstances. This in turn led to significant auditor judgment, subjectivity and effort in performing audit procedures and evaluating audit evidence obtained relating to management's accounting for regulatory assets and liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the financial statements. These procedures included testing the effectiveness of controls relating to management's assessment and consideration of regulatory and legislative proceedings and other evidence informing the probability that costs will be recovered, and amounts will be refunded, and the timing of the inclusion of these deferrals in rates as well as the disclosure impacts. These procedures also included, among others, evaluating the reasonableness of management's judgments regarding the probability and timing of recovery of regulatory assets and refund of regulatory liabilities based on the Company's correspondence with regulators, status of regulatory proceedings, past practices, and other relevant information; evaluating the related accounting and disclosure implications; and calculating regulatory assets and liabilities balances based on provisions and formulas outlined in rate orders and other correspondence with the Company's regulator.

/s/ PricewaterhouseCoopers LLP

Los Angeles, California
February 21, 2024

We have served as the Company's auditor since 2002.

AMERICAN STATES WATER COMPANY
CONSOLIDATED BALANCE SHEETS

(in thousands)	December 31, 2023	December 31, 2022
Assets		
Utility Plant		
Regulated utility plant, at cost:		
Water	$ 2,082,927	$ 2,006,468
Electric	156,471	133,815
Total	2,239,398	2,140,283
Non-regulated utility property, at cost	40,223	38,066
Total utility plant, at cost	2,279,621	2,178,349
Less — accumulated depreciation	(624,472)	(606,231)
	1,655,149	1,572,118
Construction work in progress	237,131	181,648
Net utility plant	1,892,280	1,753,766
Other Property and Investments		
Goodwill	1,116	1,116
Other property and investments	42,932	36,907
Total other property and investments	44,048	38,023
Current Assets		
Cash and cash equivalents	14,073	5,997
Accounts receivable — customers, less allowance for doubtful accounts	34,250	26,206
Unbilled receivable (Note 2)	23,516	20,663
Receivable from U.S. government, less allowance for doubtful accounts (Note 2)	49,306	34,974
Other accounts receivable, less allowance for doubtful accounts	6,340	4,215
Income taxes receivable	52	3,901
Materials and supplies	17,574	14,623
Regulatory assets — current	45,144	14,028
Prepayments and other current assets	5,767	5,450
Contract assets (Note 2)	9,956	9,390
Purchase power contract derivative at fair value (Note 5)	—	11,847
Total current assets	205,978	151,294
Other Assets		
Unbilled revenue — receivable from U.S. government (Note 2)	4,886	6,456
Receivable from U.S. government (Note 2)	42,183	50,482
Contract assets (Note 2)	4,422	5,592
Operating lease right-of-use assets	7,982	9,535
Regulatory assets	25,585	5,694
Other	18,758	13,532
Total other assets	103,816	91,291
Total Assets	$ 2,246,122	$ 2,034,374

The accompanying notes are an integral part of these consolidated financial statements.

AMERICAN STATES WATER COMPANY
CONSOLIDATED BALANCE SHEETS

(in thousands)	December 31, 2023	December 31, 2022
Capitalization and Liabilities		
Capitalization		
Common shareholders' equity	$ 776,109	$ 709,549
Long-term debt	575,555	446,547
Total capitalization	1,351,664	1,156,096
Current Liabilities		
Notes payable to banks	42,000	255,500
Long-term debt — current	353	399
Accounts payable	68,705	84,849
Income taxes payable	492	1,848
Accrued other taxes	14,654	16,257
Accrued employee expenses	14,738	13,996
Accrued interest	8,607	5,308
Regulatory liabilities	—	4,574
Contract liabilities (Note 2)	1,352	903
Operating lease liabilities	1,856	1,892
Purchase power contract derivative at fair value (Note 5)	2,360	—
Other	11,506	10,996
Total current liabilities	166,623	396,522
Other Credits		
Notes payable to banks	291,500	22,000
Advances for construction	67,431	64,351
Contributions in aid of construction — net	151,414	147,918
Deferred income taxes	161,577	149,677
Regulatory liabilities	1,222	40,602
Unamortized investment tax credits	1,011	1,082
Accrued pension and other post-retirement benefits	32,652	33,636
Operating lease liabilities	6,619	8,090
Other	14,409	14,400
Total other credits	727,835	481,756
Commitments and Contingencies (Notes 14 and 15)		
Total Capitalization and Liabilities	$ 2,246,122	$ 2,034,374

The accompanying notes are an integral part of these consolidated financial statements.

AMERICAN STATES WATER COMPANY
CONSOLIDATED STATEMENTS OF CAPITALIZATION

(in thousands, except number of shares)	December 31, 2023	December 31, 2022
Common Shareholders' Equity:		
Common Shares, no par value:		
Authorized: 60,000,000 shares		
Outstanding: 36,980,612 shares in 2023 and 36,962,241 shares in 2022	$ 263,179	$ 260,158
Retained earnings	512,930	449,391
	776,109	709,549
Long-Term Debt		
Notes/Debentures:		
6.81% notes due 2028	15,000	15,000
6.59% notes due 2029	40,000	40,000
7.875% notes due 2030	20,000	20,000
7.23% notes due 2031	50,000	50,000
6.00% notes due 2041	62,000	62,000
Private Placement Notes:		
3.45% notes due 2029	15,000	15,000
5.87% notes due 2028	40,000	40,000
2.17% notes due 2030	85,000	85,000
2.90% notes due 2040	75,000	75,000
4.548% notes due 2032	17,500	17,500
4.949% notes due 2037	17,500	17,500
5.12% notes due 2033	100,000	—
5.22% notes due 2038	30,000	—
Tax-Exempt Obligations:		
5.50% notes due 2026	7,730	7,730
State Water Project due 2035	1,729	2,834
Other Debt Instruments:		
American Recovery and Reinvestment Act Obligation due 2033	2,588	2,809
	579,047	450,373
Less: Current maturities	(353)	(399)
Debt issuance costs	(3,139)	(3,427)
	575,555	446,547
Total Capitalization	$ 1,351,664	$ 1,156,096

The accompanying notes are an integral part of these consolidated financial statements.

AMERICAN STATES WATER COMPANY
CONSOLIDATED STATEMENTS OF INCOME

(in thousands, except per share amounts)	For the years ended December 31, 2023	2022	2021
Operating Revenues			
Water	$ 433,473	$ 340,602	$ 347,112
Electric	41,832	39,986	38,345
Contracted services	120,394	110,940	113,396
Total operating revenues	595,699	491,528	498,853
Operating Expenses			
Water purchased	72,864	75,939	77,914
Power purchased for pumping	12,829	11,861	11,103
Groundwater production assessment	20,850	19,071	19,412
Power purchased for resale	13,275	15,039	11,240
Supply cost balancing accounts	12,118	(12,000)	(11,421)
Other operation	40,271	38,095	34,738
Administrative and general	88,273	86,190	83,547
Depreciation and amortization	42,403	41,315	39,596
Maintenance	14,218	13,392	12,781
Property and other taxes	24,046	22,894	22,522
ASUS construction	57,912	53,171	56,909
Gain on sale of assets	(100)	(75)	(465)
Total operating expenses	398,959	364,892	357,876
Operating Income	196,740	126,636	140,977
Other Income and Expenses			
Interest expense	(42,762)	(27,027)	(22,834)
Interest income	7,416	2,326	1,493
Other, net	5,126	125	5,134
Total other income and expenses	(30,220)	(24,576)	(16,207)
Income before income tax expense	166,520	102,060	124,770
Income tax expense	41,599	23,664	30,423
Net Income	$ 124,921	$ 78,396	$ 94,347
Weighted Average Number of Shares Outstanding	36,976	36,955	36,921
Basic Earnings Per Common Share	$ 3.37	$ 2.12	$ 2.55
Weighted Average Number of Diluted Shares	37,077	37,039	37,010
Fully Diluted Earnings Per Share	$ 3.36	$ 2.11	$ 2.55
Dividends Paid Per Common Share	$ 1.655	$ 1.525	$ 1.400

The accompanying notes are an integral part of these consolidated financial statements.

AMERICAN STATES WATER COMPANY
CONSOLIDATED STATEMENTS OF CHANGES
IN COMMON SHAREHOLDERS' EQUITY

(in thousands)	Common Shares Number of Shares	Common Shares Amount	Retained Earnings	Total
Balances at December 31, 2020	36,889	$ 256,666	$ 385,007	$ 641,673
Add:				
Net income			94,347	94,347
Issuances of Common Shares under stock-based compensation plans	47	—		—
Stock-based compensation, net of taxes paid from shares withheld from employees related to net share settlements		1,616		1,616
Dividend equivalent rights on stock-based awards not paid in cash		160		160
Deduct:				
Dividends on Common Shares			51,689	51,689
Dividend equivalent rights on stock-based awards not paid in cash			160	160
Balances at December 31, 2021	36,936	258,442	427,505	685,947
Add:				
Net income			78,396	78,396
Issuances of Common Shares under stock-based compensation plans	26	—		—
Stock-based compensation, net of taxes paid from shares withheld from employees related to net share settlements		1,562		1,562
Dividend equivalent rights on stock-based awards not paid in cash		154		154
Deduct:				
Dividends on Common Shares			56,356	56,356
Dividend equivalent rights on stock-based awards not paid in cash			154	154
Balances at December 31, 2022	36,962	260,158	449,391	709,549
Add:				
Net income			124,921	124,921
Issuances of Common Shares under stock-based compensation plans	19	—		—
Stock-based compensation, net of taxes paid from shares withheld from employees related to net share settlements		2,834		2,834
Dividend equivalent rights on stock-based awards not paid in cash		187		187
Deduct:				
Dividends on Common Shares			61,195	61,195
Dividend equivalent rights on stock-based awards not paid in cash			187	187
Balances at December 31, 2023	36,981	$ 263,179	$ 512,930	$ 776,109

The accompanying notes are an integral part of these consolidated financial statements.

AMERICAN STATES WATER COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	For the years ended December 31, 2023	2022	2021
Cash Flows From Operating Activities:			
Net income	$ 124,921	$ 78,396	$ 94,347
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	43,254	41,697	39,974
Provision for doubtful accounts	932	1,043	1,119
Deferred income taxes and investment tax credits	4,783	2,803	3,561
Stock-based compensation expense	3,298	2,571	2,566
(Gain) loss on investments held in a trust	(5,008)	5,177	(4,287)
Other — net	289	38	(381)
Changes in assets and liabilities:			
Accounts receivable — customers	(6,632)	5,424	(4,688)
Unbilled receivable	(1,283)	9,699	(1,037)
Other accounts receivable	(2,241)	2,115	(1,422)
Receivables from the U.S. government	(6,033)	(5,638)	(4,713)
Materials and supplies	(2,951)	(2,460)	(3,544)
Prepayments and other assets	1,581	3,146	1,323
Contract assets	604	(5,395)	235
Regulatory assets/liabilities	(81,373)	(18,915)	(5,842)
Accounts payable	(10,862)	11,767	(2,881)
Income taxes receivable/payable	2,493	(6,479)	(2,254)
Contract liabilities	449	646	(1,543)
Accrued pension and other post-retirement benefits	1,046	(3,087)	3,051
Other liabilities	416	(4,749)	2,000
Net cash provided (used)	67,683	117,799	115,584
Cash Flows From Investing Activities:			
Capital expenditures	(188,540)	(166,240)	(144,515)
Other investing activities	(224)	(862)	(577)
Net cash provided (used)	(188,764)	(167,102)	(145,092)
Cash Flows From Financing Activities:			
Receipt of advances for and contributions in aid of construction	11,889	6,901	12,432
Refunds on advances for construction	(4,540)	(5,321)	(4,666)
Repayments of long-term debt	(334)	(377)	(28,356)
Proceeds from the issuance of long-term debt, net of issuance costs	129,665	34,789	—
Net changes in notes payable to banks	54,590	72,000	71,300
Dividends paid	(61,195)	(56,356)	(51,689)
Other	(918)	(1,299)	(1,287)
Net cash provided (used)	129,157	50,337	(2,266)
Net change in cash and cash equivalents	8,076	1,034	(31,774)
Cash and cash equivalents, beginning of year	5,997	4,963	36,737
Cash and cash equivalents, end of year	$ 14,073	$ 5,997	$ 4,963

The accompanying notes are an integral part of these consolidated financial statements.

GOLDEN STATE WATER COMPANY
BALANCE SHEETS

(in thousands)	December 31, 2023	December 31, 2022
Assets		
Utility Plant, at cost	$ 2,082,927	$ 2,006,468
Less — accumulated depreciation	(543,135)	(530,925)
	1,539,792	1,475,543
Construction work in progress	195,742	141,175
Net utility plant	1,735,534	1,616,718
Other Property and Investments	40,480	34,655
	40,480	34,655
Current Assets		
Cash and cash equivalents	3,195	370
Accounts receivable — customers, less allowance for doubtful accounts	31,018	23,107
Unbilled receivable	17,185	15,006
Other accounts receivable, less allowance for doubtful accounts	4,301	2,721
Intercompany receivable	380	621
Income taxes receivable from Parent	222	1,692
Materials and supplies	7,380	6,120
Regulatory assets — current	44,007	14,028
Prepayments and other current assets	4,544	4,464
Total current assets	112,232	68,129
Other Assets		
Operating lease right-of-use assets	7,796	9,208
Regulatory assets	2,944	—
Other	17,169	12,598
Total other assets	27,909	21,806
Total Assets	$ 1,916,155	$ 1,741,308

The accompanying notes are an integral part of these financial statements.

GOLDEN STATE WATER COMPANY
BALANCE SHEETS

(in thousands)	December 31, 2023	December 31, 2022
Capitalization and Liabilities		
Capitalization		
Common shareholder's equity	$ 703,828	$ 643,906
Long-term debt	540,738	411,748
Total capitalization	1,244,566	1,055,654
Current Liabilities		
Long-term debt — current	353	399
Accounts payable	55,488	65,944
Accrued other taxes	12,658	14,501
Accrued employee expenses	11,502	11,233
Accrued interest	7,508	4,364
Operating lease liabilities	1,725	1,788
Other	10,715	10,152
Total current liabilities	99,949	108,381
Other Credits		
Intercompany note payable	—	129,000
Notes payable to banks	150,000	—
Advances for construction	67,411	64,331
Contributions in aid of construction — net	151,414	147,918
Deferred income taxes	147,458	138,788
Regulatory liabilities	1,222	40,602
Unamortized investment tax credits	1,011	1,082
Accrued pension and other post-retirement benefits	32,309	33,421
Operating lease liabilities	6,568	7,878
Other	14,247	14,253
Total other credits	571,640	577,273
Commitments and Contingencies (Notes 14 and 15)		
Total Capitalization and Liabilities	$ 1,916,155	$ 1,741,308

The accompanying notes are an integral part of these financial statements.

GOLDEN STATE WATER COMPANY
STATEMENTS OF CAPITALIZATION

(in thousands, except number of shares)	December 31, 2023	December 31, 2022
Common Shareholder's Equity:		
Common Shares, no par value: Authorized: 1,000 shares Outstanding: 171 shares in 2023 and 170 shares in 2022	$ 370,909	$ 358,123
Retained earnings	332,919	285,783
	703,828	643,906
Long-Term Debt		
Notes/Debentures:		
6.81% notes due 2028	15,000	15,000
6.59% notes due 2029	40,000	40,000
7.875% notes due 2030	20,000	20,000
7.23% notes due 2031	50,000	50,000
6.00% notes due 2041	62,000	62,000
Private Placement Notes:		
3.45% notes due 2029	15,000	15,000
5.87% notes due 2028	40,000	40,000
2.17% notes due 2030	85,000	85,000
2.90% notes due 2040	75,000	75,000
5.12% notes due 2033	100,000	—
5.22% notes due 2038	30,000	—
Tax-Exempt Obligations:		
5.50% notes due 2026	7,730	7,730
State Water Project due 2035	1,729	2,834
Other Debt Instruments:		
American Recovery and Reinvestment Act Obligation due 2033	2,588	2,809
	544,047	415,373
Less: Current maturities	(353)	(399)
Debt issuance costs	(2,956)	(3,226)
	540,738	411,748
Total Capitalization	$ 1,244,566	$ 1,055,654

The accompanying notes are an integral part of these financial statements.

GOLDEN STATE WATER COMPANY
STATEMENTS OF INCOME

(in thousands)	For the years ended December 31, 2023	2022	2021
Operating Revenues			
Water	$ 433,473	$ 340,602	$ 347,112
Total operating revenues	433,473	340,602	347,112
Operating Expenses			
Water purchased	72,864	75,939	77,914
Power purchased for pumping	12,829	11,861	11,103
Groundwater production assessment	20,850	19,071	19,412
Supply cost balancing accounts	13,839	(8,643)	(11,295)
Other operation	29,064	28,117	25,781
Administrative and general	59,313	58,358	55,552
Depreciation and amortization	35,886	34,805	33,384
Maintenance	9,906	9,559	9,056
Property and other taxes	19,845	19,080	19,041
Gain on sale of assets	(100)	—	(409)
Total operating expenses	274,296	248,147	239,539
Operating Income	159,177	92,455	107,573
Other Income and Expenses			
Interest expense	(31,283)	(22,742)	(21,474)
Interest income	5,557	1,083	428
Other, net	4,946	(680)	4,783
Total other income and expenses	(20,780)	(22,339)	(16,263)
Income from operations before income tax expense	138,397	70,116	91,310
Income tax expense	35,689	16,346	22,095
Net Income	$ 102,708	$ 53,770	$ 69,215

The accompanying notes are an integral part of these financial statements.

GOLDEN STATE WATER COMPANY
STATEMENTS OF CHANGES IN
COMMON SHAREHOLDER'S EQUITY

(in thousands, except number of shares)	Common Shares Number of Shares	Common Shares Amount	Retained Earnings	Total
Balances at December 31, 2020	170	$ 354,906	$ 228,392	$ 583,298
Add:				
Net income			69,215	69,215
Stock-based compensation, net of taxes paid from shares withheld from employees related to net share settlements		1,473		1,473
Dividend equivalent rights on stock-based awards not paid in cash		151		151
Deduct:				
Dividends on Common Shares			38,300	38,300
Dividend equivalent rights on stock-based awards not paid in cash			151	151
Balances at December 31, 2021	170	356,530	259,156	615,686
Add:				
Net income			53,770	53,770
Stock-based compensation, net of taxes paid from shares withheld from employees related to net share settlements		1,450		1,450
Dividend equivalent rights on stock-based awards not paid in cash		143		143
Deduct:				
Dividends on Common Shares			27,000	27,000
Dividend equivalent rights on stock-based awards not paid in cash			143	143
Balances at December 31, 2022	170	358,123	285,783	643,906
Add:				
Net income			102,708	102,708
Issuance of Common Share to Parent	1	10,000		10,000
Stock-based compensation, net of taxes paid from shares withheld from employees related to net share settlements		2,614		2,614
Dividend equivalent rights on stock-based awards not paid in cash		172		172
Deduct:				
Dividends on Common Shares			55,400	55,400
Dividend equivalent rights on stock-based awards not paid in cash			172	172
Balances at December 31, 2023	171	$ 370,909	$ 332,919	$ 703,828

The accompanying notes are an integral part of these financial statements.

GOLDEN STATE WATER COMPANY
STATEMENTS OF CASH FLOWS

(in thousands)	For the years ended December 31, 2023	2022	2021
Cash Flows From Operating Activities:			
Net income	$ 102,708	$ 53,770	$ 69,215
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	36,623	35,072	33,643
Provision for doubtful accounts	754	1,018	1,018
Deferred income taxes and investment tax credits	2,949	855	2,308
Stock-based compensation expense	2,994	2,269	2,313
(Gain) loss on investments held in a trust	(5,008)	5,177	(4,287)
Other — net	106	9	(209)
Changes in assets and liabilities:			
Accounts receivable — customers	(6,321)	6,263	(4,287)
Unbilled receivable	(2,179)	5,519	(1,195)
Other accounts receivable	(1,484)	931	592
Materials and supplies	(1,260)	(736)	(1,725)
Prepayments and other assets	1,838	2,125	1,860
Regulatory assets/liabilities	(74,378)	(12,704)	(2,854)
Accounts payable	(5,420)	7,671	(10)
Intercompany receivable/payable	248	(805)	1,479
Income taxes receivable/payable from/to Parent	1,470	(4,664)	(1,640)
Accrued pension and other post-retirement benefits	979	(3,228)	2,908
Other liabilities	(278)	(4,034)	1,165
Net cash provided (used)	54,341	94,508	100,294
Cash Flows From Investing Activities:			
Capital expenditures	(160,939)	(146,730)	(123,526)
Note receivable from AWR (parent)	—	—	(26,000)
Receipt of payment of note receivable from AWR (parent)	—	—	26,000
Other investing activities	(1,215)	(1,001)	(733)
Net cash provided (used)	(162,154)	(147,731)	(124,259)
Cash Flows From Financing Activities:			
Proceeds from issuance of Common Shares to AWR (parent)	10,000	—	—
Receipt of advances for and contributions in aid of construction	11,889	6,901	12,397
Refunds on advances for construction	(4,540)	(5,321)	(4,666)
Repayments of long-term debt	(334)	(377)	(28,356)
Proceeds from the issuance of long-term debt, net of issuance costs	129,665	—	—
Net change in intercompany borrowings	(129,000)	80,000	49,000
Net borrowings on notes payable to banks	149,198	—	—
Dividends paid	(55,400)	(27,000)	(38,300)
Other	(840)	(1,135)	(1,163)
Net cash provided (used)	110,638	53,068	(11,088)
Net change in cash and cash equivalents	2,825	(155)	(35,053)
Cash and cash equivalents, beginning of year	370	525	35,578
Cash and cash equivalents, end of year	$ 3,195	$ 370	$ 525

The accompanying notes are an integral part of these financial statements.

AMERICAN STATES WATER COMPANY AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Summary of Significant Accounting Policies

Nature of Operations: American States Water Company ("AWR") is the parent company of Golden State Water Company ("GSWC"), Bear Valley Electric Service Inc. ("BVES"), and American States Utility Services, Inc. ("ASUS") (and its subsidiaries, Fort Bliss Water Services Company ("FBWS"), Old Dominion Utility Services, Inc. ("ODUS"), Terrapin Utility Services, Inc. ("TUS"), Palmetto State Utility Services, Inc. ("PSUS"), Old North Utility Services, Inc. ("ONUS"), Emerald Coast Utility Services, Inc. ("ECUS"), Fort Riley Utility Services, Inc. ("FRUS"), Bay State Utility Services LLC ("BSUS"), and Patuxent River Utility Services LLC ("PRUS")). AWR and its subsidiaries may be collectively referred to as "Registrant" or "the Company." AWR, through its wholly owned subsidiaries, serves over one million people in ten states.

GSWC and BVES are both California public utilities. GSWC engages in the purchase, production, distribution and sale of water throughout California serving approximately 264,100 customers connections. BVES distributes electricity in several San Bernardino County mountain communities in California serving approximately 24,800 customers connections. The California Public Utilities Commission ("CPUC") regulates GSWC's and BVES's businesses in matters including properties, rates, services, facilities, and transactions between GSWC, BVES, and their affiliates.

ASUS, through its subsidiaries, operates, maintains and performs construction activities (including renewal and replacement capital work) on water and/or wastewater systems at various U.S. military bases primarily pursuant to initial 50-year, firm-fixed-price contracts with the U.S. government. These contracts are subject to annual economic price adjustments and modifications for changes in circumstances, changes in laws and regulations and additions to the contract value for new construction of facilities at the military bases. ASUS also from time to time performs construction services on military bases as a subcontractor or pursuant to a task order agreement.

On August 15, 2023, ASUS was awarded a new 50-year contract by the U.S. government to operate, maintain, and provide construction management services for the water distribution and wastewater collection and treatment facilities at Naval Air Station Patuxent River, a United States Navy air station located in Maryland. The initial firm-fixed-price value of the contract is estimated at $349 million over a 50-year period and is subject to annual economic price adjustments. This initial value is also subject to adjustment based on the results of a joint inventory of assets to be performed during the transition period and will be finalized during the first year of operations.

On September 29, 2023, ASUS was awarded a new 15-year contract by the U.S. government, that is different than ASUS's other existing 50-year contracts, to operate, maintain, and provide construction management services for the water distribution and wastewater collection and treatment facilities at Joint Base Cape Cod ("JBCC") located in Massachusetts. Under this contract, ASUS will have the opportunity to perform work at JBCC through the periodic issuance of task orders by the U.S. government for up to a maximum initial firm-fixed-price value of $45.0 million over a 15-year period, subject to adjustments as task orders are issued. In September 2023, the first task order was issued with a value of $2.3 million to perform an evaluation, construction and transition services that are scheduled for completion in 2024.

There is no direct regulatory oversight by the CPUC over AWR or the operations, rates or services provided by ASUS or its subsidiaries.

Basis of Presentation: The consolidated financial statements and notes thereto are presented in a combined report filed by two separate Registrants: AWR and GSWC. References in this report to "Registrant" are to AWR and GSWC, collectively, unless otherwise specified. AWR owns all of the outstanding common shares of GSWC, BVES and ASUS. ASUS owns all of the outstanding common shares of its subsidiaries. The consolidated financial statements of AWR include the accounts of AWR and its subsidiaries. These financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. Intercompany transactions and balances have been eliminated in the AWR consolidated financial statements.

Related-Party and Intercompany Transactions: As discussed in Note 9, prior to AWR and GSWC entering into new separate credit agreements on June 28, 2023 that replaced AWR's previous credit agreement, AWR borrowed under its credit facility and provided funds to both GSWC and ASUS in support of their operations. Under AWR's new credit facility, AWR borrows and continues to provide funds to ASUS in support of its operations, through an intercompany borrowing agreement, and AWR (parent). The interest rate charged to ASUS is sufficient to cover AWR's interest expense under the credit facility. GSWC's new credit facility provides support for its water operations. BVES has a separate credit facility and has also issued long-term debt to support its operations.

Furthermore, GSWC, BVES and ASUS provide and/or receive various support services to and from their parent, AWR, and among themselves. GSWC allocates certain corporate office administrative and general costs to its affiliates, BVES and ASUS, using allocation factors approved by the CPUC. During the years ended December 31, 2023, 2022 and 2021, GSWC allocated to ASUS approximately $5.0 million, $5.2 million and $5.3 million, respectively, of corporate office

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administrative and general costs. During the years ended December 31, 2023, 2022 and 2021, GSWC allocated corporate office administrative and general costs to BVES of approximately $3.5 million, $2.7 million and $2.8 million, respectively.

In January 2023, the Board of Directors approved the issuance of one GSWC common share to AWR for $10.0 million. Also in January 2023, GSWC issued $130.0 million in unsecured private placement long-term notes. GSWC used the proceeds from both the issuance of equity and long-term debt issued to pay-off all intercompany borrowings due to AWR at that time. On June 28, 2023, GSWC borrowed for the first time under its new syndicated credit facility and used the proceeds to again pay-off its short-term intercompany borrowings due to AWR. The CPUC requires GSWC to pay-off all intercompany borrowings it has from AWR within a 24-month period. GSWC's borrowings under its new credit facility will also be required to be paid-off in full within a 24-month period.

COVID-19: During 2021, as a response to orders issued by the CPUC and the governor of California related to the COVID-19 pandemic, GSWC and BVES suspended customer service disconnections for nonpayment at the time. However, pursuant to the CPUC's decision in the Second Phase of the Low-Income Affordability Rulemaking, the moratorium on water-service disconnections due to non-payment of past-due amounts billed to residential customers expired on February 1, 2022, with service disconnections due to nonpayment for delinquent residential customers resuming in June 2022. Payment plan options have been offered to customers; however, GSWC has continued to experience non-payments of past-due bills from customers as a result of the lingering effects of the pandemic during 2023. The CPUC authorized GSWC and BVES to track incremental costs, including bad debt expense, in excess of what is included in their respective revenue requirements incurred as a result of the pandemic in COVID-19 emergency-related memorandum accounts.

In July 2021, the governor of California approved SB-129 Budget Act of 2021, in which nearly $1 billion in relief funding for overdue water customer bills, and nearly $1 billion in relief funding for overdue electric customer bills were included. The water customer relief funding was managed by the State Water Resources Control Board ("SWRCB") through the California Water and Wastewater Arrearage Payment Program ("Arrearage Program") to provide assistance to customers for their water debt accrued during the COVID-19 pandemic by remitting federal funds that the state received from the American Rescue Plan Act of 2021 to the utility on behalf of eligible customers. In addition, on July 10, 2023, the governor of California signed a budget trailer bill expanding the Arrearage Program. This new Extended Water and Wastewater Arrearage Program ("Extended Arrearage Program") extended the COVID relief period to December 31, 2022, with the state legislature allocating an additional $600 million in federal funding.

In January 2022, GSWC received $9.5 million in COVID relief funds through the Arrearage Program to provide assistance to customers for their water debt accrued during the COVID-19 pandemic by remitting federal funds that the state received from the American Rescue Plan Act of 2021 to the utility on behalf of eligible customers. In December 2023, GSWC filed an application with the SWRCB through the Extended Arrearage Program to obtain additional COVID relief funds to provide further assistance to its customers for their water debt accrued during the COVID-19 pandemic. GSWC has received confirmation from SWRCB that it is currently processing GSWC's application and expects to disburse approximately $3.5 million in additional COVID relief funds through this Program. All funds to be received will be applied to customer eligible delinquent balances. In February and December 2022, BVES received $321,000 and $152,000, respectively, from the state of California for similar customer relief funding for unpaid electric customer bills incurred during the pandemic. The CPUC requires that amounts tracked in GSWC's and BVES's COVID-19 memorandum accounts for unpaid customer bills be first offset by any (i) federal and state relief for water or electric utility bill debt, and (ii) customer payments through payment plan arrangements, prior to receiving recovery from customers at large. As of December 31, 2023, GSWC fully offset its bad debt-related CEMA balance as a result of additional COVID relief funds approved. In addition, BVES has filed to recover the remaining balance in its COVID-19 memorandum account through its general rate case application filed in August 2022.

On April 10, 2023, the Biden Administration terminated the COVID-19 national emergency. The COVID-19 emergency-related memorandum accounts for GSWC and BVES expired when the COVID-19 national emergency ended.

Utility Accounting: Registrant's accounting policies conform to accounting principles generally accepted in the United States of America ("GAAP"), including the accounting principles for rate-regulated enterprises, which reflect the ratemaking policies of the CPUC and, to the extent applicable, the Federal Energy Regulatory Commission. GSWC and BVES have incurred various costs and received various credits reflected as regulatory assets and liabilities. Accounting for such costs and credits as regulatory assets and liabilities is in accordance with the guidance for accounting for the effects of certain types of regulation. This guidance sets forth the application of GAAP for those companies whose rates are established by or are subject to approval by an independent third-party regulator.

Under such accounting guidance, rate-regulated entities defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that those costs and credits will be recognized in the ratemaking process in a period different from the period in which they would have been reflected in income by an unregulated company. These regulatory assets and liabilities are then recognized in the income statement in the period in which the same amounts are reflected in the rates charged for service. The amounts included as regulatory assets and liabilities that will be collected or refunded over a period exceeding one year are classified as long-term assets and liabilities as of December 31, 2023 and 2022.

Regulatory assets are reviewed for recoverability each reporting period. If a regulatory asset is no longer deemed probable of recovery, the deferred cost is charged to earnings.

Property and Depreciation: Registrant's property consists primarily of regulated utility plant at GSWC and BVES. GSWC and BVES capitalize, as utility plant, the cost of construction and the cost of additions, betterments and replacements of retired units of property. Such costs include labor, material and certain indirect costs. Indirect costs are allocated to each project based on total costs.

Water systems acquired are recorded at estimated original cost of utility plant when first devoted to utility service and the applicable depreciation is recorded to accumulated depreciation. Any difference between the estimated original cost, less accumulated depreciation, and the purchase price, if recognized by the CPUC, is recorded as an acquisition adjustment within utility plant.

Depreciation for the regulated utilities is computed on the straight-line, remaining-life basis, group method, in accordance with the applicable ratemaking process. The provision for depreciation expressed as a percentage of the aggregate depreciable asset balances for regulated utilities was 2.2% for each of the years 2023, 2022 and 2021. Depreciation expense for regulated utilities, excluding amortization expense and depreciation on transportation equipment, totaled $38.3 million, $37.3 million and $35.5 million for the years ended December 31, 2023, 2022 and 2021, respectively. Depreciation computed on regulated utilities' transportation equipment is recorded in other operating expenses and totaled $851,000, $382,000 and $379,000 for the years 2023, 2022 and 2021, respectively. For the year ended December 31, 2023, approximately $212,000 of additional depreciation expense on GSWC's transportation equipment was recorded that relates to the cumulative retroactive impact for the full year of 2022 approved in the CPUC final decision in GSWC's general rate case that resulted from an increase to the transportation equipment composite depreciation rates that are retroactive to January 1, 2022. Expenditures for maintenance and repairs are expensed as incurred. Retired property costs, including costs of removal, are charged to the accumulated provision for depreciation.

Estimated useful lives of regulated utilities' utility plant, as authorized by the CPUC, are as follows:

Source of water supply	20 years to 60 years
Pumping	26 years to 41 years
Water treatment	26 years to 32 years
Transmission and distribution	15 years to 80 years
Generation	40 years
Other plant	5 years to 62 years

Non-regulated property consists primarily of equipment utilized by ASUS and its subsidiaries for its operations. This property is stated at cost, net of accumulated depreciation, which is calculated using the straight-line method over the useful lives of the assets.

Asset Retirement Obligations: GSWC has a legal obligation for the retirement of its wells, which by law need to be properly capped at the time of removal. As such, GSWC incurs asset retirement obligations. GSWC records the fair value of a liability for these asset retirement obligations in the period in which they are incurred. When the liability is initially recorded, GSWC capitalizes the cost by increasing the carrying amount of the related long-lived asset. Over time, the liability is accreted to its present value each period, and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement of the liability, GSWC either settles the obligation for its recorded amount or incurs a gain or loss upon settlement. Retirement costs have historically been recovered through rates subsequent to the retirement costs being incurred. Accordingly, recoverability of GSWC's asset retirement obligations are reflected as a regulatory asset (Note 3). GSWC also reflects the loss or gain at settlement as a regulatory asset or liability on the balance sheet.

With regards to removal costs associated with certain other long-lived assets, such as water mains, distribution and transmission assets, asset retirement obligations have not been recognized as GSWC believes there is no legal obligation to do so. There are no CPUC rules or regulations that require GSWC to remove any of its other long-lived assets. In addition, GSWC's water pipelines are not subject to regulation by any federal regulatory agency. GSWC has franchise agreements with various municipalities in order to use the public right of way for utility purposes (i.e., operate water distribution and transmission assets), and if certain events occur in the future, GSWC could be required to remove or relocate certain of its pipelines. However, it is not possible to estimate an asset retirement amount since the timing and the amount of assets that may be required to be removed, if any, is not known.

Amounts recorded for asset retirement obligations are subject to various assumptions and determinations, such as determining whether a legal obligation exists to remove assets, estimating the fair value of the costs of removal, when final removal will occur and the credit-adjusted risk-free interest rates to be utilized on discounting future liabilities. Changes that

may arise over time with regard to these assumptions will change amounts recorded in the future. Revisions in estimates for timing or estimated cash flows are recognized as changes in the carrying amount of the liability and the related capitalized asset. The estimated fair value of the costs of removal is based on third-party costs.

Impairment of Long-Lived Assets: Long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable in accordance with accounting guidance for impairment or disposal of long-lived assets. Registrant would recognize an impairment loss on its regulated assets only if the carrying value amount of a long-lived asset is not recoverable from customer rates authorized by the CPUC. Impairment loss is measured as the excess of the carrying value over the amounts recovered in customer rates. For the years ended December 31, 2023, 2022 and 2021, no impairment loss was incurred.

Goodwill: At December 31, 2023 and 2022, AWR had approximately $1.1 million of goodwill. The $1.1 million goodwill arose from ASUS's acquisition of a subcontractor's business at some of its subsidiaries. In accordance with the accounting guidance for testing goodwill, AWR annually assesses qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. For 2023 and 2022, AWR's assessment of qualitative factors did not indicate that an impairment had occurred for goodwill at ASUS.

Cash and Cash Equivalents: Cash and cash equivalents include short-term cash investments with an original maturity of three months or less. At times, cash and cash equivalent balances may be in excess of federally insured limits. Cash and cash equivalents are held with financial institutions with high credit standings.

Accounts Receivable: Accounts receivable is reported on the balance sheet net of any allowance for doubtful accounts. The allowance for doubtful accounts is Registrant's best estimate of the amount of probable credit losses in Registrant's existing accounts receivable from its water and electric customers, and is determined based on expected losses rather than incurred losses. Registrant reviews the allowance for doubtful accounts quarterly. Account balances are written off against the allowance when it is probable the receivable will not be recovered. When utility customers request extended payment terms, credit is extended based on regulatory guidelines, and collateral is not required.

Receivables from the U.S. government include amounts due under contracts with the U.S. government to operate and maintain, and/or provide construction services for the water and/or wastewater systems at military bases. Other accounts receivable consist primarily of amounts due from third parties (non-utility customers) for various reasons, including amounts due from contractors, amounts due under settlement agreements and amounts due from other third-party prime government contractors pursuant to agreements for construction of water and/or wastewater facilities for such third-party prime contractors. The allowance for these other accounts receivable is based on Registrant's evaluation of the receivable portfolio under current conditions and a review of specific problems and such other factors that, in Registrant's judgment, should be considered in estimating losses. Allowances for doubtful accounts are disclosed in Note 18.

Materials and Supplies: Materials and supplies are stated at the lower of cost or net realizable value. Cost is computed using weighted average cost. Major classes of materials include pipe, meters, hydrants and valves.

Interest: Interest incurred during the construction of capital assets has generally not been capitalized for financial reporting purposes as such policy is not followed in the ratemaking process. Interest expense is generally recovered through the regulatory process. At times, the CPUC has authorized certain capital projects to be filed for revenue recovery with advice letters when those projects are completed. During the time that such projects are under development and construction, GSWC or BVES may record an allowance for funds used during construction ("AFUDC") as a component of construction work in progress to offset the cost of financing project construction. After construction is completed, GSWC and BVES is permitted to recover these costs through the inclusion in rate base. For the year ended December 31, 2023, 2022 and 2021, BVES recorded $14,000, $106,000 and $216,000, respectively in AFUDC.

Debt Issuance Costs and Redemption Premiums: Original debt issuance costs are deducted from the carrying value of the associated debt liability and amortized over the lives of the respective issuances of long-term debt. Premiums paid on the early redemption of debt are deferred as regulatory assets and amortized over the period that GSWC and BVES recovers such costs in rates, which is generally over the term of the new debt issued to finance early debt redemption. At December 31, 2023 and 2022, Registrant's long-term debt have been issued by GSWC and BVES.

Advances for Construction and Contributions in Aid of Construction: Advances for construction represent amounts advanced by developers for the cost to construct water system facilities in order to extend water service to their properties. Advances are refundable in equal annual installments, generally over 40 years. In certain instances, GSWC makes refunds on these advances over a specific period of time based on operating revenues related to the main or as new customers are connected to receive service from the main. Contributions in aid of construction are similar to advances but require no refunding. Generally, GSWC and BVES depreciate

contributed property and amortize contributions in aid of construction at the composite rate of the related property. Utility plant funded by advances and contributions are excluded from rate base.

Fair Value of Financial Instruments: For cash and cash equivalents, accounts receivable, accounts payable and short-term debt, the carrying amount is assumed to approximate fair value due to the short-term nature of the amounts. The table below estimates the fair value of long-term debt held by AWR and GSWC, respectively. Rates available to AWR and GSWC at December 31, 2023 and 2022 for debt with similar terms and remaining maturities were used to estimate fair value for long-term debt. Changes in the assumptions will produce differing results.

	2023		2022	
(dollars in thousands)	**Carrying Amount**	**Fair Value**	**Carrying Amount**	**Fair Value**
Long-term debt—AWR **(1)(2)**	$ 579,047	$ 556,214	$ 450,373	$ 424,151

	2023		2022	
(dollars in thousands)	**Carrying Amount**	**Fair Value**	**Carrying Amount**	**Fair Value**
Long-term debt—GSWC **(1)**	$ 544,047	$ 522,883	$ 415,373	$ 391,198

(1) Excludes debt issuance costs and redemption premiums.

(2) Includes debt held by BVES of $35.0 million as of December 31, 2023 and 2022, respectively.

The accounting guidance for fair value measurements applies to all financial assets and financial liabilities that are being measured and reported on a fair value basis. Under the accounting guidance, Registrant has made fair value measurements that are classified and disclosed in one of the following three categories:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2: Quoted prices in markets that are not active or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability; or

Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

Registrant makes fair value measurements on its publicly issued notes, private placement notes and other long-term debt using current U.S. corporate debt yields for similar debt instruments. Under the fair value guidance, these are classified as Level 2, which consists of quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability.

The following table sets forth by level, within the fair value hierarchy, Registrant's long-term debt measured at fair value as of December 31, 2023:

(dollars in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Long-term debt—AWR	—	$ 556,214	—	$ 556,214

(dollars in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Long-term debt—GSWC	—	$ 522,883	—	$ 522,883

Stock-Based Awards: AWR has issued stock-based awards to its employees under stock incentive plans. AWR has also issued stock-based awards to its Board of Directors under non-employee directors stock plans. Registrant applies the provisions in the accounting guidance for share-based payments in accounting for all of its stock-based awards. See Note 13 for further discussion.

Note 2 — Revenues

Most of Registrant's revenues are accounted for under the revenue recognition accounting standard, *"Revenue from Contracts with Customers - (Topic 606)."*

GSWC and BVES provide utility services to customers as specified by the CPUC. The transaction prices for water and electric revenues are based on tariff rates authorized by the CPUC, which include both quantity-based and flat-rate charges. Tariff revenues represent the adopted revenue requirement authorized by the CPUC intended to provide GSWC and BVES with an opportunity to recover its costs and earn a reasonable return on its net capital investment. The annual revenue requirements are comprised of supply costs, operation and maintenance costs, administrative and general costs, depreciation and taxes in amounts authorized by the CPUC, and a return on rate base consistent with the capital structure authorized by the CPUC.

Water and electric revenues are recognized over time as customers simultaneously receive and use the utility services provided. Water and electric revenues include amounts billed to customers on a cyclical basis, nearly all of which are based on meter readings for services provided. Customer bills also include surcharges for cost-recovery activities, which represent CPUC-authorized balancing and memorandum accounts that allow for the recovery of previously incurred operating costs. Revenues from these surcharges have no impact to earnings as they are offset by corresponding increases in operating expenses to reflect the recovery of the associated costs. Customer payment terms are approximately 20 business days from the billing date. Unbilled revenues are amounts estimated to be billed for usage since the last meter-reading date to the end of the accounting period. The most recent customer billed usage forms the basis for estimating unbilled revenue.

GSWC and BVES bill certain sales and use taxes levied by state or local governments to its customers. Included in these sales and use taxes are franchise fees, which are paid to various municipalities and counties (based on their ordinances) in order to use public rights of way for utility purposes. GSWC and BVES bill these franchise fees to its customers based on a CPUC-authorized rate for each ratemaking area as applicable. These franchise fees, which are required to be paid regardless of GSWC's or BVES's ability to collect them from its customers, are accounted for on a gross basis. Franchise fees billed to customers and recorded as operating revenue were approximately $4.9 million, $4.0 million and $4.2 million for the years ended December 31, 2023, 2022 and 2021, respectively. When GSWC or BVES acts as an agent, where the tax is not required to be remitted if it is not collected from customers, the tax is accounted for on a net basis.

As currently authorized by the CPUC, GSWC and BVES record in revenues the difference between the adopted level of volumetric revenues as authorized by the CPUC for metered accounts (volumetric revenues) and the actual volumetric revenues recovered in customer rates. For GSWC, the difference is tracked under the Water Revenue Adjustment Mechanism ("WRAM") regulatory accounts, and for BVES the difference is tracked in the Base Revenue Requirement Adjustment Mechanism ("BRRAM") regulatory account. If this difference results in an under-collection of revenues, additional revenue is recorded only to the extent that the difference is expected to be collected within 24 months following the end of the year in which they are recorded in accordance with Accounting Standards Codification ("ASC") Topic 980, *Regulated Operations*.

ASUS's initial 50-year, firm-fixed-price contract and additional firm-fixed-price contracts, together referred to as ("50-year contract") with the U.S. government are considered service concession arrangements under ASC 853 *Service Concession Arrangements*. ASUS's military base contracts consist primarily of 50-year contracts and one 15-year contract with the U.S. government. The services under these contracts are accounted for under Topic 606 *Revenue from Contracts with Customers* and the water and/or wastewater systems are not recorded as Property, Plant and Equipment on Registrant's balance sheet. For ASUS, performance obligations consist of (i) performing ongoing operation and maintenance of the water and/or wastewater systems and treatment plants for each military base served, and (ii) performing construction activities (including renewal and replacement capital work) on each military base served. The transaction price for each performance obligation is either delineated in, or initially derived from, the applicable 50-year contract and/or any subsequent contract modifications. Depending on the state in which operations are conducted, ASUS's subsidiaries are also subject to certain state non-income tax assessments, which are accounted for on a gross basis and have been immaterial to date.

The ongoing performance of operation and maintenance of the water and/or wastewater systems and treatment plants is viewed as a single performance obligation for each of the contract with the U.S. government. Registrant recognizes revenue for operations and maintenance fees monthly using the "right to invoice" practical expedient under ASC Topic 606. ASUS has a right to the consideration from the U.S. government in an amount that corresponds directly to the value for services provided to the U.S. government based on its subsidiaries' performance completed to-date. The contractual operations and maintenance fees are firm-fixed, and the level of effort or resources expended in the performance of the operations-and-maintenance-fees performance obligation is

largely consistent over the contract term. Therefore, Registrant has determined that the monthly amounts invoiced for operations and maintenance performance are a fair reflection of the value transferred to the U.S.

government. Invoices to the U.S. government for operations and maintenance service, as well as construction activities, are due upon receipt.

ASUS's construction activities consist of various projects to be performed. Each of these capital upgrade projects' transaction prices are delineated either in the 50-year contract or through a specific contract modification for each construction project, which includes the transaction price for that project, or through a task order under a task order agreement. For renewal and replacement projects, the initial transaction price is based on the individual scope of work in accordance with contractual unit prices within the 50-year contract. Each construction project is viewed as a separate, single performance obligation. Therefore, it is generally unnecessary to allocate a construction transaction price to more than one construction performance obligation. Revenues for construction activities are recognized over time, with progress toward completion measured based on the input method using costs incurred relative to the total estimated costs (cost-to-cost method). Due to the nature of these construction projects, Registrant has determined the cost-to-cost input measurement to be the best method to measure progress towards satisfying its construction contract performance obligations, as compared to using an output measurement such as units produced. Changes in job performance, job site conditions, change orders and/or estimated profitability may result in revisions to costs and income for ASUS, and are recognized in the period in which any such revisions are determined. Pre-contract costs for ASUS, which consist of design and engineering labor costs, are deferred if recovery is probable, and are expensed as incurred if recovery is not probable. Deferred pre-contract costs have been immaterial to date.

Contracted services revenues recognized during the years ended December 31, 2023, 2022 and 2021 from performance obligations satisfied in previous periods were not material.

Although GSWC and BVES have a diversified base of residential, commercial, industrial and other customers, revenues derived from residential and commercial customers account for nearly 90% of total water revenues, and 90% of total electric revenues. The vast majority of ASUS's revenues are from the U.S. government. For the years ended December 31, 2023, 2022, and 2021, disaggregated revenues from contracts with customers by segment are as follows:

(dollar in thousands)	For The Year Ended December 31, 2023	For The Year Ended December 31, 2022	For The Year Ended December 31, 2021
Water:			
Tariff-based revenues	$ 394,623	$ 324,838	$ 345,562
CPUC-approved surcharges (cost-recovery activities)	2,955	2,461	3,280
Other	2,753	2,351	2,227
Water revenues from contracts with customers	400,331	329,650	351,069
WRAM under/(over)-collection (alternative revenue program)	33,142	10,952	(3,957)
Total water revenues **(1)**	433,473	340,602	347,112
Electric:			
Tariff-based revenues	40,130	39,750	37,124
CPUC-approved surcharges (cost-recovery activities)	567	144	310
Electric revenues from contracts with customers	40,697	39,894	37,434
BRRAM under/(over)-collection (alternative revenue program)	1,135	92	911
Total electric revenues	41,832	39,986	38,345
Contracted services:			
Water	75,785	68,626	71,210
Wastewater	44,609	42,314	42,186
Contracted services revenues from contracts with customers	120,394	110,940	113,396
Total AWR revenues	$ 595,699	$ 491,528	$ 498,853

(1) Water revenues for the year ended December 31, 2023 includes approximately $30 million from the impact of retroactive new rates for the full year of 2022 as a result of the CPUC's approval of GSWC's general rate case (Note 3). Furthermore, the CPUC also issued a final decision in June 2023 on GSWC's cost of capital proceeding. As a result of the final cost of capital decision (Note 3), for the year ended December 31, 2023, water revenues include an increase of $6.4 million from the reversal of revenues subject to refund due to a change in estimates from what had been recorded during 2022.

The opening and closing balances of the receivable from the U.S. government, contract assets and contract liabilities from contracts with customers, which related entirely to ASUS, are as follows:

(dollar in thousands)	December 31, 2023	December 31, 2022
Unbilled receivables	$ 9,693	$ 10,125
Receivable from the U.S. government	$ 91,489	$ 85,456
Contract assets	$ 14,378	$ 14,982
Contract liabilities	$ 1,352	$ 903

Unbilled receivables and receivable from the U.S. government represent receivables where the right to payment is conditional only by the passage of time.

Contract Assets - Contract assets are assets of ASUS and its subsidiaries and consist of unbilled revenues recognized from work-in-progress construction projects, where the right to payment is conditional on something other than the passage of time. The classification of this asset as current or noncurrent is based on the timing of when ASUS expects to bill these amounts.

Contract Liabilities - Contract liabilities are liabilities of ASUS and its subsidiaries and consist of billings in excess of revenue recognized. The classification of this liability as current or noncurrent is based on the timing of when ASUS expects to recognize revenue. Revenues for the year ended December 31, 2023 included in contract liabilities at the beginning of the period were not material.

As of December 31, 2023, AWR's aggregate remaining performance obligations, which are entirely from the contracted services segment, were $4.0 billion. ASUS expects to recognize revenue on these remaining performance obligations over the remaining term of each of the contracts, with original contract terms that range from 15 to 50 years. Each of the contracts with the U.S. government is subject to termination, in whole or in part, prior to the end of its contract term for the convenience of the U.S. government.

Note 3 — Regulatory Matters

In accordance with accounting principles for rate-regulated enterprises, GSWC and BVES record regulatory assets, which represent probable future recovery of costs from customers through the ratemaking process, and regulatory liabilities, which represent probable future refunds that are to be credited to customers through the ratemaking process. At December 31, 2023, GSWC and BVES had approximately $68.4 million of regulatory liabilities, net of regulatory assets, not accruing carrying costs. Of this amount, (i) $74.0 million of regulatory liabilities are excess deferred income taxes arising from the lower federal income tax rate under the Tax Cuts and Jobs Act enacted in December 2017 that are being refunded to customers (Note 11), (ii) $4.3 million of net regulatory assets relates to flowed-through deferred income taxes including the gross-up portion on the deferred tax resulting from the excess deferred income tax regulatory liability (Note 11), (iii) $3.8 million of regulatory liabilities relates to the underfunded position in Registrant's pension and other post-retirement obligations (excluding the two-way pension balancing accounts), and (iv) $2.4 million of net regulatory asset relates to a memorandum account authorized by the CPUC to track unrealized gains and losses on BVES's purchase power contracts over the terms of the contracts. The remainder relates to other items that do not provide for or incur carrying costs.

Regulatory assets represent costs incurred by GSWC and/or BVES for which they have received or expect to receive rate recovery in the future. In determining the probability of costs being recognized in other periods, GSWC and BVES consider regulatory rules and decisions, past practices, and other facts or circumstances that would indicate if recovery is probable. If the CPUC determines that a portion of either GSWC's or BVES's assets are not recoverable in customer rates, the applicable utility must determine if it has suffered an asset impairment that requires it to write down the asset's value. Regulatory assets are offset against regulatory liabilities within each ratemaking area. Amounts expected to be collected or refunded in the next twelve months have been classified as current assets and current liabilities by ratemaking area. Regulatory assets, less regulatory liabilities, included in the consolidated balance sheets are as follows:

	December 31,	
(dollars in thousands)	2023	2022
GSWC		
2022/2023 general rate case memorandum accounts (unbilled revenue)	$ 52,795	$ —
Water revenue adjustment mechanism, net of the modified cost balancing account	41,545	31,803
Asset retirement obligations (Note 1)	7,099	6,411
COVID-19 memorandum accounts	1,199	3,478
Flowed-through deferred income taxes, net (Note 11)	3,190	(1,134)
Low income rate assistance balancing accounts	5,763	2,526
Pensions and other post-retirement obligations (Note 12)	(4,867)	738
Other regulatory assets	9,462	10,289
Excess deferred income taxes (Note 11)	(70,189)	(71,870)
Other regulatory liabilities	(268)	(8,815)
Total GSWC	$ 45,729	$ (26,574)
BVES		
Derivative instrument memorandum account (Note 5)	2,360	(11,847)
Wildfire mitigation and other fire prevention related costs memorandum accounts	17,716	13,007
Electric supply cost adjustment mechanism	2,583	3,627
Other regulatory assets	7,697	4,338
Other regulatory liabilities	(6,578)	(8,005)
Total AWR	$ 69,507	$ (25,454)

Water General Rate Case and the 2022/2023 General Rate Case Memorandum Accounts:

On June 29, 2023, the CPUC adopted a final decision in GSWC's general rate case application for all its water regions and its general office that determines new water rates for the years 2022–2024. Among other things, the final decision (i) adopted the full settlement agreement between GSWC and the Public Advocates Office at the CPUC ("Public Advocates") that resolved all issues related to the 2022 annual revenue requirement in the general rate case application and made the 2022 rates retroactive to January 1, 2022, and (ii) allowed for additional increases in adopted revenues for 2023 and 2024 subject to an earnings test and inflationary index values at the time of filing for implementation of the new rates. As a result, the impact of retroactive rates for the full year of 2022 have been reflected in the results of operations for the year ended December 31, 2023. Upon receiving the final decision, GSWC filed for the implementation of new 2023 rate increases that went into effect on July 31, 2023. The new rates for 2023 were retroactive to January 1, 2023.

Due to the delay in finalizing the water general rate case, water revenues billed to customers for the year ended December 31, 2022 and for the period from January 1, 2023 to July 30, 2023 were based on 2021 adopted rates. GSWC was authorized to create general rate case memorandum accounts to track the revenue differences between the 2021 adopted rates and the new 2022 and 2023 rates authorized by the CPUC. As of December 31, 2023, there is a net aggregate $52.8 million under-collection in the general rate case memorandum accounts that GSWC has recorded as regulatory assets for retroactive water revenues related to difference between the 2021 adopted rates billed to customers and the rates authorized in the final decision for the full year of 2022 and the 2023 second-year rate increases recorded from January 1 to July 30, 2023. In October 2023, surcharges were implemented by GSWC to recover the cumulative retroactive rate differences over 36 months.

Cost of Capital Proceeding:

On June 29, 2023, a final decision was adopted by the CPUC in the cost of capital proceeding that, among other things, (i) adopts GSWC's requested capital structure of 57% equity and 43% debt; (ii) adopts a cost of debt of 5.1% for GSWC as compared to 6.6% previously authorized; (iii) adopts a return on equity of 8.85% for GSWC as compared to 8.9% previously authorized; (iv) allows for the continuation of the Water Cost of Capital Mechanism ("WCCM") through December 31, 2024; and (v) adopts the new cost of capital for the three-year period commencing January 1, 2022 through December 31, 2024. Based on the Company's assessment of the final decision issued in June, all adjustments to rates are to be prospective. GSWC filed an advice letter that implemented the new cost of capital effective July 31, 2023.

Following the receipt of the final decision adopted on June 29, 2023 in the cost of capital proceeding, management updated its analysis and reassessed the accounting estimates recorded to date related to GSWC's lower cost of debt. Accordingly, GSWC recorded a change in its estimate that resulted in an increase to water revenues for the year ended December 31, 2023 in the amount of $6.4 million as a result of reversing its regulatory liability for revenues subject to refund that it had recorded during 2022.

The WCCM adjusts the return on equity and rate of return on rate base between the three-year cost of capital proceedings only if there is a positive or negative change of more than 100 basis points based on the average of Moody's Aa utility bond rate as measured over the period from October 1 through September 30. If there is a positive or negative change of more than 100 basis points, the return on equity is adjusted by one half of the difference. For the period from October 1, 2021 through September 30, 2022, Moody's Aa utility bond rate increased by 102.80 basis points from the benchmark, which triggered the WCCM adjustment. GSWC recognized revenues for the period from January 1 through July 30, 2023 and all of 2022 based on the previously authorized return of equity of 8.9% that had also been billed to water customers through the same period. On June 30, 2023, GSWC filed an advice letter to establish the WCCM for 2023, which increased GSWC's 8.85% adopted return on equity in the decision to 9.36% effective July 31, 2023. Additionally, for the period from October 1, 2022 through September 30, 2023, the Moody's Aa utility bond rate increased by 139.70 basis points from the benchmark, which triggered another WCCM adjustment. On October 12, 2023, GSWC filed an advice letter to establish the WCCM for 2024, which has been approved by the CPUC. As a result of this approval, GSWC's 9.36% adopted return on equity increased to 10.06% effective January 1, 2024.

Alternative-Revenue Programs:

GSWC records the difference between what it bills its water customers and that which is authorized by the CPUC using the Water Revenue Adjustment Mechanism ("WRAM") and the Modified Cost Balancing Account ("MCBA") approved by the CPUC. The over- or under-collection of the WRAM is aggregated with the MCBA over- or under-collection for the corresponding ratemaking area and bears interest at the current 90-day commercial paper rate.

As of December 31, 2023, GSWC had an aggregated regulatory asset of $41.5 million, which is comprised of a $43.9 million under-collection in the WRAM accounts and a $2.4 million over-collection in the MCBA accounts. During 2023, GSWC recorded additional net under-collections in the WRAM/MCBA accounts of approximately $30.1 million related to the 2023 year that resulted largely from lower-than-adopted water usage as authorized in the general rate case decision. GSWC recorded a net reduction of $9.8 million of under-collections during the first quarter of 2023 to reflect the cumulative full-year impact of 2022 based on authorized 2022 amounts approved in the general rate case decision for both the WRAM and MCBA accounts. On July 27, 2023, the CPUC approved the recovery of all pre-2023 WRAM/MCBA balances. Accordingly, GSWC has implemented surcharges and surcredits to recover/refund all of its WRAM/MCBA balances accumulated as of December 31, 2022.

As required by the accounting guidance for alternative revenue programs, GSWC is required to collect its WRAM balances within 24 months following the end of the year in which an under-collection is recorded. As of December 31, 2023, there were no material WRAM under-collections that were estimated to be collected over more than 24 months.

Pensions and Other Post-retirement Obligations:

A net regulatory liability and asset have been recorded at December 31, 2023 and 2022, respectively, for costs that would otherwise be charged to "other comprehensive income" within shareholders' equity for the funded status of Registrant's pension and other post-retirement benefit plans because the cost of these plans has historically been recovered through rates. As discussed in Note 12, as of December 31, 2023, Registrant's overfunded position for these plans that have been recorded as regulatory liabilities totaled $3.8 million.

In addition, the CPUC has authorized GSWC and BVES to each use two-way balancing accounts to track differences between the forecasted annual pension expenses adopted in their respective customer rates and the actual annual expense to be recorded in accordance with the accounting guidance for pension costs. The two-way balancing accounts bear interest at the current 90-day commercial paper rate. As of December 31, 2023, GSWC has a $1.1 million over-collection related to the general office and water regions, and BVES has a $277,000 over-collection in its two-way balancing account.

COVID-19 Emergency Memorandum Accounts:

The CPUC has authorized GSWC and BVES to track incremental costs, including bad debt expense in excess of what is included in their respective revenue requirements, the purchase of personal protective equipment, and other incremental COVID-19 related costs incurred as a result of the pandemic in COVID-19 emergency-related memorandum accounts, which GSWC and BVES both intend to file with the CPUC for future recovery of these costs.

In December 2023, GSWC filed an application with the SWRCB through the Extended Arrearage Program to obtain additional COVID relief funds to provide further assistance to its customers for their water debt accrued during the COVID-19 pandemic. GSWC has received confirmation from SWRCB that it is currently processing GSWC's application and expects to disburse approximately $3.5 million in additional COVID relief funds through this program. All funds to be received will be applied to customer eligible delinquent balances. As of December 31, 2023, GSWC has recorded a reduction to its bad debt-related amounts included in its COVID-19 memorandum account, with a corresponding reduction to its estimated customer bad debt reserves. As of December 31, 2023, GSWC and BVES had approximately $1.2 million and $500,000, respectively, in regulatory asset accounts related to the purchase of personal protective equipment, bad debt expense in excess of their revenue requirements, additional incurred printing costs, and other incremental COVID-19-related costs. Emergency-related memorandum accounts are well-established cost recovery mechanisms authorized as a result of a state/federal declared emergency, and are recognized as regulatory assets for future recovery. As a result, the amounts recorded in the COVID-19 emergency-related memorandum accounts have not impacted GSWC's or BVES's earnings.

The CPUC requires that amounts tracked in GSWC's and BVES's COVID-19 memorandum accounts for unpaid customer bills be first offset by any (i) federal and state relief for water or electric utility bill debt, and (ii) customer payments through payment plan arrangements, prior to receiving recovery from customers at large. As of December 31, 2023, GSWC fully offset its bad debt-related CEMA balance as a result of additional COVID relief funds approved. In addition, BVES has filed to recover the remaining balance in its COVID-19 memorandum account through its general rate case application filed in August 2022.

Low Income Balancing Accounts:

This regulatory asset reflects the net balance of the incremental administration costs, not already reflected in authorized rates, the customers' discounts issued and the revenues generated by the low-income surcharges for the Customer Assistance Program in GSWC's water regions and the California Alternate Rates for Energy program for BVES. These low-income programs, which are mandated by the CPUC, currently provide a flat discount based on 20% of a typical customer bill for qualified low-income water customers and a 20% discount for qualified low-income electric customers. The low-income balancing accounts accrue interest at the prevailing 90-day commercial paper rate. As of December 31, 2023, there is an aggregate $5.7 million under-collection in the low-income balancing accounts. Surcharges have been implemented to recover the costs included in these balancing accounts.

Other BVES Regulatory Assets:

Wildfire Mitigation and Other Fire Prevention Related Costs Memorandum Accounts

The CPUC adopted regulations intended to enhance the fire safety of overhead electric power lines. Those regulations included increased minimum clearances around electric power lines. BVES was authorized to track incremental costs incurred to implement the regulations in a fire hazard prevention memorandum account for the purpose of obtaining cost recovery in a future general rate case. In August 2019, the CPUC issued a final decision on the electric general rate case, which set new rates through the year 2022. Among other things, the decision authorized BVES to record incremental costs related to vegetation management, such as costs for increased minimum clearances around electric power lines, in a CPUC-approved memorandum account for potential future recovery. As of December 31, 2023, BVES has approximately $11.8 million in incremental vegetation management costs recorded as a regulatory asset. BVES has requested recovery of these costs in its general rate case

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application filed with the CPUC in August 2022 for future recovery. The incremental costs related to vegetation management included in the memorandum account will be subject to review during the general rate case proceeding.

California legislation enacted in September 2018 requires all investor-owned electric utilities to have a wildfire mitigation plan ("WMP") approved by the Office of Energy Infrastructure Safety ("OEIS") and ratified by the CPUC. The WMP must include a utility's plans on constructing, maintaining, and operating its electrical lines and equipment to minimize the risk of catastrophic wildfire. In May 2023, BVES submitted its WMP covering the period from 2023 to 2025 to OEIS for approval prior to going to the CPUC for ratification. In the fourth quarter of 2023, OEIS issued a final decision of approval and the CPUC ratified BVES's 2023-2025 WMP. As of December 31, 2023, BVES has approximately $5.9 million related to expenses accumulated in its WMP memorandum accounts that have been recognized as regulatory assets for future recovery.

All capital expenditures and other costs incurred through December 31, 2023 as a result of BVES's WMPs are not currently in rates and have been filed for future recovery in BVES's general rate case application. These costs will be subject to review during the general rate case proceeding.

2023 Winter Storm Other Regulatory Asset

BVES activated a CEMA to track the incremental costs incurred in response to a severe winter storm that occurred during certain weeks of the first and second quarters of 2023. The governor of California declared a state of emergency for the storm. Incremental costs of approximately $1.3 million were incurred and included in the CEMA account, which has been recorded as a regulatory asset as of December 31, 2023 for future recovery. The incremental costs included in the CEMA account will be subject to review and approval by the CPUC. CEMA accounts are well-established cost recovery mechanisms authorized as a result of a state/federal declared emergency, and are therefore recognized as regulatory assets for future recovery. As a result, the amounts recorded in this CEMA account has not impacted BVES's earnings.

Electric Supply Cost Adjustment Mechanism

Under the current electric supply cost adjustment mechanism approved by the CPUC, BVES tracks the difference between its adopted supply costs included in rates and actual supply costs, which consist largely of purchased power for resale under the existing long-term fixed price purchase power agreements. The under-collections included in the electric supply cost balancing account are being recovered through surcharges. Annually, BVES files an advice letter with the CPUC to revise the surcharge that incorporates the under-collected balances through the previous calendar year's end if the balance meets the minimum balance filing threshold. During 2023, BVES recorded an additional under-collection of $1.9 million in the electric supply cost balancing account. In January 2024, BVES filed an advice letter to implement a revised surcharge to recover the cumulative balances as of December 31, 2023. The new surcharge was effective February 1, 2024.

Other Regulatory Assets:

Other regulatory assets represent costs incurred by GSWC or BVES for which they have received or expect to receive rate recovery in the future. Registrant believes that these regulatory assets are supported by regulatory rules and decisions, past practices, and other facts or circumstances that indicate recovery is probable. If the CPUC determines that a portion of either GSWC's or BVES's assets are not recoverable in customer rates, the applicable entity must determine if it has suffered an asset impairment that requires it to write down the regulatory asset to the amount that is probable of recovery.

Note 4 — Utility Plant and Intangible Assets

The following table shows Registrant's utility plant (regulated utility plant and non-regulated utility property) by major asset class:

	AWR December 31,		GSWC December 31,	
(dollars in thousands)	2023	2022	2023	2022
Water				
Land	$ 18,290	$ 18,427	$ 18,290	$ 18,427
Intangible assets	30,917	30,511	30,917	30,511
Source of water supply	111,112	109,918	111,112	109,918
Pumping	234,264	227,668	234,264	227,668
Water treatment	98,533	90,411	98,533	90,411
Transmission and distribution	1,489,974	1,431,437	1,489,974	1,431,437
Other	140,060	136,162	99,837	98,096
	2,123,150	2,044,534	2,082,927	2,006,468
Electric				
Transmission and distribution	126,143	105,499	—	—
Generation	12,583	12,583	—	—
Other (1)	17,745	15,733	—	—
	156,471	133,815	—	—
Less — accumulated depreciation	(624,472)	(606,231)	(543,135)	(530,925)
Construction work in progress	237,131	181,648	195,742	141,175
Net utility plant	$ 1,892,280	$ 1,753,766	$ 1,735,534	$ 1,616,718

(1) Includes intangible assets of $1.2 million for the years ended December 31, 2023 and 2022 for studies performed.

As of December 31, 2023 and 2022, intangible assets consist of the following:

	Weighted Average Amortization	AWR December 31,		GSWC December 31,	
(dollars in thousands)	Period	2023	2022	2023	2022
Intangible assets:					
Conservation programs	3 years	$ 9,486	$ 9,486	$ 9,486	$ 9,486
Water and service rights (2)	30 years	8,695	8,695	8,124	8,124
Water planning studies	14 years	14,164	13,757	12,926	12,519
Total intangible assets		32,345	31,938	30,536	30,129
Less — accumulated amortization		(27,275)	(26,811)	(26,294)	(25,374)
Intangible assets, net of amortization		$ 5,070	$ 5,127	$ 4,242	$ 4,755
Intangible assets not subject to amortization (3)		$ 383	$ 383	$ 382	$ 382

(2) Includes intangible assets of $571,000 for contracted services included in "Other Property and Investments" on the consolidated balance sheets as of December 31, 2023 and 2022.

(3) The intangible assets not subject to amortization primarily consist of organization and consent fees.

For the years ended December 31, 2023, 2022 and 2021, amortization of intangible assets was $1.1 million, $641,000 and $700,000, respectively, for both AWR and GSWC.

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Estimated future consolidated amortization expense related to intangible assets are as follows (in thousands):

	Amortization Expense
2024	$ 911
2025	911
2026	911
2027	911
2028	911
Total	$ 4,555

Asset Retirement Obligations:

The following is a reconciliation of the beginning and ending aggregate carrying amount of asset retirement obligations, which are included in "Other Credits" on the balance sheets as of December 31, 2023 and 2022:

(dollars in thousands)	GSWC
Obligation at December 31, 2021	$ 9,717
Accretion	386
Obligation at December 31, 2022	$ 10,103
Accretion	406
Obligation at December 31, 2023	$ 10,509

Note 5 — Derivative Instruments

BVES has entered into long-term fixed price contracts to purchase power over three- and five-year terms. These long-term contracts will expire during the fourth quarter of 2024 and are subject to the accounting guidance for derivatives and require mark-to-market derivative accounting. In July 2023, the CPUC approved a new power purchase agreement between BVES and a third party to procure renewable portfolio standard eligible energy and renewable energy credits as a bundled product. BVES will begin taking power under this long-term contract during the fourth quarter of 2024 to replace the existing expiring contracts. The new contract provides for the purchase of electricity during a delivery period from November 1, 2024 through December 31, 2035. Under this contract, there is an embedded derivative that also requires mark-to-market accounting.

The CPUC authorized the use of a regulatory asset and liability memorandum account to offset the mark-to-market entries required by the accounting guidance. Accordingly, all unrealized gains and losses generated from derivative instruments in purchase power contracts are deferred on a monthly basis into a non-interest-bearing regulatory memorandum account that tracks the changes in fair value of the derivative throughout the terms of the contracts. As a result, these unrealized gains and losses do not impact Registrant's earnings. As of December 31, 2023, there was a $2.4 million derivative liability at fair value for the derivatives in the purchase power contracts, with a corresponding regulatory asset recorded in the derivative instrument memorandum account as a result of overall fixed prices under BVES's purchase power contracts being higher than future energy prices. The notional volume of derivatives remaining under these long-term contracts as of December 31, 2023 was approximately 685,256 megawatt hours.

Registrant's valuation model utilizes various inputs that include quoted market prices for energy over the duration of the contracts. The market prices used to determine the fair value for these derivative instruments were estimated based on independent sources such as broker quotes and publications that are not observable in or corroborated by the market. When such inputs have a significant impact on the measurement of fair value, the instrument is categorized as Level 3 as described in Note 1. Accordingly, the valuation of the derivatives on Registrant's purchase power contracts have been classified as Level 3 for all periods presented.

The change in fair value was due to the change in market energy prices for the years 2023 and 2022. The following table presents changes in the fair value of the Level 3 derivatives for the years 2023 and 2022:

(dollars in thousands)	2023	2022
Fair value at beginning of the period	$ 11,847	$ 4,441
Unrealized (losses) gains on purchase power contracts	(14,207)	7,406
Fair value at end of the period	$ (2,360)	$ 11,847

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Note 6 — Military Base Operations

ASUS's subsidiaries have entered into service contracts with the U.S. government to operate and maintain, as well as perform construction activities to renew and replace, the water and/or wastewater systems at a military base or bases. The amounts charged for these services are primarily based upon the terms of the initial 50-year contract between ASUS's subsidiaries and the U.S. government. Under the terms of each of these agreements, ASUS's subsidiaries agree to operate and maintain the water and/or wastewater systems for: (i) a monthly net fixed-price for operation and maintenance, and (ii) an amount to cover renewal and replacement capital work. In addition, these contracts may also include firm-fixed-priced initial capital upgrade projects to upgrade the existing infrastructure. Contract modifications are also issued for other necessary capital upgrades to the existing infrastructure approved by the U.S. government. ASUS through its subsidiaries may also from time to time perform construction services on military bases as a subcontractor or pursuant to task orders or fixed-price task order agreements. The contract serving Joint Base Cape Cod is currently the only task order agreement with the U.S. government. This task order agreement has a term of 15 years.

Under the terms of each of these contracts, prices are subject to an economic price adjustment ("EPA") provision, on an annual basis. Prices may also be equitably adjusted for changes in law and other circumstances. ASUS's subsidiaries are permitted to file, and has filed, requests for equitable adjustment. Each of the contracts may be subject to termination, in whole or in part, prior to the end of the 50-year term for convenience of the U.S. government or as a result of default or nonperformance by an ASUS subsidiary.

ASUS has experienced delays in receiving EPAs as provided for under its 50-year contracts. Because of the delays, EPAs, when finally approved, are retroactive. During 2023, with the exception of the newly awarded contracts, the U.S. government approved EPAs at all of the bases served. In some cases, these EPAs included retroactive operation and maintenance management fees for prior periods. For the years ended December 31, 2023, 2022 and 2021, retroactive operation and maintenance management fees related to prior periods were immaterial.

Note 7 — Earnings Per Share and Capital Stock

In accordance with the accounting guidance for participating securities and earnings per share ("EPS"), Registrant uses the "two-class" method of computing EPS. The "two-class" method is an earnings allocation formula that determines EPS for each class of common stock and participating security. AWR has participating securities related to restricted stock units that earn dividend equivalents on an equal basis with AWR's Common Shares that have been issued under AWR's stock incentive plans for employees and the non-employee directors stock plans. In applying the "two-class" method, undistributed earnings are allocated to both Common Shares and participating securities.

The following is a reconciliation of Registrant's net income and weighted average Common Shares outstanding used to calculate basic EPS:

Basic:	**For The Years Ended December 31,**		
(in thousands, except per share amounts)	**2023**	**2022**	**2021**
Net income	$ 124,921	$ 78,396	$ 94,347
Less: impact from participating securities	372	197	244
Total income available to common shareholders	$ 124,549	$ 78,199	$ 94,103
Weighted average Common Shares outstanding, basic	36,976	36,955	36,921
Basic earnings per Common Share	$ 3.37	$ 2.12	$ 2.55

Diluted EPS is based upon the weighted average number of Common Shares, including both outstanding shares and shares potentially issuable in connection with restricted stock units granted under AWR's stock incentive plans for employees and directors, and net income.

The following is a reconciliation of Registrant's net income and weighted average Common Shares outstanding used to calculate diluted EPS:

Diluted:	**For The Years Ended December 31,**		
(in thousands, except per share amounts)	**2023**	**2022**	**2021**
Common shareholders earnings, basic	$ 124,549	$ 78,199	$ 94,103
Undistributed earnings for dilutive stock options and restricted stock units	189	55	110
Total common shareholders earnings, diluted	$ 124,738	$ 78,254	$ 94,213
Weighted average Common Shares outstanding, basic	36,976	36,955	36,921
Stock-based compensation **(1)**	101	84	89
Weighted average Common Shares outstanding, diluted	37,077	37,039	37,010
Diluted earnings per Common Share	$ 3.36	$ 2.11	$ 2.55

(1) In applying the treasury stock method of reflecting the dilutive effect of outstanding stock-based compensation in the calculation of diluted EPS, 115,684, 96,988 and 100,020 restricted stock units, including performance awards to officers of AWR, at December 31, 2023, 2022 and 2021, respectively, were deemed to be outstanding in accordance with accounting guidance on earnings per share.

During the years ended December 31, 2023, 2022 and 2021, AWR issued Common Shares totaling 18,371, 25,956 and 47,182, respectively, under AWR's employee stock incentive plans and the non-employee directors' plans. During 2023, 2022 and 2021, there were no cash proceeds received by AWR as a result of the exercise of stock options. AWR has not issued any Common Shares during 2023, 2022 and 2021 under AWR's Common Share Purchase and Dividend Reinvestment Plan ("DRP") and the 401(k) Plan. Shares reserved for the 401(k) Plan are in relation to AWR's matching contributions and investment by participants. As of December 31, 2023, there were 1,055,948 and 387,300 Common Shares authorized for issuance directly by AWR but unissued under the DRP and the 401(k) Plan, respectively.

During 2023, GSWC issued one common shares to AWR for $10.0 million. Proceeds from the stock issuances were used to pay down a portion of intercompany borrowings owed to AWR as described in Note 1. No shares were issued by GSWC during 2022 and 2021.

During the years ended December 31, 2023, 2022 and 2021, AWR and GSWC made payments to taxing authorities on employees' behalf for shares withheld related to net share settlements. These payments are included in the stock-based compensation caption of the statements of equity. GSWC's outstanding common shares are owned entirely by its parent, AWR. To the extent GSWC does not reimburse AWR for stock-based compensation awarded under various stock compensation plans, such amounts increase the value of GSWC's common shareholder's equity.

Note 8 — Dividend Limitations

GSWC is prohibited from paying dividends if, after giving effect to the dividend, its total indebtedness to capitalization ratio (as defined) would be more than 0.6667-to-1. Dividends in the amount of $55.4 million, $27.0 million and $38.3 million were paid to AWR by GSWC during the years 2023, 2022 and 2021, respectively.

The ability of AWR, GSWC, BVES and ASUS to pay dividends is also restricted by California law. Under California law, AWR, GSWC, BVES and ASUS are each permitted to distribute dividends to its shareholders so long as the Board of Directors determines, in good faith, that either: (i) the value of the corporation's assets equals or exceeds the sum of its total liabilities immediately after the dividend, or (ii) its retained earnings equals or exceeds the amount of the distribution. Under the least restrictive of the California tests, approximately $776.1 million was available to pay dividends to AWR's shareholders at December 31, 2023. Approximately $703.8 million was available for GSWC to pay dividends to AWR at December 31, 2023.

Note 9 — Bank Debts

Registrant's bank debts consist of outstanding borrowings made under three separate credit facilities at AWR (parent), GSWC and BVES.

AWR (parent) and GSWC Credit Facilities:

On June 28, 2023, AWR and GSWC, each entered into new credit agreements with a term of five years provided by a syndicate of banks and financial institutions. Both credit agreements will mature on June 28, 2028. In connection with the new credit agreements, AWR and GSWC incurred, legal and other fees totaling $632,000 and $802,000, respectively. The syndicated credit facilities replaced AWR's previous credit agreement with a sole bank where AWR had a borrowing capacity of $280.0 million that supported GSWC and ASUS operations. Funds from the new facilities were used to pay-off in full all outstanding borrowings under AWR's prior credit facility and GSWC's outstanding intercompany borrowings from AWR.

AWR's credit agreement provided for a $150.0 million unsecured revolving credit facility to support AWR (parent) and ASUS. Under AWR's credit agreement, the borrowing capacity may be expanded up to an additional amount of $75 million, subject to the lenders' approval. On November 6, 2023, AWR's credit facility was amended to increase the borrowing capacity from $150.0 million to $165.0 million to provide additional support to ASUS and AWR (parent). In connection with the increase in borrowing capacity, the amendment also provides for the addition of a new bank to the existing syndicate group participating in AWR's credit facility. Furthermore, the aggregate amount that may be outstanding under letters of credit for AWR is $10.0 million. Loans may be obtained under the credit facilities at the option of AWR and bear interest at rates based on either a base rate plus an applicable margin or an adjusted term secured overnight financing rate ("SOFR") determined by the SOFR administrator, currently the Federal Reserve Bank of New York, plus an applicable margin. The applicable margin depends upon AWR's credit ratings. As of December 31, 2023, AWR's outstanding borrowings under its credit facility of $141.5 million have been classified as non-current liabilities on AWR's Consolidated Balance Sheet.

AWR's credit agreement contains affirmative and negative covenants and events of default customary for credit facilities of this type, including, among other things, affirmative covenants relating to compliance with law and material contracts, and negative covenants relating to additional indebtedness, liens, investments, restricted payments and asset sales by AWR and its subsidiaries, other than BVES. AWR is not permitted to have a consolidated total capitalization ratio (as defined in the credit agreement), excluding BVES, greater than 0.65 to 1.00 at the end of any quarter. Default under any indebtedness of any subsidiary of AWR, other than BVES, will result in a default under AWR's credit agreement. As of December 31, 2023, AWR was in compliance with these requirements. As of December 31, 2023, AWR had a capitalization ratio of 0.54 to 1.00.

GSWC's credit agreement provides for a $200.0 million unsecured revolving credit facility to support its operations and capital expenditures. Under GSWC's credit agreement, the borrowing capacity may be expanded up to an additional amount of $75.0 million, also as subject to the lenders' approval. The aggregate amount that may be outstanding under letters of credit is $20.0 million. Loans may be obtained under this credit facility at the option of GSWC and bear interest at rates based on either a base rate plus an applicable margin or an adjusted term SOFR determined by the SOFR administrator plus an applicable margin. The applicable margin depends upon GSWC's credit rating.

GSWC's credit facility is considered a short-term debt arrangement by the CPUC. GSWC has been authorized by the CPUC to borrow under the credit facility for a term of up to 24 months. Borrowings under this credit facility are, therefore, required to be fully paid off within a 24-month period. GSWC's next pay-off period ends in June 2025. Accordingly, as of December 31, 2023, GSWC's outstanding borrowings under its credit facility of $150.0 million has been classified as non-current liabilities on GSWC's Balance Sheet. Similar to AWR's credit agreement, GSWC's credit agreement also contains affirmative and negative covenants and events of default customary for credit facilities of its type. GSWC is also not permitted to have a total capitalization ratio greater than 0.65 to 1.00 at the end of any quarter. Default under any indebtedness of any subsidiary of AWR will not result in a default under GSWC's credit agreement. As of December 31, 2023, GSWC was in compliance with these requirements, with total funded debt ratio of 0.50 to 1.00.

BVES Credit Facility:

BVES has a separate revolving credit facility without a parent guaranty that supports its electric operations and capital expenditures. On June 16, 2023, BVES's credit agreement was amended to increase the borrowing capacity from $35.0 million to $50.0 million. In addition, the amendment to the credit agreement also (i) extended the credit facility to July 1, 2026, (ii) converted the interest rate on new borrowings to the benchmark rate of SOFR, plus a margin, and (iii) provides an option to increase the facility by an additional $25.0 million, subject to lender approval. On February 15, 2024, BVES, through its fourth amendment, increased the borrowing capacity from $50.0 million to $65.0 million. BVES's revolving credit facility is considered a short-term debt arrangement by the CPUC. BVES has been authorized by the CPUC to borrow under this credit facility for a term of up to 24 months. Borrowings under this credit facility are, therefore, required to be fully paid off within a 24-month period. BVES's next pay-off period for its credit facility ends in August 2024. Accordingly, the $42.0 million outstanding under BVES's credit facility has been classified as a current liability in AWR's Consolidated Balance Sheet as of December 31, 2023.

Pursuant to BVES's amended credit facility agreement, effective December 20, 2023 and throughout 2024, BVES must maintain a minimum interest coverage ratio of 3.0 times interest expense, and 4.5 times interest expense thereafter. BVES

is also required to maintain a maximum consolidated total debt to consolidated total capitalization ratio of 0.65 to 1.00. As of December 31, 2023, BVES was in compliance with these requirements, with an actual interest coverage ratio of 4.51 times interest expense and a total funded debt ratio of 0.52 to 1.00 as of December 31, 2023. In addition, BVES is required to have a current safety certification issued by the CPUC, which it currently has.

Registrant's borrowing activities (excluding letters of credit) for the years ended December 31, 2023 and 2022 were as follows:

	December 31,	
(in thousands, except percent)	2023	2022
Balance Outstanding at December 31,	$ 333,500	$ 277,500
Interest Rate at December 31,	6.33% ~ 6.96%	5.07% ~ 5.89%
Average Amount Outstanding	$ 243,355	$ 226,556
Weighted Average Annual Interest Rate	6.11 %	2.55 %
Maximum Amount Outstanding	$ 333,500	$ 277,500

Note 10 — Long-Term Debt

Registrant's long-term debt consists of notes and debentures of GSWC and BVES. Registrant summarizes its long-term debt in the Statements of Capitalization. GSWC and BVES do not currently have any secured debt.

On January 13, 2023, GSWC issued $130.0 million unsecured private-placement notes consisting of: $100.0 million aggregate principal amount of Series A Senior Notes at a coupon rate of 5.12% due January 31, 2033 and $30.0 million aggregate principal amount of Series B Senior Notes at a coupon rate of 5.22% due January 31, 2038. GSWC used the proceeds to pay down intercompany borrowings with AWR and to fund operations and capital expenditures for GSWC. Interest is payable semiannually on January 31 and July 31 of each year. The Series A and Series B notes are unsecured and rank equally with GSWC's unsecured and unsubordinated debt. GSWC may, at its option, redeem all or portions of the notes at any time upon written notice, subject to payment of a make-whole premium based on 50 basis points above the applicable treasury yield. The make-whole premiums and covenant requirements under these new notes are similar to the terms of the other private placement notes issued by GSWC. Pursuant to the terms of each of these notes, GSWC must maintain a total indebtedness to capitalization ratio (as defined) of less than 0.6667-to-1 and a total indebtedness to earnings before income taxes, depreciation and amortization ("EBITDA") of less than 8-to-1. As of December 31, 2023, GSWC had a total indebtedness to capitalization ratio of 0.4956-to-1 and a total indebtedness to EBITDA of 3.4-to-1.

On April 28, 2022, BVES completed the issuance of $35.0 million in unsecured private-placement notes consisting of $17.5 million at a coupon rate of 4.548% due April 28, 2032 and $17.5 million at a coupon rate of 4.949% due April 28, 2037. BVES used the proceeds from the notes to pay down all amounts under its revolving credit facility outstanding at the time of issuing the notes. Interest on these notes is payable semiannually, and the covenant requirements under these notes are similar to the terms of BVES's revolving credit facility (Note 9).

Registrant's annual maturities of all long-term debt at December 31, 2023 are as follows (in thousands):

2024	$ 353
2025	370
2026	8,116
2027	403
2028	55,421
Thereafter	514,384
Total	$ 579,047

Note 11 — Taxes on Income

Registrant records deferred income taxes for temporary differences pursuant to the accounting guidance that addresses items recognized for income tax purposes in different periods than when they are reported in the financial statements. These items include differences in net asset basis (primarily related to differences in depreciation lives and methods, and differences in capitalization methods) and the treatment of certain regulatory balancing accounts, and construction contributions and advances. The accounting guidance for income taxes requires that rate-regulated enterprises record deferred income taxes and offsetting regulatory liabilities and assets for temporary differences where the rate regulator has prescribed flow-through treatment for rate-making purposes (Note 3). Deferred investment tax credits ("ITC") are amortized ratably to deferred tax expense over the remaining lives of the property that gave rise to the credits.

GSWC is included in both AWR's consolidated federal income tax and its combined California state franchise tax returns. The impact of California's unitary apportionment on the amount of AWR's California income tax liability is a function of both the profitability of AWR's non-California activities and the proportion of AWR's California sales to its total sales. GSWC's income tax expense is computed as if GSWC were autonomous and separately files its income tax returns, which is consistent with the method adopted by the CPUC in setting GSWC's customer rates.

On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was signed into federal law. IRA, among other things, imposes a nondeductible 1% excise tax after December 31, 2022 on the fair market value of certain stock that is "repurchased" by a publicly traded U.S. corporation or acquired by certain of its subsidiaries. The taxable amount is reduced by the fair market value of certain issuances of stock throughout the year. Registrant did not have a stock repurchase program in effect for 2023 and does not have current plans to institute such a program; consequently, this excise tax was not incurred in 2023 and is not expected to have a material impact on its consolidated financial position in the future. If average annual adjusted financial statement income exceeds $1 billion over a 3-taxable-year period, IRA also imposes a 15% corporate alternative minimum tax on adjusted financial statement income for taxable years beginning after December 31, 2022. Registrant does not expect to incur this tax in the foreseeable future.

The significant components of the deferred tax assets and liabilities as reflected in the balance sheets at December 31, 2023 and 2022 are:

	AWR		GSWC	
	December 31,		December 31,	
(dollars in thousands)	2023	2022	2023	2022
Deferred tax assets:				
Regulatory-liability-related (1)	$ 32,042	$ 31,330	$ 30,407	$ 29,623
Contributions and advances	6,660	6,544	6,981	6,896
Other	5,924	7,424	6,041	7,874
Total deferred tax assets	$ 44,626	$ 45,298	$ 43,429	$ 44,393
Deferred tax liabilities:				
Fixed assets	$ (161,820)	$ (155,955)	$ (155,131)	$ (150,133)
Regulatory-asset-related: depreciation and other	(36,337)	(30,226)	(33,242)	(28,489)
Balancing and memorandum accounts (non-flowed-through)	(8,046)	(8,794)	(2,514)	(4,559)
Total deferred tax liabilities	(206,203)	(194,975)	(190,887)	(183,181)
Accumulated deferred income taxes, net	$ (161,577)	$ (149,677)	$ (147,458)	$ (138,788)

(1) Primarily represents the gross-up portion of the deferred income tax (on the excess-deferred-tax regulatory liability) brought about by the Tax Cuts and Jobs Act's reduction of the federal income tax rate.

The current and deferred components of income tax expense are as follows:

	AWR		
	Year Ended December 31,		
(dollars in thousands)	2023	2022	2021
Current			
Federal	$ 26,327	$ 14,845	$ 19,592
State	10,489	6,016	7,270
Total current tax expense	$ 36,816	$ 20,861	$ 26,862
Deferred			
Federal	$ 4,157	$ 2,991	$ 2,802
State	626	(188)	759
Total deferred tax (benefit) expense	4,783	2,803	3,561
Total income tax expense	$ 41,599	$ 23,664	$ 30,423

	GSWC		
	Year Ended December 31,		
(dollars in thousands)	2023	2022	2021
Current			
Federal	$ 22,564	$ 10,582	$ 13,698
State	10,176	4,909	6,089
Total current tax expense	$ 32,740	$ 15,491	$ 19,787
Deferred			
Federal	$ 2,867	$ 1,507	$ 2,251
State	82	(652)	57
Total deferred tax (benefit) expense	2,949	855	2,308
Total income tax expense	$ 35,689	$ 16,346	$ 22,095

The reconciliations of the effective tax rates ("ETR") to the federal statutory rate are as follows:

	AWR		
	Year Ended December 31,		
(dollars in thousands)	2023	2022	2021
Federal taxes on pretax income at statutory rate	$ 34,969	$ 21,433	$ 26,202
Increase (decrease) in taxes resulting from:			
State income tax, net of federal benefit	9,785	4,335	6,425
Excess deferred tax amortization	(1,648)	(1,311)	(1,356)
Flow-through on fixed assets	1,067	1,076	1,069
Flow-through on removal costs	(2,255)	(1,802)	(1,962)
Investment tax credit	(71)	(71)	(71)
Other – net	(248)	4	116
Total income tax expense from operations	$ 41,599	$ 23,664	$ 30,423
Pretax income from operations	$ 166,520	$ 102,060	$ 124,770
Effective income tax rate	25.0 %	23.2 %	24.4 %

	GSWC		
	Year Ended December 31,		
(dollars in thousands)	2023	2022	2021
Federal taxes on pretax income at statutory rate	$ 29,063	$ 14,724	$ 19,175
Increase (decrease) in taxes resulting from:			
State income tax, net of federal benefit	9,169	3,119	4,923
Excess deferred tax amortization	(1,681)	(1,130)	(1,184)
Flow-through on fixed assets	1,041	1,010	1,008
Flow-through on removal costs	(2,225)	(1,715)	(1,954)
Investment tax credit	(71)	(71)	(71)
Other – net	393	409	198
Total income tax expense from operations	$ 35,689	$ 16,346	$ 22,095
Pretax income from operations	$ 138,397	$ 70,116	$ 91,310
Effective income tax rate	25.8 %	23.3 %	24.2 %

The AWR and GSWC ETRs differ from the federal corporate statutory tax rate of 21% primarily due to (i) state taxes; (ii) permanent differences, including certain tax effects from stock compensation; (iii) the ongoing amortization of the excess deferred income tax liability; and (iv) differences between book and taxable income that are treated as flowed-through adjustments in accordance with regulatory requirements (principally from plant, rate-case, and compensation-related items). As regulated utilities, GSWC and BVES treat certain temporary differences as being flowed through to customers in computing their income tax expense consistent with the income tax method used in their CPUC-jurisdiction rate making. Flowed-through items either increase or decrease tax expense and thus impact the ETR.

AWR and GSWC had no unrecognized tax benefits at December 31, 2023, 2022 and 2021.

Registrant's policy is to classify interest on income tax over/underpayments in interest income/expense and penalties in "other" expenses. Registrant did not have any material interest receivables/payables from/to taxing authorities as of December 31, 2023 and 2022, nor did it recognize any material interest income/expense or accrue any material tax-related penalties during the years ended December 31, 2023, 2022 and 2021.

Registrant files federal, California and various other state income tax returns. AWR's 2020–2022 tax years remain subject to examination/assessment by the Internal Revenue Service. AWR filed refund claims with the California Franchise Tax Board ("FTB") for the 2005 through 2020 tax years in connection with prior federal refund claims, other state issues, or both, and the FTB continues to review the claims. While the statute of limitations to assess tax has closed through the tax year 2018, the 2019–2022 tax years remain subject to examination/assessment by the FTB.

Note 12 — Employee Benefit Plans

Pension and Post-Retirement Medical Plans:

Registrant maintains a defined benefit pension plan (the "Pension Plan") that provides eligible employees (those aged 21 and older, hired before January 1, 2011) monthly benefits upon retirement based on average salaries and length of service. The eligibility requirement to begin receiving these benefits is 5 years of vested service. The normal retirement benefit is equal to 2% of the 5 highest consecutive years' average earnings multiplied by the number of years of credited service, up to a maximum of 40, reduced by a percentage of primary Social Security benefits. There is also an early retirement option. Annual contributions are made to the Pension Plan, which comply with the funding requirements of the Employee Retirement Income Security Act ("ERISA"). At December 31, 2023, Registrant had 903 participants in the Pension Plan.

Employees hired or rehired after December 31, 2010 are eligible to participate in a defined contribution plan. Registrant's existing 401(k) Investment Incentive Program was amended to include this defined contribution plan. Under this plan, Registrant provides a contribution ranging from 3% to 5.25% of eligible pay each pay period into investment vehicles offered by the plan's trustee. Full vesting under this plan occurs upon 3 years of service. Employees hired before January 1, 2011 continue to participate in and accrue benefits under the terms of the Pension Plan.

Registrant also provides post-retirement medical benefits for all active employees hired before February of 1995 through a medical insurance plan. Eligible employees, who retire prior to age 65, and/or their spouses, are able to retain the benefits under the plan for active employees until reaching age 65. Eligible employees upon reaching age 65, and those eligible employees retiring at or after age 65, and/or their spouses, receive coverage through a Medicare supplement insurance policy paid for by Registrant subject to an annual cap limit. Registrant's post-retirement medical plan does not provide prescription drug benefits to Medicare-eligible employees and is not affected by the Medicare Prescription Drug Improvement and Modernization Act of 2003.

In accordance with the accounting guidance for the effects of certain types of regulation, Registrant has established a regulatory asset or liability for its underfunded or overfunded position, respectively, in its pension and post-retirement medical plans that is expected to be recovered through rates in future periods. The changes in actuarial gains and losses, prior service costs and transition assets or obligations are tracked and recognized as an adjustment to the regulatory account as these amounts are recognized as components of net periodic pension cost each year and in the rate-making process.

The following table sets forth the Pension Plan's and post-retirement medical plan's funded status and amounts recognized in Registrant's balance sheets and the components of net pension cost and accrued liability at December 31, 2023 and 2022:

	Pension Benefits		Post-Retirement Medical Benefits	
(dollars in thousands)	2023	2022	2023	2022
Change in Projected Benefit Obligation:				
Projected benefit obligation at beginning of year	$ 190,678	$ 259,751	$ 2,014	$ 2,686
Service cost	3,196	5,644	130	129
Interest cost	10,142	7,401	106	60
Actuarial (gain) loss	8,525	(72,710)	49	(570)
Benefits/expenses paid	(9,578)	(9,408)	(334)	(291)
Projected benefit obligation at end of year	$ 202,963	$ 190,678	$ 1,965	$ 2,014
Changes in Plan Assets:				
Fair value of plan assets at beginning of year	$ 186,906	$ 233,524	$ 11,240	$ 13,773
Actual return on plan assets	25,031	(40,299)	1,921	(2,242)
Employer contributions	2,946	3,089	265	263
Benefits/expenses paid	(9,578)	(9,408)	(599)	(554)
Fair value of plan assets at end of year	$ 205,305	$ 186,906	$ 12,827	$ 11,240
Funded Status:				
Overfunded/(underfunded) amount recognized	$ 2,342	$ (3,772)	$ 10,862	$ 9,226

The change in the underfunded status of the pension was due to an increase in plan asset performance, partially offset by a decrease in the discount rate, which decreased from 5.41% as of December 31, 2022 to 5.16% as of December 31, 2023.

(dollars in thousands)	Pension Benefits 2023	Pension Benefits 2022	Post-Retirement Medical Benefits 2023	Post-Retirement Medical Benefits 2022
Amounts recognized on the balance sheets:				
Non-current assets	$ 2,342	$ —	$ 10,862	$ 9,226
Current liabilities	—	—	—	—
Non-current liabilities	—	(3,772)	—	—
Net amount recognized	$ 2,342	$ (3,772)	$ 10,862	$ 9,226
Amounts recognized in regulatory assets (liabilities) consist of:				
Prior service cost (credit)	$ 1,454	$ 1,889	$ —	$ —
Net loss (gain)	(1,899)	4,123	(6,272)	(5,846)
Regulatory assets (liabilities)	(445)	6,012	(6,272)	(5,846)
Prefunded plan costs	(1,897)	(2,240)	(4,590)	(3,380)
Net liability (asset) recognized	$ (2,342)	$ 3,772	$ (10,862)	$ (9,226)
Changes in plan assets and benefit obligations recognized in regulatory assets (liabilities):				
Regulatory asset (liability) at beginning of year	$ 6,012	$ 25,691	$ (5,846)	$ (9,839)
Net (loss) gain	(6,023)	(19,245)	(1,395)	2,259
New prior service cost	—	—	—	—
Amortization of prior service (cost) credit	(434)	(434)	—	—
Amortization of net gain (loss)	—	—	969	1,734
Total change in regulatory asset (liability)	(6,457)	(19,679)	(426)	3,993
Regulatory asset (liability) at end of year	$ (445)	$ 6,012	$ (6,272)	$ (5,846)
Net periodic pension costs	$ 3,289	$ 313	$ (1,210)	$ (2,132)
Change in regulatory asset (liability)	(6,457)	(19,679)	(426)	3,993
Total recognized in net periodic pension cost and regulatory asset (liability)	$ (3,168)	$ (19,366)	$ (1,636)	$ 1,861
Additional year-end information for plans with an accumulated benefit obligation in excess of plan assets:				
Projected benefit obligation	$ 202,963	$ 190,678	$ 1,965	$ 2,014
Accumulated benefit obligation	$ 192,986	$ 181,376	N/A	N/A
Fair value of plan assets	$ 205,305	$ 186,906	$ 12,827	$ 11,240
Weighted-average assumptions used to determine benefit obligations at December 31:				
Discount rate	5.16 %	5.41 %	5.04 %	5.34 %
Rate of compensation increase	*	*	N/A	N/A

- Age-graded ranging from 2.5% to 7.0%.

The components of net periodic pension and post-retirement benefits cost, before allocation to the overhead pool, for 2023, 2022 and 2021 are as follows:

	Pension Benefits			Post-Retirement Medical Benefits		
(dollars in thousands, except percent)	2023	2022	2021	2023	2022	2021
Components of Net Periodic Benefits Cost:						
Service cost	$3,196	$5,644	$6,316	$130	$129	$149
Interest cost	10,142	7,401	6,833	106	60	110
Expected return on plan assets	(10,483)	(13,166)	(12,541)	(477)	(587)	(537)
Amortization of prior service cost (credit)	434	434	434	—	—	—
Amortization of actuarial (gain) loss	—	—	3,817	(969)	(1,734)	(1,417)
Net periodic pension cost under accounting standards	$3,289	$313	$4,859	$(1,210)	$(2,132)	$(1,695)
Regulatory adjustment	(281)	—	(1,277)	—	—	—
Total expense recognized, before surcharges and allocation to overhead pool	$3,008	$313	$3,582	$(1,210)	$(2,132)	$(1,695)
Weighted-average assumptions used to determine net periodic cost:						
Discount rate	5.41 %	2.89 %	2.55 %	5.34 %	2.46 %	2.20 %
Expected long-term return on plan assets	5.75 %	5.75 %	6.00 %	*	*	*
Rate of compensation increase	**	**	**	N/A	N/A	N/A

*5.50% for union plan and 3.9% for non-union (net of income taxes) in 2023 and 2022 and 5.75% for union plan and 4.0% for non-union (net of income taxes) in 2021.

** Age-graded ranging from 2.5% to 7.0%.

Regulatory Adjustment:

The CPUC authorized GSWC and BVES to track differences between the forecasted annual pension expenses adopted in rates and the actual annual expenses to be recorded in accordance with the accounting guidance for pension costs in a two-way pension balancing account. During the years ended December 31, 2023 and 2021, GSWC's actual pension expense was higher than the amounts included in water customer rates by $281,000 and $1.3 million, respectively. During the year ended December 31, 2022, GSWC's actual expense was lower than the amounts included in water customer rates by $1.5 million and recorded as a reduction to water revenues. The cumulative amount recorded in GSWC's two-way pension balancing account is included within the pensions and other post-retirement obligations regulatory asset discussed in Note 3. During the years ended December 31, 2023, 2022 and 2021, BVES's actual expense was lower than the amounts included in electric rates by $270,000, $490,000 and $246,000, respectively. These over-collections were recorded as a reduction to electric revenues.

Plan Funded Status:

The Pension Plan was overfunded and underfunded at December 31, 2023 and 2022, respectively. Registrant's market related value of plan assets is equal to the fair value of plan assets. Past volatile market conditions have affected and continue to affect the value of GSWC's trust established to fund its future long-term pension benefits. These benefit plan assets and related obligations are measured annually using a December 31 measurement date. Changes in the Pension Plan's funded status will affect the assets and liabilities recorded on the balance sheet in accordance with accounting guidance on employers' accounting for defined benefit pension and other post-retirement plans. Due to Registrant's regulatory recovery treatment, the recognition of the under or overfunded status for the Pension Plan has been offset by a regulatory asset or liability, respectively, pursuant to guidance on the accounting for the effects of certain types of regulation.

Plan Assets:

The assets of the pension and post-retirement medical plans are managed by a third party trustee. The investment policy allocation of the assets in the trust was approved by Registrant's Administrative Committee (the "Committee") for the pension and post-retirement medical funds, which has oversight responsibility for all retirement plans. The primary objectives underlying the investment of the pension and post-retirement plan assets are: (i) attempt to maintain a fully funded status with a cushion for unexpected developments, possible future increases in expense levels and/or a reduction in the expected return on investments; (ii) seek to earn long-term returns that compare favorably to appropriate market indexes, peer group universes and

the policy asset allocation index; (iii) seek to provide sufficient liquidity to pay current benefits and expenses; (iv) attempt to limit risk exposure through prudent diversification; and (v) seek to limit costs of administering and managing the plans.

The Committee recognizes that risk and volatility are present to some degree with all types of investments. High levels of risk may be avoided through diversification by asset class, style of each investment manager and sector and industry limits. Investment managers are retained to manage a pool of assets and allocate funds in order to achieve an appropriate, diversified and balanced asset mix. The Committee's strategy balances the requirement to maximize returns using potentially higher-return generating assets, such as equity securities, with the need to control the risk of its benefit obligations with less volatile assets, such as fixed-income securities.

The Committee approves the target asset allocations. Registrant's pension and post-retirement plan weighted-average asset allocations at December 31, 2023 and 2022, by asset category are as follows:

	Pension Benefits		Post-Retirement Medical Benefits	
Asset Category	2023	2022	2023	2022
Actual Asset Allocations:				
Equity securities	56 %	56 %	60 %	59 %
Debt securities	39 %	39 %	39 %	39 %
Real Estate Funds	5 %	5 %	— %	— %
Cash equivalents	— %	— %	1 %	2 %
Total	100 %	100 %	100 %	100 %

Equity securities did not include AWR's Common Shares as of December 31, 2023 and 2022.

Target Asset Allocations:	Pension Benefits	Post-retirement Medical Benefits
Equity securities	60 %	60 %
Debt securities	40 %	40 %
Total	100 %	100 %

The Pension Plan assets are in collective trust funds managed by a management firm appointed by the Committee. The fair value of these collective trust funds is measured using net asset value per share. In accordance with ASU 2015-07 *Disclosures for Investments in Certain Entities that Calculate Net Asset Value per Share (or Its Equivalents)*, the fair value of the collective trust funds is not categorized in the fair value hierarchy as of December 31, 2023 and 2022.

The following tables set forth the fair value, measured by net asset value, of the pension investment assets as of December 31, 2023 and 2022:

	Net Asset Value as of December 31, 2023			
(dollars in thousands)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Cash equivalents	$ 814	—	N/A	N/A
Fixed income fund	80,737	—	Daily	Daily
Equity securities:				
U.S. small/mid cap funds	19,162	—	Daily	Daily
U.S. large cap funds	49,770	—	Daily	Daily
International funds	45,377	—	Daily	Daily
Total equity funds	114,309	—		
Real estate funds	9,445	—	Daily	Daily
Total	$ 205,305	—		

(dollars in thousands)	Net Asset Value as of December 31, 2022 Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Cash equivalents	$ 801	—	N/A	N/A
Fixed income fund	73,863	—	Daily	Daily
Equity securities:				
U.S. small/mid cap funds	17,136	—	Daily	Daily
U.S. large cap funds	44,572	—	Daily	Daily
International funds	42,239	—	Daily	Daily
Total equity funds	103,947			
Real estate funds	8,295	—	Daily	Daily
Total	$ 186,906	—		

The collective trust funds may be invested or redeemed daily, and generally do not have any significant restrictions to redeem the investments.

As previously discussed in Note 1, the accounting guidance for fair value measurements establishes a framework for measuring fair value and requires fair value measurements to be classified and disclosed in one of three levels. As required by the accounting guidance, assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. All equity investments in the post-retirement medical plan are Level 1 investments in mutual funds. The fixed income category includes corporate bonds and notes. The majority of fixed income investments range in maturities from less than 1 to 20 years. The fair values of these investments are based on quoted market prices in active markets.

The following tables set forth by level, within the fair value hierarchy, the post-retirement plan's investment assets measured at fair value as of December 31, 2023 and 2022:

(dollars in thousands)	Fair Value as of December 31, 2023 Level 1	Level 2	Level 3	Total
Fair Value of Post-Retirement Plan Assets:				
Cash equivalents	$ 189	—	—	$ 189
Fixed income	5,001	—	—	5,001
U.S. equity securities	7,637	—	—	7,637
Total investments measured at fair value	$ 12,827	—	—	$ 12,827

(dollars in thousands)	Fair Value as of December 31, 2022 Level 1	Level 2	Level 3	Total
Fair Value of Post-Retirement Plan Assets:				
Cash equivalents	$ 215	—	—	$ 215
Fixed income	4,380	—	—	4,380
U.S. equity securities	6,645	—	—	6,645
Total investments measured at fair value	$ 11,240	—	—	$ 11,240

Plan Contributions:

During 2023, Registrant contributed $2.9 million to its pension plan and did not make a contribution to the post-retirement medical plan. Registrant expects to contribute approximately $3.3 million to its pension plan in 2024. Registrant's policy is to fund the plans annually at a level which is deductible for income tax purposes and is consistent with amounts recovered in customer rates while also complying with ERISA's funding requirements.

Benefit Payments:

Estimated future benefit payments at December 31, 2023 are as follows (in thousands):

	Pension Benefits	Post-Retirement Medical Benefits
2024	$ 10,604	$ 295
2025	11,089	279
2026	11,539	276
2027	12,075	252
2028	12,568	226
Thereafter	70,006	713
Total	$ 127,881	$ 2,041

Assumptions:

Certain actuarial assumptions, such as the discount rate, long-term rate of return on plan assets, mortality, and the healthcare cost trend rate have a significant effect on the amounts reported for net periodic benefit cost as well as the related benefit obligation amounts.

Discount Rate — The assumed discount rate for pension and post-retirement medical plans reflects the market rates for high-quality corporate bonds currently available. Registrant's discount rates were determined by considering the average of pension yield curves constructed of a large population of high quality corporate bonds. The resulting discount rate reflects the matching of plan liability cash flows to the yield curves.

Expected Long-Term Rate of Return on Assets — The long-term rate of return on plan assets represents an estimate of long-term returns on an investment portfolio consisting of a mixture of equities, fixed income and other investments. To develop the expected long-term rate of return on assets assumption for the pension plan, Registrant considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocation of the pension portfolio. Registrant's policy is to fund the medical benefit trusts based on actuarially determined amounts as allowed in rates approved by the CPUC. Registrant has invested the funds in the post-retirement trusts that are intended to achieve a desired return and minimize amounts necessary to recover through rates. The mix is expected to provide for a return on assets similar to the Pension Plan and to achieve Registrant's targeted allocation. This resulted in the selection of the 5.50% long-term rate of return on assets assumption for the union plan and 3.9% (net of income taxes) for the non-union plan portion of the post-retirement plan.

Mortality — Mortality assumptions are a critical component of benefit obligation amounts and a key factor in determining the expected length of time for annuity payments. Registrant uses the latest mortality tables published by the Society of Actuaries. Accordingly, the benefit obligation amounts as of December 31, 2023 and 2022 have incorporated recent updates to the mortality tables.

Healthcare Cost Trend Rate — The assumed health care cost trend rate for 2024 starts at 5.9% grading down to 4.0% in 2047 for those under age 65, and at 6.3% grading down to 4.0% in 2047 for those 65 and over. Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans.

Supplemental Executive Retirement Plan:

Registrant has a supplemental executive retirement plan ("SERP") that is intended to restore retirement benefits to certain key employees and officers of Registrant that are limited by Sections 415 and 401(a)(17) of the Internal Revenue Code of 1986, as amended. The Board of Directors approved the establishment of a Rabbi Trust created for the SERP. Assets in a Rabbi Trust can be subject to the claims of creditors; therefore, they are not considered as an asset for purposes of computing the SERP's funded status. As of December 31, 2023, the balance in the Rabbi Trust totaled $34.1 million and is included in Registrant's other property and investments.

All equity investments in the Rabbi Trust are Level 1 (as defined in Note 1) investments in mutual funds. The fixed income category includes corporate bonds and notes. The fair values of these investments are based on quoted market prices in active markets.

The following tables set forth by level, within the fair value hierarchy, the Rabbi Trust investment assets measured at fair value as of December 31, 2023 and 2022:

	Fair Value as of December 31, 2023			
(dollars in thousands)	Level 1	Level 2	Level 3	Total
Fair Value of Assets held in Rabbi Trust:				
Cash equivalents	$ 6	—	—	$ 6
Fixed income securities	13,676	—	—	13,676
Equity securities	20,461	—	—	20,461
Total investments measured at fair value	$ 34,143	—	—	$ 34,143

	Fair Value as of December 31, 2022			
(dollars in thousands)	Level 1	Level 2	Level 3	Total
Fair Value of Assets held in Rabbi Trust:				
Cash equivalents	$ 9	—	—	$ 9
Fixed income securities	10,962	—	—	10,962
Equity securities	16,560	—	—	16,560
Total investments measured at fair value	$ 27,531	—	—	$ 27,531

The following provides a reconciliation of benefit obligations, funded status of the SERP, as well as a summary of significant estimates at December 31, 2023 and 2022:

(dollars in thousands)	2023	2022
Change in Benefit Obligation:		
Benefit obligation at beginning of year	$ 30,807	$ 36,089
Service cost	1,248	1,191
Interest cost	1,644	1,022
Actuarial loss (gain)	840	(6,522)
Benefits paid	(945)	(973)
Benefit obligation at end of year	$ 33,594	$ 30,807
Changes in Plan Assets:		
Fair value of plan assets at beginning and end of year	—	—
Funded Status:		
Net amount recognized as accrued cost	$ (33,594)	$ (30,807)

(in thousands)	2023	2022
Amounts recognized on the balance sheets:		
Current liabilities	$ (942)	$ (942)
Non-current liabilities	(32,652)	(29,865)
Net amount recognized	$ (33,594)	$ (30,807)
Amounts recognized in regulatory assets consist of:		
Prior service cost	$ —	$ —
Net loss	2,869	1,995
Regulatory assets	2,869	1,995
Unfunded accrued cost	30,725	28,812
Net liability recognized	$ 33,594	$ 30,807
Changes in plan assets and benefit obligations recognized in regulatory assets consist of:		
Regulatory asset at beginning of year	$ 1,995	$ 9,097
Net gain (loss)	840	(6,522)
Amortization of prior service credit	—	—
Amortization of net gain (loss)	34	(580)
Total change in regulatory asset	874	(7,102)
Regulatory asset at end of year	$ 2,869	$ 1,995
Net periodic pension cost	$ 2,858	$ 2,793
Change in regulatory asset	874	(7,102)
Total recognized in net periodic pension and regulatory asset	$ 3,732	$ (4,309)
Additional year-end information for plans with an accumulated benefit obligation in excess of plan assets:		
Projected benefit obligation	$ 33,594	$ 30,807
Accumulated benefit obligation	30,794	28,157
Fair value of plan assets	—	—
Weighted-average assumptions used to determine benefit obligations:		
Discount rate	5.15 %	5.42 %
Rate of compensation increase	*	*

* Age graded from 4.0% to 5.5% per year.

The components of SERP expense, before allocation to the overhead pool, for 2023, 2022 and 2021 are as follows:

(dollars in thousands, except percent)	2023	2022	2021
Components of Net Periodic Benefits Cost:			
Service cost	$ 1,248	$ 1,191	$ 1,392
Interest cost	1,644	1,022	915
Amortization of net (gain) loss	(34)	580	1,678
Net periodic pension cost	$ 2,858	$ 2,793	$ 3,985
Weighted-average assumptions used to determine net periodic cost:			
Discount rate	5.42 %	2.87 %	2.52 %
Rate of compensation increase	*	*	*

* Age graded from 4.0% to 5.5% per year.

Benefit Payments: Estimated future benefit payments for the SERP at December 31, 2023 are as follows (in thousands):

2024	$	942
2025		2,344
2026		2,519
2027		2,630
2028		2,604
Thereafter		13,551
Total	$	24,590

401(k) Investment Incentive Program:

Registrant has a 401(k) Investment Incentive Program under which employees may invest a percentage of their pay, up to a maximum investment prescribed by law, in an investment program managed by an outside investment manager. Registrant's cash contributions to the 401(k) are based upon a percentage of individual employee contributions and for the years ended December 31, 2023, 2022 and 2021 were $2.9 million, $2.7 million and $2.7 million, respectively. The Investment Incentive Program also incorporates the defined contribution plan for employees hired on or after January 1, 2011. The cash contributions to the defined contribution plan for the years ended December 31, 2023, 2022 and 2021 were $2.2 million, $2.0 million and $1.9 million, respectively.

Note 13 — Stock-Based Compensation Plans

Summary Description of Stock Incentive Plans

As of December 31, 2023, AWR had three stock incentive plans: the 2016 stock incentive plan for its employees, and the 2003 and 2023 non-employee directors plans for its Board of Directors, each more fully described below.

2016 Employee Plans — AWR adopted this employee plan, following shareholder approval, to provide stock-based incentive awards in the form of restricted stock units, stock options and restricted stock to employees as a means of promoting the success of Registrant by attracting, retaining and more fully aligning the interests of employees with those of customers and shareholders. The 2016 employee plan also provides for the grant of performance awards. There are no stock options or restricted stock grants currently outstanding. For restricted stock unit awards, the Compensation Committee determines the specific terms, conditions and provisions relating to each restricted stock unit. Each employee who has been granted a time-vested restricted stock unit is entitled to dividend equivalent rights in the form of additional restricted stock units until vesting of the time-vested restricted stock units. In general, time-vested restricted stock units vest over a period of three years. Restricted stock units may also vest upon retirement if the grantee is at least 55 and the sum of the grantee's age and years of service are equal to or greater than 75, or upon death or total disability. In addition, restricted stock units may vest following a change in control if the applicable subsidiary of AWR terminates the grantee other than for cause or the employee terminates employment for good reason. Each restricted stock unit is non-voting and entitles the holder of the restricted stock unit to receive one Common Share.

The Compensation Committee also has the authority to determine the number, amount or value of performance awards, the duration of the performance period or performance periods applicable to the award and the performance criteria applicable to each performance award for each performance period. Each outstanding performance award granted by the Compensation Committee has been in the form of restricted stock units that generally vest over a period of three years as provided in the performance award agreement. The amount of the performance award paid to an employee depends upon satisfaction of performance criteria following the end of a three-year performance period. Performance awards may also vest and be payable upon retirement if the grantee is at least 55 and the sum of the grantee's age and years of service are equal to or greater than 75, or upon death or total disability. In addition, performance awards may vest following a change in control if the applicable subsidiary of AWR terminates the grantee other than for cause or the employee terminates employment for good reason. The amount of the payment for performance awards granted will be at target in the event of death or a termination of employment (other than for cause) by the applicable subsidiary of AWR or termination by the employee for good reason within 24 months after a change in control. In all other circumstances, adjustments will be made to the amount of the payment to take into account the shortened performance period.

2003 and 2023 Directors Plans — The Board of Directors and shareholders of AWR have approved the 2003 and 2023 directors plans in order to provide the non-employee directors with supplemental stock-based compensation to encourage them to increase their stock ownership in AWR. New grants may not be made under the 2003 directors plan. Under the 2023 non-employee directors plan, non-employee directors are entitled to receive restricted stock units in an amount determined by

the Board of Directors prior to the meeting; provided that, in no event may that amount be equal to more than two times the then current annual retainer for services as a director divided by the fair market value of AWR's Common Shares on the date preceding the annual meeting. Such units are convertible into AWR's Common Shares 90 days after the grant date.

All non-employee directors of AWR who were directors of AWR at the 2003 annual meeting have also received restricted stock units, which will be distributed upon termination of the director's service as a director.

All restricted stock units and performance awards have been granted with dividend equivalent rights payable in the form of additional restricted stock units.

Recognition of Compensation Expense

Registrant recognizes compensation expense related to the fair value of stock-based compensation awards. Share-based compensation cost is measured at the grant date, based on the calculated fair value of the award, and is recognized as an expense over the employee's requisite service period (generally the vesting period of the equity grant). Immediate vesting occurs if the employee is at least 55 years old and the sum of the employee's age and years of employment is equal to or greater than 75. Registrant assumes that pre-vesting forfeitures will be minimal, and recognizes pre-vesting forfeitures as they occur, which results in a reduction in compensation expense.

The following table presents share-based compensation expenses for the years ended December 31, 2023, 2022 and 2021. These expenses resulting from restricted stock units, including performance awards, are included in administrative and general expenses in AWR's and GSWC's statements of income:

	AWR			GSWC		
	For The Years Ended December 31,			For The Years Ended December 31,		
(in thousands)	2023	2022	2021	2023	2022	2021
Stock-based compensation related to:						
Restricted stock units	$ 3,298	$ 2,571	$ 2,566	$ 2,994	$ 2,269	$ 2,313
Total stock-based compensation expense	$ 3,298	$ 2,571	$ 2,566	$ 2,994	$ 2,269	$ 2,313

Equity-based compensation cost capitalized as part of utility plant for the years ended December 31, 2023, 2022 and 2021 was approximately $450,000, $290,000 and $336,000, respectively, for both AWR and GSWC. For the years ended December 31, 2023, 2022 and 2021, approximately $750,000, $900,000 and $1.4 million, respectively, of tax benefits from stock-based awards were recorded for both AWR and GSWC.

Registrant amortizes stock-based compensation over the requisite (vesting) period for the entire award. Time-vesting restricted stock units vest and become non-forfeitable in installments of 33% the first two years and 34% in the third year, starting one year from the date of the grant. Outstanding performance awards vest and become non-forfeitable in installments of 33% the first two years and 34% in the third year and are distributed at the end of the performance period to the extent that the Compensation Committee determines that the performance criteria set forth in the award agreement have been satisfied.

Restricted Stock Units (Time-Vested) — A restricted stock unit ("RSU") represents the right to receive a share of AWR's Common Shares and are valued based on the fair market value of AWR's Common Shares on the date of grant. The fair value of RSUs were determined based on the closing trading price of Common Shares on the grant date. A summary of the status of Registrant's outstanding RSUs, excluding performance awards, to employees and directors as of December 31, 2023, and changes during the year ended December 31, 2023, is presented below:

	Number of Restricted Share Units	Weighted Average Grant-Date Value
Restricted share units at January 1, 2023	47,552	$ 49.01
Granted	19,837	94.71
Vested	(16,574)	87.28
Forfeited	(488)	92.84
Restricted share units at December 31, 2023	50,327	$ 54.00

As of December 31, 2023, there was approximately $622,000 of total unrecognized compensation cost related to time-vested restricted stock units granted under AWR's employee stock plans. That cost is expected to be recognized over a weighted average period of 1.53 years.

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Restricted Stock Units (Performance Awards) – During the years ended December 31, 2023, 2022 and 2021, the Compensation Committee granted performance awards in the form of restricted stock units to officers of Registrant. A performance award represents the right to receive a share of AWR's Common Shares if the Compensation Committee determines that specified performance goals have been met over the performance period specified in the grant (generally three years). Each grantee of any outstanding performance award may earn between 0% and up to 200% or 250% of the target amount, which varies depending on the target and Registrant's performance against performance goals, which are determined by the Compensation Committee on the date of grant. As determined by the Compensation Committee, the performance awards granted during the years ended December 31, 2023, 2022 and 2021 included various performance-based conditions and one market-based condition related to total shareholder return ("TSR") that will be earned based on Registrant's TSR compared to the TSR for a specific peer group of investor-owned water companies.

A summary of the status of Registrant's outstanding performance awards to officers as of December 31, 2023, and changes during the year ended December 31, 2023, is presented below:

	Number of Performance awards	Weighted Average Grant-Date Value
Performance awards at January 1, 2023	49,435	$ 83.70
Granted	19,696	96.04
Performance criteria adjustment	8,321	91.73
Vested	(12,095)	89.59
Performance awards at December 31, 2023	65,357	$ 87.35

A portion of the fair value of performance awards was estimated at the grant date based on the probability of satisfying the market-based condition using a Monte-Carlo simulation model, which assesses the probabilities of various outcomes of the market condition. The portion of the fair value of the performance awards associated with performance-based conditions was based on the fair market value of AWR's Common Shares at the grant date. The fair value of each outstanding performance award grant is amortized into compensation expense in installments of 33% the first two years and 34% in the third year of their respective vesting periods, which is generally over 3 years unless earlier vested pursuant to the terms of the agreement. The accrual of compensation costs is based on the estimate of the final expected value of the award and is adjusted as required for the portion based on the performance-based condition. Unlike the awards with performance-based conditions, for the portion based on the market-based condition, compensation cost is recognized, and not reversed, even if the market condition is not achieved, as required by the accounting guidance for share-based awards. As of December 31, 2023, $272,000 of unrecognized compensation costs related to performance awards is expected to be recognized over a weighted average period of 1.50 years.

Note 14 - Commitments

GSWC's Water Supply:

GSWC has contracts to purchase water or water rights for an aggregate amount of $2.7 million as of December 31, 2023. Included in the $2.7 million is a commitment of $1.3 million to use water rights from a third party under an agreement, which expires in 2028. The remaining $1.4 million is for commitments for purchased water with other third parties, which expire from 2025 through 2038.

GSWC's estimated future minimum payments under these purchased water supply commitments at December 31, 2023 are as follows (in thousands):

2024	$ 491
2025	441
2026	391
2027	391
2028	213
Thereafter	805
Total	$ 2,732

BVES Commitments:

Purchase Power Contracts:

BVES had entered into long-term, fixed-price contracts to purchase power over three- and five-year terms. These long-term contracts will expire during the fourth quarter of 2024. In July 2023, the CPUC approved a new power purchase agreement between BVES and a third party to procure renewable portfolio standard ("RPS") eligible energy and renewable energy credits as a bundled product. BVES will begin taking power under this long-term contract during the fourth quarter of 2024 to replace the existing expiring contracts. The new contract provides for the purchase of electricity during a delivery period from November 1, 2024 through December 31, 2035. As of December 31, 2023, BVES has power purchase commitments under these contracts that totals $45.8 million.

Renewables Portfolio Standard:

BVES is subject to the renewables portfolio standard law, which requires BVES to meet certain targets for purchases of energy from qualified renewable energy resources. BVES had an agreement with a third party to purchase RECs whereby BVES agreed to purchase approximately 578,000 RECs over a ten-year period through 2023, which has been used towards BVES meeting California's RPS requirements. On January 18, 2023, BVES filed a compliance report with the CPUC that covered pre-2023 compliance period, which did not reflect any RPS procurement deficiencies.

BVES executed a contract in July 2023 with a third party to procure RPS eligible energy and RECs as a bundled product. The RECs under this agreement will be delivered following the year in which energy is purchased. BVES has agreed to purchase approximately 587,000 RECs over the eleven-year term of the contract. In addition, BVES has executed additional REC purchase agreements that delivered in 2023 a total of 30,000 RECs with an additional 15,000 RECs delivered in January 2024. As of December 31, 2023, BVES believes that it has purchased sufficient RECs to be in compliance through 2024 and management does not believe any provision for loss or potential penalties is required as of December 31, 2023. The cost of RECS are recorded to the electric supply cost balancing account when retired. BVES has commitments for RECs under contracts totaling $9.0 million as of December 31, 2023.

See Note 16 for Registrant's future minimum payments under long-term non-cancelable operating leases.

Note 15 - Contingencies

Environmental Clean-Up and Remediation at GSWC:

GSWC has been involved in environmental remediation and cleanup at one of its plant sites that contained an underground storage tank, which was used to store gasoline for its vehicles. This tank was removed from the ground in July 1990 along with the dispenser and ancillary piping. Since then, GSWC has been involved in various remediation activities at this site.

As of December 31, 2023, the total spent to clean-up and remediate the plant site was approximately $6.3 million, of which $1.5 million has been paid by the State of California Underground Storage Tank Fund. Amounts paid by GSWC have been included in rate base and approved by the CPUC for recovery. As of December 31, 2023, GSWC has a regulatory asset and an accrued liability for the estimated remaining cost of $1.3 million to complete the cleanup at the site. The estimate includes costs for continued activities of groundwater cleanup and monitoring, future soil treatment and site-closure-related activities. The ultimate cost may vary as there are many unknowns in remediation of underground gasoline spills and this is an estimate based on currently available information. Management believes it is probable that the estimated additional costs will continue to be approved in rate base by the CPUC.

Contracted Services:

Most of ASUS's contract services are provided to the U.S. government pursuant to the terms of the initial 50-year, firm-fixed-price contracts and additional firm-fixed-price contracts subject to annual economic price adjustments. ASUS's subsidiaries also, from time to time, performs construction services on military bases as a subcontractor or pursuant to a task order agreement. Entering into contracts with the U.S. government subjects ASUS and its subsidiaries to potential government audits or investigations of its business practices and compliance with government procurement statutes and regulations. ASUS had been under a civil government investigation over bidding and estimating practices used in certain capital upgrade projects. In July 2023, ASUS and the U.S. government entered into an agreement that settled civil and monetary claims by the U.S. government. This settlement did not have a material impact on Registrant's financial statements.

Other Litigation:

Registrant is also subject to other ordinary routine litigation incidental to its business, some of which may include claims for compensatory and punitive damages. Management believes that rate recovery, proper insurance coverage and reserves are in place to insure against, among other things, property, general liability, employment, and workers' compensation

claims incurred in the ordinary course of business. Insurance coverage may not cover certain claims involving punitive damages. Registrant does not believe the outcome from any pending suits or administrative proceedings will have a material effect on Registrant's consolidated results of operations, financial position, or cash flows.

Note 16 — Leases

Right-of-use ("ROU") assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at the lease commencement date based on the estimated present value of lease payments over the lease term. As of December 31, 2023, Registrant has right-of-use assets of $8.0 million, short-term operating lease liabilities of $1.9 million and long-term operating lease liabilities of $6.6 million. Currently, Registrant does not have any financing leases.

Significant assumptions and judgments made as part of the lease standard include determining (i) whether a contract contains a lease, (ii) whether a contract involves an identified asset, and (iii) which party to the contract directs the use of the asset. The discount rates used to calculate the present value of lease payments were determined based on hypothetical borrowing rates available to Registrant over terms similar to the lease terms.

Registrant's leases consist of real estate and equipment leases, which are mostly GSWC's. Most of Registrant's leases require fixed lease payments. Some real estate leases have escalation payments which depend on an index. Variable lease costs were not material. Lease terms used to measure the lease liability include options to extend the lease if the option is reasonably certain to be exercised. Lease and non-lease components were combined to measure lease liabilities.

Registrant's supplemental lease information for the year ended December 31, 2023 is as follows (in thousands, except for weighted average data):

	For The Year Ended December 31, 2023	For The Year Ended December 31, 2022
Operating lease costs	$2,486	$2,609
Short-term lease costs	$147	$198
Weighted average remaining lease term (in years)	4.55	5.27
Weighted-average discount rate	4.0%	3.9%
Non-cash transactions		
Lease liabilities arising from obtaining right-of-use assets	$565	$1,569

For the years 2023, 2022 and 2021, Registrant's consolidated rent expense was approximately $2.3 million, $2.6 million and $2.5 million, respectively. Registrant's future minimum payments under long-term non-cancelable operating leases as of December 31, 2023 are as follows (in thousands):

2024	$ 2,161
2025	2,066
2026	1,816
2027	1,556
2028	1,305
Thereafter	386
Total lease payments	9,290
Less: imputed interest	815
Total lease obligations	8,475
Less: current obligations	1,856
Long-term lease obligations	$ 6,619

The consolidated operations of AWR and the operations of GSWC in regard to future minimum payments under long-term non-cancelable operating leases are not materially different.

Note 17 - Business Segments

AWR has three reportable segments, water, electric and contracted services. GSWC has one segment, water. On a stand-alone basis, AWR has no material assets other than its equity investments in its subsidiaries, note payables to banks, deferred income taxes and intercompany note receivables.

All GSWC and BVES business activities are conducted in California. Activities of ASUS and its subsidiaries are conducted in California, Florida, Kansas, Maryland, Massachusetts, New Mexico, North Carolina, South Carolina, Texas and Virginia. Some of ASUS's wholly owned subsidiaries are regulated by the state in which the subsidiary primarily conducts water and/or wastewater operations. Fees charged for operations and maintenance and renewal and replacement services are based upon the terms of the contracts with the U.S. government, which have been filed, as appropriate, with the commissions in the states in which ASUS's subsidiaries are incorporated.

The tables below set forth information relating to AWR's operating segments and AWR (parent). The utility plant balances are net of respective accumulated provisions for depreciation. Capital additions reflect capital expenditures paid in cash and exclude U.S. government-funded and third-party prime funded capital expenditures for ASUS's subsidiaries and property installed by developers and conveyed to GSWC and BVES.

	As Of And For The Year Ended December 31, 2023				
(dollars in thousands)	Water	Electric	Contracted Services	AWR Parent	Consolidated AWR
Operating revenues	$ 433,473	$ 41,832	$ 120,394	$ —	$ 595,699
Operating income (loss)	159,177	11,196	26,151	216	196,740
Interest expense (income), net	25,726	2,238	1,321	6,061	35,346
Net property, plant and equipment	1,735,534	140,279	16,467	—	1,892,280
Depreciation and amortization expense **(1)**	35,886	3,256	3,261	—	42,403
Income tax expense (benefit)	35,689	1,515	6,109	(1,714)	41,599
Capital additions	160,939	25,372	2,229	—	188,540

	As Of And For The Year Ended December 31, 2022				
(dollars in thousands)	Water	Electric	Contracted Services	AWR Parent	Consolidated AWR
Operating revenues	$ 340,602	$ 39,986	$ 110,940	$ —	$ 491,528
Operating income (loss)	92,455	11,740	22,449	(8)	126,636
Interest expense (income), net	21,659	831	(132)	2,343	24,701
Net property, plant and equipment	1,616,718	119,560	17,488	—	1,753,766
Depreciation and amortization expense **(1)**	34,805	2,792	3,718	—	41,315
Income tax expense (benefit)	16,346	2,439	5,476	(597)	23,664
Capital additions	146,730	18,069	1,441	—	166,240

	As Of And For The Year Ended December 31, 2021				
(dollars in thousands)	Water	Electric	Contracted Services	AWR Parent	Consolidated AWR
Operating revenues	$ 347,112	$ 38,345	$ 113,396	$ —	$ 498,853
Operating income (loss)	107,573	10,738	22,675	(9)	140,977
Interest expense (income), net	21,046	141	(637)	791	21,341
Net property, plant and equipment	1,499,745	106,508	19,751	—	1,626,004
Depreciation and amortization expense **(1)**	33,384	2,572	3,640	—	39,596
Income tax expense (benefit)	22,095	2,975	5,434	(81)	30,423
Capital additions	123,526	19,859	1,130	—	144,515

(1) Depreciation computed on regulated utilities' transportation equipment is recorded in other operating expenses and totaled $851,000, $382,000 and $379,000 for the years ended December 31, 2023, 2022 and 2021, respectively. For the year ended December 31, 2023, approximately $212,000 of additional depreciation expense on GSWC's transportation equipment was recorded that relates to the cumulative retroactive impact for the full year of 2022 approved in the CPUC final decision in GSWC's general rate case that resulted from an increase to the transportation equipment composite depreciation rates that are retroactive to January 1, 2022.

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The following table reconciles total net property, plant and equipment (a key figure for ratemaking) to total consolidated assets (in thousands):

	December 31,	
	2023	2022
Total net property, plant and equipment	$ 1,892,280	$ 1,753,766
Other assets	353,842	280,608
Total consolidated assets	$ 2,246,122	$ 2,034,374

Note 18 — Allowance for Doubtful Accounts

Registrant's allowance for doubtful accounts as of December 31, 2023 was developed based on expected credit losses and other considerations that may impact the customers' ability to pay their bills. The estimate considers customer payment history and trends but also any COVID relief funds that Registrant receives.

GSWC received confirmation from SWRCB that it is currently processing GSWC's application and expects to disburse approximately $3.5 million of COVID relief funds through the Extended Arrearage Program that will provide further assistance to customers for water debt accrued during the COVID-19 pandemic (Note 1). The CPUC has authorized GSWC and BVES to track incremental costs, including bad debt expense in excess of what is included in their respective revenue requirements, incurred as a result of the pandemic in COVID-19 related memorandum accounts to be filed with the CPUC for future recovery. In January 2022, GSWC received $9.5 million in COVID relief funds from the state of California through the initial California Water and Wastewater Arrearage Payment Program, which were applied to delinquent customers' eligible balances incurred during the COVID-19 pandemic. During 2022, BVES received a total of $473,000 from the state of California for similar relief funding for unpaid electric bills incurred during the pandemic. Pursuant to CPUC requirements, as of December 31, 2023, 2022 and 2021, GSWC and BVES have reflected these relief funds as a reduction to its COVID-19 memorandum accounts, as well as a reduction to its estimated allowance for doubtful accounts.

Other accounts receivable consist primarily of amounts due from third parties (non-utility customers) for various reasons, including amounts due from contractors, amounts due under settlement agreements, and amounts due from other third-party prime government contractors pursuant to agreements for construction of water and/or wastewater facilities for such third-party prime contractors.

The table below presents Registrant's provision for doubtful accounts charged to expense and accounts written off, net of recoveries. Provisions included in 2023, 2022 and 2021 for AWR and GSWC are as follows:

	AWR		
	December 31,		
(dollars in thousands)	2023	2022	2021
Balance at beginning of year	$ 4,440	$ 3,569	$ 5,316
Provision charged **(1)**	932	2,842	8,150
Accounts written off, net of recoveries **(2)**	(1,782)	(1,971)	(9,897)
Balance at end of year	$ 3,590	$ 4,440	$ 3,569
Allowance for doubtful accounts related to accounts receivable-customer	$ 3,537	$ 4,387	$ 3,516
Allowance for doubtful accounts related to other accounts receivable	53	53	53
Total allowance for doubtful accounts	$ 3,590	$ 4,440	$ 3,569

(1) In 2022 and 2021, includes amounts in excess of GSWC's and BVES's respective revenue requirements incurred during the COVID-19 pandemic. These incremental amounts are recorded as regulatory assets in the COVID-19 memorandum accounts.

(2) Reflects consideration of government relief funds expected to be received in 2024 and received in 2022 from the state of California for unpaid water and electric utility bills incurred during the pandemic. A total of $3.5 million is expected to be received for unpaid water utility bills in 2024, and $9.5 million and $473,000 was received in 2022 for unpaid water and electric utility bills, respectively.

(dollars in thousands)	GSWC December 31, 2023	2022	2021
Balance at beginning of year	$ 4,196	$ 3,221	$ 4,960
Provision charged **(3)**	754	2,501	7,732
Accounts written off, net of recoveries **(4)**	(1,503)	(1,526)	(9,471)
Balance at end of year	$ 3,447	$ 4,196	$ 3,221
Allowance for doubtful accounts related to accounts receivable-customer	$ 3,394	$ 4,143	$ 3,168
Allowance for doubtful accounts related to other accounts receivable	53	53	53
Total allowance for doubtful accounts	$ 3,447	$ 4,196	$ 3,221

(3) In 2022 and 2021, includes amounts in excess of GSWC's revenue requirement incurred during the COVID-19 pandemic. This incremental amount was recorded as a regulatory asset in the COVID-19 memorandum account.

(4) Reflects consideration of government relief funds expected to be received in 2024 and received in 2022 from the state of California for unpaid water utility bills incurred during the pandemic. A total of $3.5 million is expected to be received in 2024 and $9.5 million was received in 2022 for unpaid water utility bills.

Note 19 — Supplemental Cash Flow Information

The following table sets forth non-cash financing and investing activities and other cash flow information (in thousands).

	AWR December 31, 2023	2022	2021	GSWC December 31, 2023	2022	2021
Taxes and Interest Paid:						
Income taxes paid, net	$ 34,682	$ 27,370	$ 29,153	$ 31,625	$ 20,155	$ 21,428
Interest paid, net of capitalized interest	39,367	26,005	22,540	28,099	22,294	21,156
Non-Cash Transactions:						
Accrued payables for investment in utility plant	34,906	40,034	32,855	33,465	38,302	30,656
Property installed by developers and conveyed	4,690	1,549	7,222	4,690	1,549	7,222

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) or 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based on this evaluation, our principal executive officer and our principal financial officer concluded that the disclosure controls and procedures of AWR and GSWC were effective as of the end of the period covered by this annual report.

(b) Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control - Integrated Framework*, our management concluded that the internal control over financial reporting of AWR and GSWC was effective as of December 31, 2023.

(c) Attestation Report of the Independent Registered Public Accounting Firm

The effectiveness of our internal control over financial reporting of AWR as of December 31, 2023 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

(d) Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) or 15d(f) under the Exchange Act) of AWR and GSWC that occurred during the fourth quarter of 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the quarter ended December 31, 2023, no officer or director adopted, terminated, or modified any Rule 10b5-1 plans or non-Rule 10b5-1 plans.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information responsive to Part III, Item 10 is included in the Proxy Statement, to be filed by AWR with the SEC pursuant to Regulation 14A, under the captions therein entitled: (i) "Proposal 1: Election of Directors"; (ii) "Executive Officers"; (iii) "Governance of the Company"; (iv) "Stock Ownership"; (v) "Nominating and Governance Committee"; (vi) "Audit and Finance Committee;" and (vii) "Obtaining Additional Information From Us" and is incorporated herein by reference pursuant to General Instruction G(3).

Item 11. Executive Compensation

Information responsive to Part III, Item 11 is included in the Proxy Statement, to be filed by AWR with the SEC pursuant to Regulation 14A, under the captions therein entitled: (i) "Proposal 1: Election of Directors"; (ii) "Executive Officers;" (iii) "Governance of the Company" and (iv) "Compensation Committee" and is incorporated herein by reference pursuant to General Instruction G(3).

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information responsive to Part III, Item 12 is included in the Proxy Statement, to be filed by AWR with the SEC pursuant to Regulation 14A, under the captions entitled "Stock Ownership" are incorporated herein by reference pursuant to General Instruction G(3).

Securities Authorized for Issuance under Equity Compensation Plans:

AWR has made stock awards to its executive officers and managers under the 2016 employee plan. It has also made stock awards to its non-employee directors under the 2003 and 2023 director plans. Information regarding the securities, which have been issued and which are available for issuance under these plans is set forth in the table below as of December 31, 2023. This table does not include any AWR Common Shares that may be issued under our 401(k) plan.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights[1]	Weighted-average exercise price of outstanding options, warrants and rights[2]	Number of securities remaining available for future issuance under equity compensation plans (excluding securities Reflected in the first column)[3]
Equity compensation plans approved by shareholders	146,314	N/A	1,145,567
Equity compensation plans not approved by shareholders	–	–	–
Total	146,314	N/A	1,145,567

(1) Amount shown in this column consists of 27,836 time-vested restricted stock units outstanding under the 2016 employee plan (including dividend equivalents thereon with respect to declared dividends), 95,987 performance awards at the maximum level (including dividend equivalents thereon with respect to declared dividends) outstanding under the 2016 employee plan, and 22,491 restricted stock units (including dividend equivalents thereon with respect to declared dividends) outstanding under the 2003 directors plan.

(2) Amount shown in this column is for options granted only. As of December 31, 2023, there were no options outstanding.

(3) Amount shown in this column consists of 192,206 shares available under the 2003 directors plan, 246,396 shares available under the 2023 directors plan, and 706,965 shares available under the 2016 employee plan. The only increase in restricted stock units in the 2003 directors plan will come from restricted stock units that may be issued under the 2003 directors plan pursuant to dividend equivalent rights on dividends not yet declared with respect to restricted stock units previously granted under the 2003 directors plan. No additional stock awards may be granted under the 2003 directors plan.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information responsive to Part III, Item 13 is included in the Proxy Statement, to be filed by AWR with the SEC pursuant to Regulation 14A, under the caption therein entitled "Governance of the Company" and is incorporated herein by reference pursuant to General Instruction G(3).

Item 14. Principal Accounting Fees and Services

Information responsive to Part III, Item 14 is included in the Proxy Statement, to be filed by AWR with the SEC pursuant to Regulation 14A, under the caption therein entitled "Proposal 3: Ratification of Auditors" and is incorporated herein by reference pursuant to General Instruction G(3).

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as a part of this Annual Report on Form 10-K:

1. Reference is made to the Financial Statements incorporated herein by reference to Part II, Item 8 hereof.

2. Schedule I — Condensed Financial Information of American States Water Company Parent at December 31, 2023 and 2022 and for the years ended December 31, 2023, 2022 and 2021. Schedules II, III, IV, and V are omitted as they are not applicable.

See page 127.

3. Reference is made to Item 15(b) of this Annual Report on Form 10-K.

(b) Exhibits:

3.1	Amended and Restated By-Laws of American States Water Company incorporated by reference to Exhibit 3.1 of Registrant's Form 10-Q filed for September 30, 2023
3.2	By-laws of Golden State Water Company incorporated by reference to Exhibit 3.2 of Registrant's Form 8-K filed May 13, 2011 (File No. 1-14431)
3.3	Amended and Restated Articles of Incorporation of American States Water Company, as amended, incorporated by reference to Exhibit 3.1 of Registrant's Form 8-K filed June 19, 2013
3.4	Restated Articles of Incorporation of Golden State Water Company, as amended, incorporated herein by reference to Exhibit 3.1 of Registrant's Form 10-Q for the quarter ended September 30, 2005 (File No. 1-14431)
4.1	Indenture, dated September 1, 1993 between Golden State Water Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee, as supplemented, incorporated herein by reference to Exhibit 4.01 of Golden State Water Company Form S-3 filed December 12, 2008 (File No. 333-156112)
4.2	Note Purchase Agreement dated as of October 11, 2005 between Golden State Water Company and Co-Bank, ACB incorporated by reference to Exhibit 4.1 of Registrant's Form 8-K filed October 13, 2005 (File No. 1-14431)
4.3	Description of Common Shares (1)
4.4	Description of Debt Securities incorporated by reference to Exhibit 4.4 to Registrant's Form 10-K for the year ended December 31,2021
10.1	Second Sublease dated October 5, 1984 between Golden State Water Company and Three Valleys Municipal Water District incorporated herein by reference to Registrant's Registration Statement on Form S-2, Registration No. 33-5151
10.2	Loan Agreement between California Pollution Control Financing Authority and Golden State Water Company, dated as of December 1, 1996 incorporated by reference to Exhibit 10.7 of Registrant's Form 10-K for the year ended December 31, 1998 (File No. 1-14431)
10.3	Water Supply Agreement dated as of June 1, 1994 between Golden State Water Company and Central Coast Water Authority incorporated herein by reference to Exhibit 10.15 of Registrant's Form 10-K with respect to the year ended December 31, 1994 (File No. 1-14431)
10.4	2003 Non-Employee Directors Stock Purchase Plan, as amended, incorporated herein by reference to Exhibit 10.4 to Registrant's Form 8-K filed on May 20, 2015 (File No. 1-14431) (2)
10.5	Dividend Reinvestment and Common Share Purchase Plan incorporated herein by reference to American States Water Company Registrant's Form S-3D filed November 12, 2008 (File No. 1-14431)
10.6	Change in Control Agreement between American States Water Company or a subsidiary and certain executives incorporated herein by reference to Exhibit 10.6 to Registrant's Form 10-K for the year ended December 31, 2022 (2)
10.7	Golden State Water Company Supplemental Executive Retirement Plan, amended and restated, incorporated herein by reference to Exhibit 10.7 to Registrant's Form 10-Q filed on May 2, 2022 (2)
10.8	Credit Agreement of American States Water Company dated June 28, 2023, as amended , incorporated by reference to Exhibit 10.8 to Registrant's Form 10-Q filed for September 30, 2023
10.9	Officer Relocation Policy incorporated herein by reference to Exhibit 10.5 to Registrant's Form 8-K filed on July 31, 2009 (2)

10.10	Credit Agreement of Golden State Water Company dated June 28, 2023 incorporated by reference to Registrant's Form 8-K filed on July 5, 2023
10.11	2016 Stock Incentive Plan incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K filed on May 19, 2016 (2)
10.12	2023 Non-Employee Directors Plan incorporated by reference herein to Exhibit 10.1 to Registrant's Form 8-K filed on May 26, 2023 (2)
10.13	Form of Restricted Stock Award Agreement for officers with respect to time-vested restricted stock awards under the 2016 Stock Incentive Plan after December 31, 2017 incorporated by reference to Exhibit 10.1 of Form 8-K filed on November 3, 2017 (2)
10.14	Note Purchase Agreement dated July 8, 2020 incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K filed July 14, 2020
10.15	Form of 2021 Performance Award Agreement incorporated by reference to Exhibit 10.1 of Registrant's Form 8-K filed February 5, 2021 (2)
10.16	Separation Agreement and General Release of Claims dated August 10, 2021 incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K filed on August 13, 2021 (2)
10.17	Retirement Agreement and General Release of Claims effective January 14, 2022, incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K filed on January 21, 2022 (2)
10.18	Contract for Professional Services effective January 15, 2022, incorporated by reference to Exhibit 10.2 to Registrant's Form 8-K filed on January 21, 2022 (2)
10.19	Form of 2022 Performance Award Agreement incorporated by reference to Exhibit 10.1 of Registrant's Form 8-K filed February 4, 2022 (2)
10.20	Form of 2023 Performance Award Agreement incorporated by reference to Exhibit 10.1 of Registrant's Form 8-K filed February 10, 2023 (2)
10.21	Form of Indemnification Agreement for directors and officers incorporated by reference to Exhibit 10.24 to Registrant's Form 10-K for the year ended December 31, 2022 (2)
10.22	Short-Term Incentive Program incorporated by reference to Exhibit 10.1 of Registrant's Form 8-K filed on March 31, 2023 (2)
10.23	Form of 2023 Short-Term Incentive Program Award Agreement incorporated by reference to Exhibit 10.2 of Registrant's Form 8-K filed on March 31, 2023 (2)
19.1	Insider Trading Policy (1)
21	Subsidiaries of Registrant (1)
23.1	Consent of Independent Registered Public Accounting Firm for AWR (1)
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for AWR (1)
31.1.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for GSWC (1)
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for AWR (1)
31.2.1	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for GSWC (1)
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (3)
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (3)
97.1	Policy Regarding the Recoupment of Certain Performance-Based Compensation Payments revised October 31, 2023 incorporated by reference to Exhibit 10.9 to Registrant's Form 10-Q filed for September 30, 2023
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema (3)
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase (3)
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase (3)

101.LAB	Inline XBRL Taxonomy Extension Label Linkbase (3)
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase (3)
104	Cover Page Interactive Data File - (formatted as Inline XBRL and contained in Exhibit 101)

(c) See Item 15(a)(2)

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(1) Filed concurrently herewith
(2) Management contract or compensatory arrangement
(3) Furnished concurrently herewith

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Registrants have duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMERICAN STATES WATER COMPANY ("AWR"):

By: /s/ EVA G. TANG
Eva G. Tang
Senior Vice President-Finance, Chief Financial Officer, Treasurer and Corporate Secretary

GOLDEN STATE WATER COMPANY ("GSWC"):

By: /s/ EVA G. TANG
Eva G. Tang
Senior Vice President-Finance, Chief Financial Officer and Secretary

Date: February 21, 2024

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Registrants and in the capacities and on the dates indicated.

	Date:
/s/ ANNE M. HOLLOWAY	February 21, 2024
Anne M. Holloway Chairman of the Board and Director of AWR and GSWC	
/s/ ROBERT J. SPROWLS	February 21, 2024
Robert J. Sprowls Principal Executive Officer, President and Chief Executive Officer of AWR and GSWC and Director of AWR and GSWC	
/s/ EVA G. TANG	February 21, 2024
Eva G. Tang Principal Financial and Accounting Officer, Senior Vice President-Finance, Chief Financial Officer, Treasurer and Corporate Secretary of AWR; and Principal Financial and Accounting Officer, Senior Vice President-Finance, Chief Financial Officer and Secretary of GSWC	
/s/ DIANA M. BONTÁ	February 21, 2024
Diana M. Bontá Director of AWR and GSWC	
/s/ STEVEN D. DAVIS	February 21, 2024
Steven D. Davis Director of AWR and GSWC	
/s/ THOMAS A. EICHELBERGER	February 21, 2024
Thomas A. Eichelberger Director of AWR and GSWC	
/s/ JOHN R. FIELDER	February 21, 2024
John R. Fielder Director of AWR and GSWC	
/s/ MARY ANN HOPKINS	February 21, 2024
Mary Ann Hopkins Director of AWR and GSWC	
/s/ C. JAMES LEVIN	February 21, 2024
C. James Levin Director of AWR and GSWC	
/s/ ROGER M. ERVIN	February 21, 2024
Roger M. Ervin Director of AWR and GSWC	

AMERICAN STATES WATER COMPANY
SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF PARENT

CONDENSED BALANCE SHEETS

(in thousands)	December 31, 2023	2022
Assets		
Cash and equivalents	$ 3,547	$ 93
Prepayments and other current assets	116	—
Income taxes receivable	39	20
Intercompany note receivables	39,044	159,582
Total current assets	42,746	159,695
Investments in subsidiaries	870,020	799,802
Deferred taxes and other assets	10,135	9,891
Total assets	$ 922,901	$ 969,388
Liabilities and Capitalization		
Notes payable to bank	$ —	$ 255,500
Income taxes payable	2,422	2,158
Other liabilities	577	454
Total current liabilities	2,999	258,112
Notes payable to bank	141,500	—
Deferred taxes and other liabilities	2,293	1,727
Total other liabilities	143,793	1,727
Common shareholders' equity	776,109	709,549
Total capitalization	776,109	709,549
Total liabilities and capitalization	$ 922,901	$ 969,388

The accompanying condensed notes are an integral part of these condensed financial statements.

AMERICAN STATES WATER COMPANY
SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF PARENT

CONDENSED STATEMENTS OF INCOME

(In thousands, except per share amounts)	For the Years Ended December 31, 2023	2022	2021
Operating revenues and other income	$ —	$ —	$ —
Operating expenses and other expenses	5,576	2,093	542
Loss before equity in earnings of subsidiaries and income taxes	(5,576)	(2,093)	(542)
Equity in earnings of subsidiaries	128,783	79,892	94,808
Income before income taxes	123,207	77,799	94,266
Income tax benefit	(1,714)	(597)	(81)
Net income	$ 124,921	$ 78,396	$ 94,347
Weighted Average Number of Common Shares Outstanding	36,976	36,955	36,921
Basic Earnings Per Common Share	$ 3.37	$ 2.12	$ 2.55
Weighted Average Number of Diluted Common Shares Outstanding	37,077	37,039	37,010
Fully Diluted Earnings per Common Share	$ 3.36	$ 2.11	$ 2.55
Dividends Paid Per Common Share	$ 1.655	$ 1.525	$ 1.400

The accompanying condensed notes are an integral part of these condensed financial statements.

AMERICAN STATES WATER COMPANY
SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF PARENT

CONDENSED STATEMENTS OF CASH FLOWS

	For the Years Ended December 31,		
(in thousands)	**2023**	**2022**	**2021**
Cash Flows From Operating Activities	$ 67,041	$ 56,398	$ 36,799
Cash Flows From Investing Activities:			
Loans (made to)/repaid from, wholly-owned subsidiaries	121,000	(81,000)	(46,000)
Increase in investment of subsidiary	(10,000)	—	—
Net cash provided (used) by investing activities	111,000	(81,000)	(46,000)
Cash Flows From Financing Activities:			
Net borrowings on notes payable to banks	(113,392)	81,000	60,500
Proceeds from note payable to GSWC	—	—	(26,000)
Repayment of note payable to GSWC	—	—	26,000
Dividends paid	(61,195)	(56,356)	(51,689)
Net cash provided (used) by financing activities	(174,587)	24,644	8,811
Net change in cash and cash equivalents	3,454	42	(390)
Cash and equivalents at beginning of period	93	51	441
Cash and equivalents at the end of period	$ 3,547	$ 93	$ 51

The accompanying condensed notes are an integral part of these condensed financial statements.

AMERICAN STATES WATER COMPANY
NOTES TO CONDENSED FINANCIAL INFORMATION OF PARENT

Note 1 — Basis of Presentation

The accompanying condensed financial statements of AWR (parent) should be read in conjunction with the consolidated financial statements and notes thereto of American States Water Company and subsidiaries ("Registrant") included in Part II, Item 8 of this Form 10-K. AWR's (parent) significant accounting policies are consistent with those of Registrant and its wholly owned subsidiaries, Golden State Water Company ("GSWC"), Bear Valley Electric Service, Inc. ("BVES") and American States Utility Services, Inc. ("ASUS"), except that all subsidiaries are accounted for as equity method investments.

Related-Party Transactions:

As further discussed in *Note 2 — Notes Payable to Banks*, AWR (parent) currently has access to a $165.0 million syndicated credit facility. AWR (parent) borrows under this facility and provides funds to ASUS in support of their operations and itself. Prior to the new credit agreement in June 2023, described below, AWR (parent) had a credit facility with access of up to $280.0 million and had provided funds to both GSWC and ASUS in support of their operations. Any amounts owed to AWR (parent) for borrowings under this facility are reflected as intercompany receivables on the Condensed Balance Sheets. The interest rate charged to its subsidiaries is sufficient to cover AWR (parent)'s interest cost under the credit facility. AWR may, from time to time, also make equity investments in its subsidiaries.

In October 2020, AWR (parent) issued an interest-bearing promissory note to GSWC, which expired in May 2023. Under the terms of the note, AWR (parent) was permitted to borrow from GSWC amounts up to $30.0 million for working capital purposes. AWR (parent) agreed to pay any unpaid principal amounts outstanding under this note, plus accrued interest. During 2021, AWR (parent) borrowed and repaid a total of $26.0 million from GSWC under the terms of the note. There were no borrowings or repayments made during 2022 and 2023. As of December 31, 2023 and 2022, there were no amounts outstanding under this note.

In January 2023, the Board of Directors approved the issuance of one GSWC Common Share to AWR (parent) for $10.0 million. In January 2023, GSWC issued $130.0 million in unsecured long-term notes in a private placement. GSWC used the proceeds from both the issuance of equity and long-term debt to pay-off all intercompany borrowings from AWR (parent).

AWR (parent) guarantees performance of ASUS's contracts with the U.S. government and agrees to provide necessary resources, including financing, which are necessary to assure the complete and satisfactory performance of such contracts.

Note 2 — Note Payable to Banks

On June 28, 2023, AWR (parent) entered into a new credit agreement with a term of five years provided by a syndicate of banks and financial institutions. The credit agreement will mature on June 28, 2028. In connection with the new credit agreement, AWR (parent) incurred legal and other fees totaling $632,000. The syndicated credit facility replaced AWR (parents)'s previous credit agreement with a sole bank where it had a borrowing capacity of $280.00 million. Funds from the new facilities were used to pay-off in full all outstanding borrowings under AWR (parent)'s prior credit facility.

The new credit agreement provides for a $150.0 million unsecured revolving credit facility. Under the credit agreement, the borrowing capacity may be expanded up to an additional amount of $75 million, subject to the lenders' approval. The aggregate amount that may be outstanding under letters of credit is $10.0 million. Loans may be obtained under the credit facilities at the option of AWR (parent) and bear interest at rates based on either a base rate plus an applicable margin or an adjusted term SOFR determined by the SOFR administrator, currently the Federal Reserve Bank of New York, plus an applicable margin. The applicable margin depends upon AWR's credit ratings.

On November 6, 2023, the credit facility was amended to increase the borrowing capacity from $150.0 million to $165.0 million. In connection with the increase in borrowing capacity, the amendment also provides for the addition of a new bank to the existing syndicate group participating in AWR's credit facility. As of December 31, 2023, outstanding borrowings under its credit facility of $141.5 million have been classified as non-current liabilities on its Condensed Balance Sheet.

The credit agreement contains affirmative and negative covenants and events of default customary for credit facilities of this type, including, among other things, affirmative covenants relating to compliance with law and material contracts, and negative covenants relating to additional in indebtedness, liens, investments, restricted payments and asset sales by AWR (parent) and its subsidiaries, other than BVES. AWR (parent) is not permitted to have a consolidated total capitalization ratio (as defined in the credit agreement), excluding BVES, greater than 0.65 to 1.00 at the end of any quarter. Default under any indebtedness of any subsidiary of AWR (parent), other than BVES, will result in a default under its credit agreement. As of December 31, 2023, AWR (parent) had a debt ratio of 0.54 to 1.00.

AWR (parent)'s borrowing activities (excluding letters of credit) for the years ended December 31, 2023 and 2022 were as follows:

	December 31,	
(in thousands, except percent)	2023	2022
Balance Outstanding at December 31,	$ 141,500	$ 255,500
Interest Rate at December 31,	6.45 %	5.07 %
Average Amount Outstanding	$ 156,533	$ 213,758
Weighted Average Annual Interest Rate	5.92 %	2.56 %
Maximum Amount Outstanding	$ 257,500	$ 255,500

Note 3 — Income Taxes

AWR (parent) receives a tax benefit for expenses incurred at the parent-company level. AWR (parent) also recognizes the effect of AWR's consolidated California unitary apportionment, which is beneficial or detrimental depending on a combination of the profitability of AWR's consolidated non-California activities as well as the proportion of its consolidated California sales to total sales.

Note 4 — Dividend from Subsidiaries

Cash dividends in the amount of $71.4 million, $56.4 million and $38.3 million were paid to AWR (parent) by its wholly owned subsidiaries during the years ended December 31, 2023, 2022 and 2021, respectively.

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file No. 1-13883

CALIFORNIA WATER SERVICE GROUP
(Exact name of registrant as specified in its charter)

Delaware	**77-0448994**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
1720 North First Street	
San Jose, California	**95112**
(Address of Principal Executive Offices)	(Zip Code)

(408) 367-8200
(Registrant's Telephone Number, including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class:	**Trading Symbol(s)**	**Name of Each Exchange on Which Registered:**
Common Stock, $0.01 par value per share	CWT	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 of Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232,405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated Filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☒

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant was $1,814 million on June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter. The valuation is based on the closing price of the registrant's common stock as traded on the New York Stock Exchange.

The Common stock outstanding at February 12, 2024 was 57,675,179 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required to be disclosed in Part III of this report is incorporated by reference from the registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be held on or about May 29, 2024. The proxy statement is expected to be filed no later than 120 days after the end of the fiscal year covered by this report.

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PART I

Item 1. ***Business.***

Forward-Looking Statements

This annual report, including all documents incorporated by reference, contains forward-looking statements within the meaning established by the Private Securities Litigation Reform Act of 1995 (the PSLRA). The forward-looking statements are intended to qualify under provisions of the federal securities laws for "safe harbor" treatment established by the PSLRA. Forward-looking statements in this annual report are based on currently available information, expectations, estimates, assumptions and projections, and our management's beliefs, assumptions, judgments and expectations about us, the water utility industry and general economic conditions. These statements are not statements of historical fact. When used in our documents, statements that are not historical in nature, including words like "will," "would," "expects," "intends," "plans," "believes," "may," "could," "estimates," "assumes," "anticipates," "projects," "progress," "predicts," "hopes," "targets," "forecasts," "should," "seeks," "indicates," or variations of these words or similar expressions are intended to identify forward-looking statements. Examples of forward-looking statements in this annual report include, but are not limited to, statements describing our intention, indication or expectation regarding our financial performance, dividends or targeted payout ratio, our expectations, anticipations or beliefs regarding governmental, legislative, judicial, administrative or regulatory timelines, decisions, approvals, authorizations, requirements or other actions, including our 2021 GRC, rate amounts or cost recovery, certain PFAS regulations, and associated impacts, such as our expected or estimated revenue benefit or loss, authorized return on equity, cost of debt and capital structure, expectations regarding regulatory asset and operating revenue recognition, sources of funding or capital requirements, estimates of, or expectations regarding, capital expenditures, funding needs or other capital requirements, obligations, contingencies or commitments, our expectations regarding water sources, our beliefs regarding adequacy of water supplies, our anticipation regarding renewing water supply contracts, and estimated water prices, estimated future amortization expense, estimates relating to our significant accounting policies, such as deferred revenue or assets or refund of advances, our expectations regarding stock-based compensation and estimated contributions to our pension plans and other postretirement benefit plans, our estimated annual effective tax rate and expectations regarding tax benefits, our intentions regarding use of net proceeds from any future equity or debt issuances or borrowings or our intentions or anticipations regarding our sources of funding, capital structure or capital allocation plans. The forward-looking statements are not guarantees of future performance. They are based on numerous assumptions that we believe are reasonable, but they are open to a wide range of uncertainties and business risks. Consequently, actual results may vary materially from what is contained in a forward-looking statement.

Factors which may cause actual results to be different than those expected or anticipated include, but are not limited to:

- the outcome and timeliness of regulatory commissions' actions concerning rate relief and other matters, including with respect to our 2021 GRC;
- changes in regulatory commissions' policies and procedures, such as the California Public Utilities Commission (CPUC)'s decision in 2020 to preclude companies from proposing fully decoupled WRAMs (which impacted our 2021 GRC);
- our ability to collect eligible customer arrearages and program administrative costs under the California Extended Water and Wastewater Arrearages Payment Program;
- our ability to invest or apply the proceeds from the issuance of common stock in an accretive manner;
- governmental and regulatory commissions' decisions, including decisions on proper disposition of property;
- consequences of eminent domain actions relating to our water systems;
- increased risk of inverse condemnation losses as a result of climate change and drought;
- changes in California State Water Resources Control Board water quality standards;
- changes in environmental compliance and water quality requirements;
- electric power interruptions, especially as a result of Public Safety Power Shutoff (PSPS) programs;
- availability of water supplies;
- housing and customer growth;
- the impact of opposition to rate increases;

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- our ability to recover costs;
- our ability to renew leases to operate water systems owned by others on beneficial terms;
- issues with the implementation, maintenance or security of our information technology systems;
- civil disturbances or terrorist threats or acts;
- the adequacy of our efforts to mitigate physical and cyber security risks and threats;
- the ability of our enterprise risk management processes to identify or address risks adequately;
- labor relations matters as we negotiate with the unions;
- changes in customer water use patterns and the effects of conservation, including as a result of drought conditions;
- our ability to complete, in a timely manner or at all, successfully integrate, and achieve anticipated benefits from announced acquisitions;
- the impact of weather, climate change, natural disasters, and actual or threatened public health emergencies, including disease outbreaks, on our operations, water quality, water availability, water sales and operating results and the adequacy of our emergency preparedness;
- restrictive covenants in or changes to the credit ratings on our current or future debt that could increase our financing costs or affect our ability to borrow, make payments on debt or pay dividends;
- risks associated with expanding our business and operations geographically;
- the impact of stagnating or worsening business and economic conditions, including inflationary pressures, general economic slowdown or a recession, increasing interest rates, instability of certain financial institutions, changes in monetary policy, adverse capital markets activity or macroeconomic conditions as a result of geopolitical conflicts, and the prospect of a shutdown of the U.S. federal government;
- the impact of market conditions and volatility on unrealized gains or losses on our non-qualified benefit plan investments and our operating results;
- the impact of weather and timing of meter reads on our accrued unbilled revenue;
- the impact of evolving legal and regulatory requirements, including emerging environmental, social and governance requirements; and
- the risks set forth in “Risk Factors” included elsewhere in this annual report.

In light of these risks, uncertainties and assumptions, investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of this annual report or as of the date of any document incorporated by reference in this annual report, as applicable. When considering forward-looking statements, investors should keep in mind the cautionary statements in this annual report and the documents incorporated by reference. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise.

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Overview

California Water Service Group (Company) is a holding company with seven operating subsidiaries: California Water Service Company (Cal Water), New Mexico Water Service Company (New Mexico Water), Washington Water Service Company (Washington Water), Hawaii Water Service Company, Inc. (Hawaii Water), TWSC, Inc. (Texas Water), and CWS Utility Services and HWS Utility Services LLC (CWS Utility Services and HWS Utility Services LLC being referred to collectively in this annual report as Utility Services). Cal Water, New Mexico Water, Washington Water, and Hawaii Water are regulated public utilities. Texas Water is a holding company with regulated and contracted wastewater utilities.

The regulated utility entities also provide some non-regulated services. Utility Services holds non-utility property and provides non-regulated services to private companies and municipalities outside of California (see "Non-Regulated Activities" below for more details). Cal Water was the original operating company that began operations in 1926.

Our business is conducted through our operating subsidiaries and we provide utility services to approximately two million people. The bulk of the business consists of the production, purchase, storage, treatment, testing, distribution, and sale of water for domestic, industrial, public, and irrigation uses, and the provision of domestic and municipal fire protection services. In some areas, we provide wastewater collection and treatment services, including treatment which allows water recycling. We also provide non-regulated water-related services under agreements with municipalities and other private companies. The non-regulated services include full water system operation, meter reading, and billing services. Non-regulated operations also include the lease of communication antenna sites, lab services, and promotion of other non-regulated services.

During the year ended December 31, 2023, there were no significant changes in the kind of products produced or services rendered by our operating subsidiaries, or in the markets or methods of distribution.

Our mailing address and contact information is:

California Water Service Group
1720 North First Street
San Jose, California 95112-4598
Telephone number: 408-367-8200
www.calwatergroup.com

Annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports are available free of charge through our website at www.calwatergroup.com. The reports are available on our website as soon as reasonably practicable after such reports are filed with the SEC.

The content on any website referred to in this annual report is not incorporated by reference in this annual report unless expressly noted.

Regulated Business

California water operations are conducted by Cal Water, which provides service to approximately 497,700 customer connections in approximately 100 California communities through 21 separate districts, which are subject to regulation by the CPUC. California water operations accounted for approximately 89.5% of our total customer connections and 90.6% of our total consolidated operating revenue in 2023.

We operate the City of Hawthorne and the City of Commerce water systems under lease agreements. In accordance with the lease agreements, we receive all revenues from operating the systems and are responsible for paying the operating costs. The City of Hawthorne and the City of Commerce lease revenues are governed through their respective city councils and are considered non-regulated because they are outside of the CPUC's jurisdiction. We report revenue and expenses for the City of Hawthorne and City of Commerce leases in operating revenue and operating expenses because we are entitled to retain all customer billings and are responsible for all operating expenses. These leases are considered "nontariffed products and services" (NTPS) by the CPUC and require a 10% revenue sharing with regulated customers.

In October of 2011, an agreement was negotiated with the City of Hawthorne to lease and operate its water system. The system, which is located near the Hermosa Redondo district, serves about half of Hawthorne's population. The capital lease agreement required an up-front $8.1 million lease deposit to the city that is being amortized over the lease term. Additionally, annual lease payments are contracted to be adjusted based on changes in rates charged to customers. Under the lease, we are responsible for all aspects of system operation and capital improvements, although title to the system and system improvements reside with the city. Capital improvements are recorded as depreciable plant and equipment and depreciated per the asset lives set forth in the agreement. In exchange, we receive all revenue from the water system, which was $12.2 million, $12.5 million, and $11.4 million in 2023, 2022, and 2021, respectively. At the end of the lease, the city is required to reimburse us for the unamortized value of capital improvements made during the term of the lease. The City of Hawthorne capital lease is a 15-year lease and expires in 2026.

In April of 2018, a renewal agreement was negotiated with the City of Commerce for us to continue to lease and to operate its water system for 15 years. Under the agreement, the operating lease requires us to pay $0.8 million per year in monthly installments. We have operated the City of Commerce water system since 1985 and are responsible for all operations, maintenance, water quality assurance, customer service programs, and financing capital improvements to provide a reliable supply of water that meets federal and state standards to customers served by the City of Commerce system. The City of Commerce retains title to the system and system improvements and remains responsible for setting its customers' water rates. We bear the risks of operation and collection of amounts billed to customers. In exchange, we receive all revenue from the water system, which was $4.2 million, $4.2 million, and $3.4 million in 2023, 2022, and 2021, respectively. The agreement allows us to request a rate change annually in order to recover costs.

Hawaii Water provides service to approximately 6,500 water and wastewater customer connections on the islands of Kauai, Maui, Oahu, and Hawaii, including several large resorts and condominium complexes. Hawaii Water's regulated customer connections are subject to the jurisdiction of the Hawaii Public Utilities Commission (HPUC). Hawaii Water accounted for 1.2% of our total customer connections and approximately 5.2% of our total consolidated operating revenue in 2023.

Washington Water provides domestic water service to approximately 38,000 customer connections in the Tacoma, Olympia, Graham, Spanaway, Puyallup, Rainier, Yelm, and Gig Harbor areas. Washington Water's utility operations are regulated by the Washington Utilities and Transportation Commission (UTC). Washington Water accounted for approximately 6.8% of our total customer connections and approximately 3.0% of our total consolidated operating revenue in 2023.

New Mexico Water provides service to approximately 11,400 water and wastewater customer connections in our Rio Communities, Rio Del Oro, Meadow Lake, Indian Hills, Squaw Valley, Elephant Butte, Morningstar, Sandia Knolls, Juan Tomas, and Cypress Gardens systems. New Mexico's regulated operations are subject to the jurisdiction of the New Mexico Public Regulation Commission (NMPRC). New Mexico Water accounted for approximately 2.0% of our total customer connections and 0.9% of our total consolidated operating revenue in 2023.

In May of 2021, Texas Water became the majority owner of BVRT Utility Holding Company (BVRT), a Texas-based utility development company owning and operating four wastewater utilities serving growing communities outside of Austin and San Antonio. Texas Water initially invested funds to enable BVRT to continue to build wastewater infrastructure and converted its investment to equity. BVRT's four wastewater utilities currently serve or are under contract to serve approximately 2,800 customer connections. On August 16, 2022, BVRT entered into a long-term water supply agreement with the Guadalupe Blanco River Authority (GBRA) that enables BVRT to receive up to 2,419 acre-feet of potable water annually (see Note 14 for more details). Texas Water accounted for approximately 0.5% of our total customer connections and 0.3% of our total consolidated operating revenue in 2023.

The state regulatory bodies governing our regulated operations are referred to as the Commissions in this annual report. Rates and operations for regulated customers are subject to the jurisdiction of the respective state's regulatory Commission. The Commissions require that water and wastewater rates for each regulated district are independently determined based on the cost of service. The Commissions are expected to authorize rates sufficient to recover normal operating expenses and allow the utility to earn a fair and reasonable return on invested capital.

We treat and distribute water and treat wastewater in accordance with accepted water utility methods. Where applicable, we hold franchises and permits in the cities and communities where we operate. The franchises and permits allow us to operate and maintain facilities in public streets and rights-of-way as necessary.

Non-Regulated Activities

Non-regulated activities consist primarily of the operation of water systems that are owned by other entities under lease agreements, leasing of communication antenna sites on our properties, and billing of optional third-party insurance programs to our residential customers.

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Fees for non-regulated activities are based on contracts negotiated between the parties. Under our non-regulated contract arrangements, we operate municipally owned water systems and privately owned water and recycled water distribution systems, but are not responsible for all operating costs. Non-regulated revenue received from non-leased water system operations is generally determined on a fee-per-customer basis.

In California, nearly all non-regulated activities are considered NTPS. The prescribed accounting for these NTPS is incremental cost allocation plus revenue sharing with regulated customers. Non-regulated services determined to be "active activities" require a 10% revenue sharing, and "passive activities" require a 30% revenue sharing. The amount of non-regulated revenues subject to revenue sharing is the total billed revenues less any authorized pass-through costs. Some examples of CPUC authorized pass-through costs are purchased water, purchased power, and pump taxes. All of our non-regulated services, except for leasing communication antenna sites on our properties, are "active activities" subject to a 10% revenue sharing. Leasing communication antenna sites on our properties are "passive activities" subject to a 30% revenue sharing. Cal Water's annual revenue sharing with regulated customers was $2.7 million, $2.7 million, and $3.1 million in 2023, 2022, and 2021, respectively.

Operating Segment

We operate in one reportable segment, the supply and distribution of water and providing water-related utility services. For information about revenue from external customers, net income attributable to California Water Service Group and total assets, see "Item 8. Financial Statements and Supplementary Data."

Growth

We intend to continue exploring opportunities to expand our regulated and non-regulated water and wastewater activities, particularly in the western United States. The opportunities could include system acquisitions, lease arrangements similar to the City of Hawthorne and City of Commerce contracts, utility development investments similar to the BVRT investment, full service system operation and maintenance agreements, meter reading, billing contracts, customer service functions, and other utility-related services.

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Geographical Service Areas and Number of Customer Connections at Year-end

Our principal markets are users of water within our service areas. The approximate number of customer connections served in each regulated district, the City of Hawthorne and the City of Commerce, at December 31 is as follows:

(rounded to the nearest hundred)	2023	2022
SAN FRANCISCO BAY AREA/NORTH COAST		
Bay Area Region (serving South San Francisco, Colma, Broadmoor, San Mateo, San Carlos, Lucerne, Duncans Mills, Guerneville, Dillon Beach, Noel Heights and portions of Santa Rosa)	56,000	56,000
Bear Gulch (serving portions of Menlo Park, Atherton, Woodside and Portola Valley)	19,100	19,000
Los Altos (including portions of Cupertino, Los Altos Hills, Mountain View and Sunnyvale)	19,000	19,000
Livermore	19,000	19,000
	113,100	113,000
SACRAMENTO VALLEY		
Chico (including Hamilton City)	31,500	31,300
Oroville	3,700	3,700
Marysville	3,800	3,800
Dixon	3,100	3,100
Willows	2,400	2,400
	44,500	44,300
SALINAS VALLEY		
Salinas Valley Region (including Salinas and King City)	31,800	31,700
	31,800	31,700
SAN JOAQUIN VALLEY		
Bakersfield	74,400	74,100
Stockton	45,200	45,200
Visalia	48,700	48,100
Selma	6,600	6,600
Kern River Valley	4,000	4,100
	178,900	178,100
LOS ANGELES AREA		
East Los Angeles	26,900	27,000
Hermosa Redondo (serving Hermosa Beach, Redondo Beach and a portion of Torrance)	27,300	27,200
Dominguez (Carson and portions of Compton, Harbor City, Long Beach, Los Angeles and Torrance)	34,500	34,400
Los Angeles County Region (including Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills Estates, Rolling Hills, Fremont Valley, Lake Hughes, Lancaster and Leona Valley)	26,000	25,900
Westlake (a portion of Thousand Oaks)	7,100	7,100
Hawthorne and Commerce (leased municipal systems)	7,600	7,700
	129,400	129,300
CALIFORNIA TOTAL	497,700	496,400
HAWAII	6,500	6,200
NEW MEXICO	11,400	10,700
WASHINGTON	38,000	37,500
TEXAS	2,800	2,200
COMPANY TOTAL	556,400	553,000

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Rates and Regulation

The Commissions have plenary powers setting both rates and operating standards. As such, the Commissions' decisions significantly impact the Company's revenues, earnings, and cash flows. The amounts discussed herein are generally annual amounts, unless otherwise stated, and the financial impact to recorded revenue is expected to occur over a 12-month period from the effective date of the decision. In California, water utilities are required to make several different types of filings. Certain filings, such as General Rate Case (GRC) filings, escalation rate increase filings, and offset filings, may result in rate changes that generally remain in place until the next GRC. As explained below, surcharges and surcredits to recover balancing and memorandum accounts as well as GRC interim rate relief are temporary rate changes, having specific time frames for recovery.

The CPUC follows a rate case plan which requires Cal Water to file a GRC for each of its regulated operating districts (except Grand Oaks, which is filed as needed) every three years. In a GRC proceeding, the CPUC not only considers the utility's rate setting requests, but may also consider other issues that affect the utility's rates and operations. The CPUC is generally required to issue its GRC decision prior to the first day of the test year or authorize interim rates and an Interim Rates Memorandum Account (IRMA). In accordance with the rate case plan, Cal Water filed its most recent GRC filing in July of 2021 (2021 GRC) requesting rate changes effective January 1, 2023. For additional information on our 2021 GRC, see "Regulatory Activity - California".

Between GRC filings, Cal Water may file escalation rate increases, which allow Cal Water to recover cost increases, primarily from inflation and incremental investments, generally during the second and third years of the rate case cycle. However, escalation rate increases are district specific and subject to an earnings test. The CPUC may reduce a district's escalation rate increase if, in the most recent 13-month period, the earnings test reflects earnings in excess of what was authorized for that district.

In addition, California water utilities are entitled to make offset requests via advice letter. Offsets may be requested to adjust revenues for construction projects authorized in GRCs or recycled water projects when those capital projects go into service (these filings are referred to as "rate base offsets"), or for rate changes charged to Cal Water for purchased water, purchased power, and pump taxes (which are referred to as "expense offsets"). Rate changes approved in offset requests remain in effect until the next GRC is approved.

In pursuit of the State of California's water conservation goals, the CPUC decoupled Cal Water's revenue requirement from customer consumption levels in 2008 by authorizing a Water Revenue Adjustment Mechanism (WRAM) and Modified Cost Balancing Account (MCBA) for each district. The WRAM and MCBA were designed to ensure that Cal Water recovers revenues authorized by the CPUC regardless of customer consumption. This removed the historical disincentive against promoting lower water usage among customers. Through an annual advice letter filing, Cal Water can seek to recover any under-collected metered revenue amounts authorized, or refund over-collected metered revenues, via surcharges and surcredits. The advice letters generally have been filed in April of each year and addressed the net WRAM and MCBA balances recorded for the previous calendar year. The majority of WRAM and MCBA balances have been collected or refunded through surcharges/surcredits over 12 and 18 month periods. The WRAM and MCBA amounts have been cumulative, so if they were not amortized in a given calendar year, the balance was carried forward and included with the following year's balance. Cal Water also had a Sales Reconciliation Mechanism (SRM) in place for 2021 and 2022 (the second and third years of its 2018 GRC), that allowed the company to adjust its adopted sales forecast if actual sales vary from adopted sales by more than 5.0% over the prior year in a district. The SRM moderates the growth of the net WRAM and MCBA balances until the next GRC.

The CPUC issued a decision effective August 27, 2020 requiring that Class A companies submitting GRC filings after the effective date be (i) precluded from proposing the use of a full decoupling WRAM in their next GRCs and (ii) allowed the use of a Monterey-Style Water Revenue Adjustment Mechanism (MWRAM). In addition, the CPUC's decision allowed for Incremental Cost Balancing Accounts (ICBAs) to replace the MCBA. The MWRAM tracks the difference between the revenue received for actual metered sales through the tiered volumetric rate and the revenue that would have been received with the same actual metered sales if a uniform rate had been in effect. The ICBA tracks differences between the authorized per-unit prices of water production costs and actual per-unit prices of water production costs. Cal Water complied with this decision in its 2021 GRC and the MWRAM and ICBAs are expected to be effective retroactive to January 1, 2023 once approved.

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In September 2020, Cal Water filed an Application for Rehearing at the CPUC seeking to reverse the August 27, 2020 CPUC decision. In September 2021, the CPUC denied the Application for Rehearing. On or about October 27, 2021, Cal Water along with four other Class A California water utilities filed Petitions for a Writ of Review with the California Supreme Court (Court). On May 18, 2022, the Court issued writs granting review and ordered the CPUC and other filing parties to submit additional pleadings to the Court. The final pleadings were submitted on January 13, 2023. Cal Water anticipates that the Court will schedule an oral argument before it begins deliberations and issues its decision.

Regulatory Activity - California

2021 GRC

On July 2, 2021, Cal Water filed its 2021 GRC requesting water infrastructure improvements of $1.0 billion in accordance with the rate case plan for all of its regulated operating districts (except Grand Oaks) for the years 2022, 2023, and 2024. Cal Water proposed rate design changes that would improve revenue stability and provide a discounted unit rate for the first six units of water per month for residential customers. This block of usage would be charged at 25% of the second tier rate. As part of the rate design changes, Cal Water has also proposed the use of a MWRAM and ICBA. In the 2021 GRC, Cal Water proposed to the CPUC to increase revenues by $80.5 million, or 11.1%, in 2023; $43.6 million, or 5.4%, in 2024; and $43.2 million, or 5.1%, in 2025 to support these investments.

On January 24, 2024, the assigned CPUC Administrative Law Judges (ALJs) issued a proposed decision (PD) on the litigated 2021 GRC, and concurrently, the assigned CPUC Commissioner issued an alternate proposed decision (APD) opposing and modifying certain decisions made by the ALJs. The PD issued by the ALJs was closer aligned to Cal Water's requested revenue requirement whereas the APD issued by the assigned Commissioner was closer aligned to the Public Advocates' requested revenue requirement. On February 13, 2024, Cal Water filed a request to change several elements in the PD and APD, including correction of possible 2021 GRC technical issues. We are unable to determine which of the two proposed decisions will be adopted by the CPUC, or if a second alternate proposed decision will be issued by the CPUC. As a result of the uncertainty of the decision that will ultimately be made by the CPUC, we are unable to reasonably estimate the impact on 2023 operating revenue and expenses. The 2021 GRC cumulative adjustment plus interest which is retroactive to January 1, 2023, will be recorded when the final decision is issued by the CPUC.

2021 GRC Interim Rates and IRMA

In June of 2022, Cal Water filed a motion requesting authority to increase rates by inflation on January 1, 2023 and for the establishment of an IRMA in the event the CPUC did not issue a final decision for the 2021 GRC in time for new rates to be implemented on January 1, 2023. In November of 2022, the ALJ assigned to evaluate the motion granted Cal Water's request for the IRMA but did not authorize the inflation rate increase. The IRMA tracks the difference between the current rates that continue to be billed starting January 1, 2023 (considered to be interim rates), and the rates that will eventually be approved pursuant to the CPUC's decision concerning Cal Water's 2021 GRC plus any additional revenue changes approved since July 1, 2021 (final rates). After the CPUC's decision is issued and final rates are implemented, we would then expect the balance in the IRMA to be reviewed, and customer bills to be adjusted to account for the difference between interim rates and final rates back to January 1, 2023.

In January of 2023, Cal Water filed a motion requesting a modification to the November 2022 ruling on inflationary rate increases. In the motion, Cal Water requested inflationary rate increases of 1.5% in Marysville and 4% for all other ratemaking areas besides Selma, Travis Air Force Base, and Visalia for whom a rate increase was not requested. In February of 2023, the ALJ granted Cal Water's request. Cal Water implemented the increased interim inflation rates on May 5, 2023.

2021 Cost of Capital Application

On May 3, 2021, after an approved extension from a 2020 due date, Cal Water filed its required application with the CPUC to review its cost of capital for 2022 through 2024 (2021 Cost of Capital Application). At the time of filing, Cal Water had an approved return on equity of 9.2%, a cost of debt of 5.51%, and a capital structure of 53.4% equity and 46.6% debt. Cal Water requested a return on equity of 10.35%, a cost of debt of 4.23%, and a capital structure of 53.4% equity and 46.6% debt. The California Public Advocates Office recommended a return on equity of 7.81%, a cost of debt of 4.23%, and a capital structure of 49.4% equity and 50.6% debt. Evidentiary hearings were held in May 2022 and the case was submitted to the CPUC at the end of the second quarter of 2022. In the second quarter of 2023, the CPUC issued and adopted a proposed decision for the 2021 Cost of Capital Application. Cal Water was authorized a return on equity of 9.05%, a cost of debt of 4.23%, a capital structure of 53.4% equity and 46.6% debt, and an authorized rate of return of 6.80% for 2023 and 2024. The CPUC also reauthorized the Water Cost of Capital Mechanism (WCCM), which automatically adjusts the rate of return when the Moody's Utilities Bond Index (Index) fluctuates between cost of capital applications. Because the Index changed in 2022, the WCCM triggered for 2023. Cal Water implemented new rates based on an authorized 9.57% return on equity, with a 4.23% cost of debt, and an authorized rate of return of 7.08% on July 31, 2023. The 40 basis-point reduction from Cal Water's prior rate of return of 7.48% lowered adopted annual operating revenue as of July 31, 2023 by $7.0 million and is subject to change based on finalization of the 2021 GRC.

In October of 2023, Cal Water evaluated the WCCM for 2024 and determined that it was triggered due to a change in the Index in 2023. Cal Water filed an advice letter to implement new rates based on an authorized 10.27% return on equity, with a 4.23% cost of debt, and an authorized rate of return of 7.46% effective January 1, 2024. These new rates were implemented on January 1, 2024. We currently expect that the 38 basis-point increase from Cal Water's rate of return for the period July 31, 2023 to December 31, 2023 of 7.08% will positively impact adopted annual operating revenue for 2024 by approximately $10.0 million. This estimate is subject to change based on finalization of the 2021 GRC.

On February 2, 2024, Cal Water received a letter from the CPUC addressed jointly to Cal Water and three other Class A water companies granting their request for a one-year extension in their next cost of capital filing with the CPUC to May 1, 2025. The WCCM will remain in effect during the one-year extension. As a result, Cal Water's authorized return on equity in 2025 is expected to be 10.27% plus or minus any changes from the WCCM.

2023 Financing Application for California

On October 6, 2023, Cal Water filed a financing application with the CPUC requesting authority to issue up to $1.3 billion of new equity and debt securities, in addition to previously-authorized amounts, to finance water system infrastructure investments in 2024, 2025, and 2026. Cal Water also seeks a continuation of its existing waiver that authorizes each Cal Water borrowing under its revolving credit arrangements to be payable at periods up to twenty-four months from the date of the applicable borrowing, rather than the twelve-month period currently permitted for short-term borrowings.

Expense Offset Requests

Expense offsets are dollar-for-dollar increases in revenue to match increased expenses, and therefore do not affect net operating income. In December of 2022, Cal Water submitted an advice letter to request offsets for increases in purchased water costs and pump taxes in five of its regulated districts totaling $5.1 million. The new rates were implemented on January 1, 2023.

In July of 2023, Cal Water submitted an advice letter to request offsets for increases in purchased water costs, pump taxes, and purchased power costs in 11 of its regulated districts totaling $24.6 million. The new rates were implemented on July 31, 2023.

In November of 2023, Cal Water submitted an advice letter to request offsets for increases in purchased water costs and pump taxes in six of its regulated districts totaling $5.1 million. The new rates were implemented on January 1, 2024.

WRAM/MCBA Filings

In April and July of 2023, Cal Water submitted advice letters to true up the revenue under-collections for the 2022 annual WRAMs/MCBAs of its regulated districts. A net under-collection of $76.6 million is being recovered from customers in the form of 12, 18, and greater-than-18-month surcharges. The new surcharges incorporate net WRAM/MCBA balances that were previously approved for recovery and were implemented on May 5, 2023, except for Kern River Valley's surcharge, which was implemented on January 15, 2024. The balance also includes $1.5 million of settlement proceeds from a settled lawsuit with the Stockton East Water District related to purchased water in Stockton. Cal Water intends to pass on this benefit to its Stockton customers through a reduction of its net WRAM receivable.

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California Drought Memorandum Account (DRMA)

In June 2021, Cal Water submitted advice letters to request a DRMA to track the incremental operational and administrative costs incurred to further implement updated Rule 14.1 for voluntary conservation measures and Schedule 14.1 for implementation of our Water Shortage Contingency Plan, including activities related to enhanced conservation efforts, staffing, and capital expenditures to ensure a safe, reliable water supply. The DRMA would also track monies paid by customers for fines, penalties, or other compliance measures associated with water use violations; and penalties paid by Cal Water to its water wholesalers. The DRMA was approved by the CPUC with an effective date of June 14, 2021. As of December 31, 2023, Cal Water has incurred $2.1 million of cumulative DRMA related costs, of which $0.8 million was incurred in 2023.

California's Governor issued a drought declaration for all California counties through a series of State of Emergency Proclamations with the most recent in March 2022. Given these drought proclamations and then-existing water usage levels in all of its service areas, in 2022 Cal Water activated Stage 2 of the "Water Use Restrictions of its Water Shortage Contingency Plan" (WSCP) of Schedule 14.1 in all of its service areas; as a result, Cal Water saw an increase in DRMA related costs in 2022 and 2023.

In Stage 1, irrigating ornamental landscape with potable water is prohibited during the hours of 8:00 a.m. and 6:00 p.m. For Stage 2, irrigating ornamental landscapes with potable water is limited to no more than three days per week as well as prohibited during the hours of 8:00 a.m. and 6:00 p.m. In addition, this stage states that new connections may not install single-pass cooling systems for air conditioning or other cooling system applications unless required for health or safety reasons.

On March 24, 2023, the Governor issued an Executive Order (EO) that, among other things, ended the voluntary 15% water conservation target and ended the requirement that local water agencies implement Stage 2 of their drought contingency plans. This EO maintained the ban on wasteful water uses and retained the State of Emergency for all 58 California counties to allow for drought response and recovery efforts to continue.

On May 8, 2023, Cal Water deactivated Stage 2 and moved to Stage 1 of Cal Water's Schedule 14.1 in all regulated service areas.

On July 28, 2023, Cal Water submitted a Tier 3 advice letter requesting authority to amortize $1.4 million of incremental expenses incurred from June 14, 2021 to December 31, 2022 tracked in the DRMA. The effective date of the advice letter is uncertain as Tier 3 advice letters require a resolution to be adopted by the CPUC.

Drought Response Memorandum Account (DREMA)

In December of 2022, Cal Water received approval for a DREMA to track lost revenues, for potential future recovery, associated with reduced sales as a result of the activation of Rule 14.1 and Schedule 14.1 of its WSCP in all of its service territories. The request is consistent with the CPUC's drought procedures which allow companies without full decoupling mechanisms to track lost revenues, subject to a 20 basis points return on equity adjustment, associated with the reduced sales as a result of the activation of either Rule 14.1 or Schedule 14.1. As Cal Water's full decoupling mechanisms ended on December 31, 2022, the DREMA became effective as of January 1, 2023.

Polyfluoroalkyl Substances Memorandum Account (PFAS MA)

Public water systems have been ordered by the State Water Resources Control Board to detect, monitor, and report perfluorooctanoic and perfluorooctanesulfonic acid in drinking water. In the third quarter of 2020, the CPUC approved the PFAS MA which allows Cal Water to track incremental expenses related to compliance with the order. The tracking of capital costs was excluded due to the current lack of a maximum contaminant level (MCL).

In March of 2023, the United States Environmental Protection Agency (EPA) issued proposed MCLs for six per- and polyfluoroalkyl substances (PFAS). In September of 2023, Cal Water filed an application with the CPUC to modify the PFAS MA to track capital related costs associated with activities necessary to comply with the proposed PFAS drinking water regulations. Cal Water also proposed to submit Tier 2 advice letters requesting authority to add completed PFAS-related capital projects to authorized rate base.

2018 GRC Conservation Expense Balancing Account (CEBA) Filing

In March of 2023, Cal Water submitted an advice letter to amortize the CEBA from the 2018 GRC that tracked the difference between adopted and actual conservation program costs for the period of 2020-2022. $6.2 million is being refunded to customers in some districts in the form of one-time or 12-month surcredits as actual conservation program costs during 2020-2022 were lower than the adopted conservation program costs. The new surcredits were implemented on May 5, 2023.

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2018 GRC Health Cost Balancing Account (HCBA) and Pension Cost Balancing Account (PCBA) Filing

In June of 2023, Cal Water submitted an advice letter to amortize the HCBA and PCBA from the 2018 GRC that tracked the difference between adopted and actual costs for the period of 2020-2022. For the HCBA, $14.0 million is expected to be refunded to customers in the form of one-time or 12-month surcredits as actual employee and retiree medical costs during 2020-2022 were lower than the adopted employee and retiree medical costs. For the PCBA, $17.4 million is expected to be recovered from customers in the form of one-time or 12-month surcharges as actual costs for employee pension benefits during 2020-2022 were higher than the adopted employee pension benefit costs. The new rates were implemented on July 31, 2023.

City of Hawthorne GRC Filing

In June of 2023, the City of Hawthorne approved Cal Water's water rate increase proposal for 2023-2026. Cal Water was approved to increase total revenue by $0.9 million incrementally over four years. Revenue is scheduled to increase by 1.5% in 2023, 1.9% in 2024, 1.6% in 2025, and 2.3% in 2026. The 2023 increase was implemented on July 1, 2023. Cal Water was also approved to establish a Full Cost Balancing Account to track differences between adopted and actual water production costs.

Palos Verdes Peninsula Water Reliability Project (Project)

In 2002, Cal Water commissioned a Water System Master Plan (Master Plan) for the Palos Verdes water system. The Master Plan identified the high-priority need to augment the existing potable water system with new transmission mains and a new pump station to improve the capacity and reliability of the water system. This resulted in the development of a capital project known as the Project. Before the Project, a single pipeline that is over 60 years old delivered potable water to approximately 90 percent of the Peninsula, and a second pipeline of the same age delivered water to the remaining 10 percent. Both of these pipelines were approaching the end of their useful lives.

The CPUC authorized Cal Water to recover revenue associated with costs up to a cap of $96.1 million after the Project was in service, subject to the CPUC's reasonableness review. In 2020, the Project was completed and Advice Letter 2387 was filed asking for authority to increase rates reflecting the Project costs up to the cap, with an effective date of August 27, 2020. The advice letter was approved on January 29, 2021. New rates were implemented on February 1, 2021, with the revenue requirement being effective as of August 27, 2020.

Due to the complexity of the Project, total project costs exceeded the advice letter cap of $96.1 million. Total project costs incurred as of the end of 2023 were $117.2 million. Amongst other things, the 2021 GRC requested an additional $6.4 million of capital costs to be included in base rates plus authority to open a memorandum account allowing Cal Water to track incremental capital-related costs associated with this project. The remaining $14.7 million of capital costs not in base rates will be applied for in a future rate proceeding or tracked in the memorandum account for possible future recovery.

Regulatory Activity - Other States

2023 Washington Water GRC (Washington Water)

On April 10, 2023, Washington Water filed a GRC application with the UTC requesting an annual revenue increase of $3.0 million for its East Pierce water system phased in over two years and an annual revenue increase of $0.6 million for its legacy Washington Water system. In July of 2023, the UTC approved an annual revenue increase of $2.1 million. Washington Water implemented the new rates on July 28, 2023.

Pukalani GRC (Hawaii Water)

On October 30, 2023, HPUC approved Pukalani's GRC application that was filed in 2022. The approval increased annual revenues by $0.4 million to be implemented at $0.2 million each year for the next two years. The new rates were implemented on December 1, 2023.

HOH Utilities Company (Hawaii Water)

In December of 2023, Hawaii Water closed on the acquisition of assets of HOH Utilities Company, a wastewater utility located in the growing Poipu/Koloa area of Kauai County on the island of Kauai.

The acquisition of HOH Utilities Company's wastewater system assets added 1,800 residential, commercial and resort customers, including three hotels, condominiums, multi-family housing, single-family homes and a golf course to the customer base of Hawaii Water.

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Kaanapali GRC (Hawaii Water)

On February 1, 2024, Hawaii Water filed a GRC application with the HPUC requesting an annual revenue increase of $0.6 million. Hawaii Water is requesting a fourth quarter of 2024 effective date for new rates.

Water Supply

Our source of supply varies among our operating districts. Certain districts obtain all of their supply from wells; some districts purchase all of their supply from wholesale suppliers; and other districts obtain supply from a combination of wells and wholesale suppliers. A small portion of supply comes from surface sources and is processed through Company-owned water treatment plants. To the best of management's knowledge, we are meeting water quality, environmental, and other regulatory standards for all Company-owned systems.

Historically, approximately half of our annual water supply is pumped from wells. State groundwater management agencies operate differently in each state. Some of our wells extract ground water from water basins under state ordinances. These are adjudicated groundwater basins, in which a court has settled the dispute between landowners, or other parties over how much annual groundwater can be extracted by each party. All of our adjudicated groundwater basins are located in the State of California. Our annual groundwater extraction from adjudicated groundwater basins approximates 6.7 billion gallons or 13.1% of our total annual water supply pumped from wells. Historically, we have extracted less than 100% of our annual adjudicated groundwater rights and have the right to carry forward up to 20% of the unused amount to the next annual period. All of our remaining wells extract ground water from managed or unmanaged water basins. There are no set limits for the ground water extracted from these water basins. Our annual groundwater extraction from managed groundwater basins approximates 29.7 billion gallons or 57.6% of our total annual water supply pumped from wells. Our annual groundwater extraction from unmanaged groundwater basins approximates 15.1 billion gallons or 29.3% of our total annual water supply pumped from wells. Most of the managed groundwater basins we extract water from have groundwater recharge facilities. We are required to financially support these groundwater recharge facilities by paying well pump taxes. Our well pump taxes for 2023, 2022, and 2021 were $19.0 million, $16.2 million, and $15.3 million, respectively. In 2014, the State of California enacted the Sustainable Groundwater Management Act of 2014 (SGM Act). The law and its implementing regulations required most basins to select a sustainability agency by 2017, develop a sustainability plan by the end of 2022, and show progress toward sustainability by 2027. We expect that after the SGM Act's provisions are fully implemented, substantially all the Company's California groundwater will be produced from sustainably managed and adjudicated basins.

California's normal weather pattern yields little precipitation between mid-spring and mid-fall. The Washington Water service areas receive precipitation in all seasons, with the heaviest amounts during the winter. New Mexico Water's rainfall is heaviest in the summer monsoon season. Hawaii Water receives precipitation throughout the year, with the largest amounts in the winter months. Typically water usage in all service areas is highest during the warm and dry summers and declines in the cool winter months. Rain and snow during the winter months in California replenish underground water aquifers and fill reservoirs, providing the water supply for subsequent delivery to customers. As of February 22, 2024, the State of California snowpack water content during the 2023-2024 water year was 99% of long-term averages (per the California Department of Water Resources, Northern Sierra Precipitation Accumulation report). The northern Sierra region is the most important for the state's urban water supplies. The central and southern portions of the Sierras have recorded 82% and 80%, respectively, of long-term averages. Management believes that supply pumped from underground aquifers and purchased from wholesale suppliers will be adequate to meet customer demand during 2024 and thereafter. Long-term water supply plans are developed for each of our districts to help assure an adequate water supply under various operating and supply conditions. Some districts have unique challenges in meeting water quality standards, but management believes that supplies will meet current standards using currently available treatment processes.

On May 31, 2018, California's Governor signed two bills (Assembly Bill 1668 and Senate Bill 606) into law that were intended to establish long-term standards for water use efficiency. The bills revise and expand the existing urban water management plan requirements to include five-year drought risk assessments, water shortage contingency plans, and annual water supply/demand assessments. The California State Water Resources Control Board, in conjunction with the California Department of Water Resources, is expected to establish long-term water use standards for indoor residential use, outdoor residential use, water losses, and other uses. Cal Water will also be required to calculate and report on its urban water use targets by November 1 of each year, that compares actual urban water use to the targets. Management believes that Cal Water is well positioned to comply with all such regulations.

In March of 2023, the EPA issued proposed MCLs for six PFAS. Based on current information, if the regulation is adopted in its current form, we expect that we would have three years to comply with the final PFAS regulations and we estimate that capital investments of approximately $215.0 million would be required to comply.

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The following table shows the estimated quantity of water purchased and the percentage of purchased water to total water production in each California operating district that purchased water in 2023. Other than noted below, all other districts receive 100% of their water supply from wells.

District	Water Purchased (MG)	Percentage of Total Water Production	Source of Purchased Supply
SAN FRANCISCO BAY AREA/NORTH COAST			
Bay Area Region*	6,275	98.9 %	San Francisco Public Utilities Commission and Yolo County Flood Control & Water Conservation District
Bear Gulch	3,561	100.0 %	San Francisco Public Utilities Commission
Los Altos	2,147	63.6 %	Valley Water
Livermore	1,777	67.5 %	Alameda County Flood Control and Water Conservation District, Zone 7
SACRAMENTO VALLEY			
Oroville	668	89.7 %	Pacific Gas and Electric Co. and County of Butte
SAN JOAQUIN VALLEY			
Bakersfield	9,811	55.0 %	Kern County Water Agency and City of Bakersfield
Stockton	6,462	88.9 %	Stockton East Water District
LOS ANGELES AREA			
East Los Angeles	586	14.0 %	Central Basin Municipal Water District
Dominguez	8,108	78.4 %	West Basin Municipal Water District and City of Torrance
City of Commerce	361	49.5 %	Central Basin Municipal Water District
City of Hawthorne	1,059	89.1 %	West Basin Municipal Water District
Hermosa Redondo	2,901	90.2 %	West Basin Municipal Water District
Los Angeles County Region**	4,451	97.0 %	West Basin Municipal Water District and Antelope Valley-East Kern Water Agency
Westlake	1,794	100.0 %	Calleguas Municipal Water District and Triunfo Water and Sanitation District
Kern River Valley	53	22.8 %	City of Bakersfield

MG = million gallons

* Bay Area Region includes Bayshore and Redwood Valley

** Los Angeles County Region includes Palos Verdes and Antelope Valley

The Bear Gulch district obtains a portion of its water supply from surface runoff from the local watershed. The Oroville district in the Sacramento Valley, the Bakersfield district in the San Joaquin Valley, and the Kern River Valley district in the Los Angeles Area purchase water from a surface supply. Surface sources are processed through our water treatment plants before being delivered to the distribution system. The Bakersfield district also purchases treated water as a component of its water supply.

The Chico, Marysville, Dixon, and Willows districts in the Sacramento Valley, the Salinas Valley Region district in the Salinas Valley, the Selma and Visalia districts in the San Joaquin Valley, and the Travis Air Force Base in Solano County obtain their entire supply from wells.

Purchases for the Los Altos, Livermore, Oroville, Redwood Valley, Stockton, and Bakersfield districts are pursuant to long-term contracts expiring on various dates after 2023. The water supplies purchased for the Dominguez, East Los Angeles, Hermosa Redondo, Palos Verdes, and Westlake districts as well as the Hawthorne and Commerce systems are provided by public agencies pursuant to a statutory obligation of continued non-preferential service to purveyors within the agencies' boundaries. Purchases for the Bayshore and Bear Gulch districts are in accordance with long-term contracts with the San Francisco Public Utilities Commission (SFPUC) until June 30, 2034.

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Management anticipates water supply contracts will be renewed as they expire though the price of wholesale water purchases is anticipated to increase in the future.

Shown below are wholesaler price rates and increases that became effective in 2023, and estimated wholesaler price rates and percent changes for 2024. In 2023, several districts experienced purchased water rate increases, resulting in the filing of several purchased water offsets.

	2023			2024		
District	Effective Month	Unit Cost	Percent Change	Effective Month	Unit Cost	Percent Change
Antelope	July	$752.00 /af	7.6%	July	$809.00 /af	7.6%
Bakersfield (1)	July	$195.00 /af	8.9%	January	$195.00 /af	—
Bear Gulch	July	$5.21 /ccf	9.7%	January	$5.21 /ccf	—
Commerce (2)	January	$1,379.00 /af	5.0%	January	$1,426.00 /af	3.4%
Dominguez (2)	July	$1,605.00 /af	7.0%	January	$1,677.00 /af	4.5%
East Los Angeles (2)	January	$1,379.00 /af	5.0%	January	$1,426.00 /af	3.4%
Hawthorne (2)	July	$1,605.00 /af	7.0%	January	$1,677.00 /af	4.5%
Hermosa-Redondo (2)	July	$1,605.00 /af	7.0%	January	$1,677.00 /af	4.5%
Livermore	February	$2.27 /ccf	10.2%	January	$2.34 /ccf	3.1%
Los Altos	July	$2,089.00 /af	13.6%	January	$2,089.00 /af	—
Oroville (2)	April	$216,068 /yr	8.0%	January	$216,068 /yr	—%
Palos Verdes (2)	July	$1,605.00 /af	7.0%	January	$1,677.00 /af	4.5%
Mid-Peninsula	July	$5.21 /ccf	9.7%	January	$5.21 /ccf	—
Redwood Valley	January	$69.24 /af	—	January	$69.24 /af	—
South San Francisco	July	$5.21 /ccf	9.7%	January	$5.21 /ccf	—
Stockton	October	$931,190 /mo	1.4%	January	$931,190 /mo	—
Westlake	January	$1,632.00 /af	4.5%	January	$1,730.00 /af	6.0%

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af = acre foot;

ccf = hundred cubic feet;

yr = fixed annual cost;

mo = fixed monthly cost

(1) untreated water

(2) wholesaler price changes occur every six months

We work with all local suppliers and agencies responsible for water supply to enable adequate, long-term supply for each system.

See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Water Supply" for more information on adequacy of supplies.

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Seasonal Fluctuations

In California, our customers' consumption pattern of water varies with the weather, in terms of rainfall and temperature. When setting customer rates, the CPUC considers the historical pattern in determining the adopted sales and production costs. With a majority of our sales expected to be subject to the MWRAM and per-unit variations in production costs being covered by the ICBA, fluctuations in financial results are expected to be moderated once the MWRAM and ICBA mechanisms are approved by the CPUC. However, cash flows from operations and short-term borrowings on our credit facilities can be significantly impacted by seasonal fluctuations including recovery of the MWRAM and ICBA.

Our water business is seasonal in nature. Weather conditions can have a material effect on customer usage. Customer demand for water generally is lower during the cooler and rainy winter months. Demand increases in the spring when warmer weather returns and the rains end, and customers use more water for outdoor purposes such as landscape irrigation. Warm temperatures during the generally dry summer months result in increased demand. Water usage declines during the late fall as temperatures decrease and the rainy season begins. During years in which precipitation is especially heavy or extends beyond the spring into the early summer, customer demand can decrease from historic normal levels, generally due to reduced outdoor water usage. Likewise, an early start to the rainy season during the fall can cause a decline in customer usage. As a result, seasonality of water usage has a significant impact on our cash flows from operations and borrowing on our short-term facilities.

Utility Plant Construction

We have continually extended, enlarged, and replaced our facilities as required to meet increasing demands and to maintain our water systems. We obtain construction financing using funds from operations, long-term financing, advances for construction and contributions in aid of construction that are funded by developers. Advances for construction are cash deposits from developers for construction of water facilities or water facilities deeded from developers. These advances are generally refundable without interest over a period of 40 years in equal annual payment amounts and developer-installed facilities are exempt from corporate income taxes. Contributions in aid of construction consist of nonrefundable cash deposits or facilities transferred from developers, primarily for fire protection and relocation projects. We cannot control the amounts received from developers. This amount fluctuates from year-to-year as the level of construction activity carried on by developers varies. This activity is impacted by the demand for housing, commercial development, and general business conditions, including interest rates.

See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" for additional information.

Energy Reliability

We continue to seek to use power efficiently to minimize the power expenses passed on to our customers, and maintain backup power systems to continue water service to our customers if the power companies' supplies are interrupted. If future legislation limits emissions from the power generation process, our cost of power may increase. Any increase in the per-unit cost of power would be expected to be passed along to our California customers through the ICBA or included in our cost of service paid by our customers as requested in our GRC filings. Many of our well sites are equipped with emergency electric generators designed to produce electricity to keep the wells operating during power outages. Storage tanks also provide customers with water during blackout periods.

During 2023, 2022, and 2021 we leased additional emergency generators to respond to potential PSPSs, an electric utility operating paradigm approved by the CPUC.

Security at Company Facilities

Due to terrorism and other risks, we have heightened security at our facilities and have taken added precautions to protect our employees and the water delivered to customers. In 2002, federal legislation was enacted that resulted in new regulations concerning security of water facilities, including submitting vulnerability assessment studies to the federal government. We have complied with regulations issued by the EPA pursuant to federal legislation concerning vulnerability assessments and have made filings to the EPA as required. In addition, communication plans have been developed as a component of our procedures.

In accordance with the 2018 America's Water Infrastructure Act (AWIA), we are required to conduct additional risk and resilience assessments (RRAs) and develop emergency response plans (ERPs) for each of our water systems. These RRAs and ERPs include natural hazards as well as malevolent acts. The first such assessments were completed in 2020. The RRAs are scheduled to be reviewed and resubmitted every five years.

While we do not make public comments on our security programs, we have been in contact with federal, state, and local law enforcement agencies to coordinate and improve our water delivery systems' security.

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Competition and Condemnation

Our principal operations are regulated by the Commission of each state. Under state laws, no privately owned public utility may compete within any service territory that we already serve without first obtaining a certificate of public convenience and necessity from the applicable Commission. Issuance of such a certificate would only be made upon finding that our service is deficient. To management's knowledge, no application to provide service to an area served by us has been made.

State law in California provides that whenever a public agency constructs facilities to extend a utility system into the service area of a privately owned public utility, such an act constitutes the taking of property and requires reimbursement to the utility for its loss. State law in Washington and other states recognize chartered service areas but do not have specific statutes. State statutes allow municipalities, water districts and other public agencies to own and operate water systems. These agencies are empowered to condemn properties already operated by privately owned public utilities. The agencies are also authorized to issue bonds, including revenue bonds, for the purpose of acquiring or constructing water systems. However, if a public agency were to acquire utility property by eminent domain action, the utility would be entitled to just compensation for its loss. In Washington, annexation was approved in February 2008 for property served by us on Orcas Island; however, we continue to serve the customers in the annexed area and do not expect the annexation to affect our operations. To management's knowledge, other than the Orcas Island property, no municipality, water district, or other public agency is contemplating or has any action pending to acquire or condemn any of our systems.

Government Regulations

Our water and wastewater services are governed by various federal and state environmental protection, health and safety laws, and regulations. These provisions establish criteria for drinking water and for discharges of water, wastewater, and airborne substances. The EPA, state water quality regulators, and other state regulatory authorities promulgate numerous nationally and locally applicable standards, including MCLs for drinking water. We believe we are currently in compliance with all of the MCLs promulgated to date.

Environmental Matters

Our operations are subject to environmental regulation by various governmental authorities. Environmental health and safety programs have been designed to provide compliance with water discharge regulations, underground and above-ground fuel storage tank regulations, hazardous materials management plans, hazardous waste regulations, air quality permitting requirements, wastewater discharge limitations, and employee safety issues related to hazardous materials. In addition, we actively investigate alternative technologies for meeting environmental regulations and continue the traditional practices of meeting environmental regulations.

For a description of the material effects that compliance with environmental regulations may have on us, see Item 1A. "Risk Factors—Risks Related to Our Regulatory Environment." We expect environmental regulation to increase, resulting in higher operating costs in the future, and there can be no assurance that the Commissions would approve rate increases to enable us to recover these additional compliance costs.

Quality of Water Supply

Our operating practices are designed to produce potable water in accordance with accepted water utility practices. Water entering the distribution systems from surface sources is treated in compliance with federal and state Safe Drinking Water Act (SDWA) standards. Most well supplies are chlorinated or chloraminated for disinfection. Water samples from each water system are analyzed on a regular, scheduled basis in compliance with regulatory requirements. We operate a state-certified water quality laboratory at the San Jose Customer Support Services Office that provides testing for most of our California operations. Certain tests in California are contracted with independent certified labs qualified under the Environmental Laboratory Accreditation Program. Local independent state certified labs provide water sample testing for the Washington, New Mexico, and Hawaii operations.

In recent years, federal and state water quality regulations have resulted in increased water sampling requirements. The SDWA continues to be used to monitor and regulate additional potential contaminants to address public health concerns. The State of California has continued to adopt new water quality regulations, which may be in addition to those adopted by the EPA. We monitor water quality standard changes and upgrade our treatment capabilities to maintain compliance with the various regulations.

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Impact of Climate Change Legislation and Regulation

Our operations depend on power provided by other public utilities and, in emergencies, power generated by our portable and fixed generators. If future legislation limits emissions from the power generation process, our cost of power may increase. Any increase in the cost of power would be expected to be passed along to our California customers through the ICBA or included in our cost of service paid by our customers as requested in our GRC filings.

We maintain a fleet of vehicles to provide service to our customers, including a number of passenger vehicles, as well as heavy-duty diesel vehicles that were retrofitted to meet California emission standards. If future legislation affects the cost to operate the fleet or the fleet acquisition cost in order to meet certain emission standards and/or requirements to phase-in the use of zero-emission vehicles, it would increase our cost of service and our rate base. Any increase in fleet operating costs associated with meeting emission standards and/or requirements to phase-in the use of zero-emission vehicles would be expected to be included in our cost of service paid by our customers as requested in our GRC filings. While recovery of these costs is not guaranteed, we would expect recovery in the regulatory process.

Under the California Environmental Quality Act (CEQA), all capital projects of a certain type (primarily wells, tanks, major pipelines, and treatment facilities) require mitigation of greenhouse gas emissions. The cost to prepare the CEQA documentation and permit are expected to be included in our capital cost and added to our rate base, which is expected to be requested to be paid for by our customers. Any increase in the operating cost of the facilities would also be expected to be included in our cost of service paid by our customers as requested in our GRC filings. While recovery of these costs is not guaranteed, we would expect recovery in the regulatory process.

Cap and trade regulations were implemented in 2012 with the goal of reducing emissions to 1990 levels by the year 2020. These regulations have not affected water utilities at this time. In the future, if we are required to comply with these regulations, any increase in operating costs associated with meeting these standards would be included in our cost of service paid by our customers as requested in our GRC filings. While recovery of these costs is not guaranteed, we would expect recovery in the regulatory process.

We currently publicly disclose information about our climate change strategy, risks, metrics, and targets. If future legislation or regulation requires new or additional reporting on our climate change strategy, risks, metrics, and/or targets, our cost to gather and report that information in accordance with the legislation or regulation may increase, and we may be subject to litigation, enforcement proceedings, fines or other penalties if we are unable to comply in part or in whole, or if our efforts are deemed insufficient.

Human Capital Resources

We believe our employees are our most valuable asset and are critical to our continued success. We focus our attention on attracting and retaining talented and experienced individuals to manage and support our operations. We offer our employees a broad range of Company-paid benefits, and we believe our compensation package and benefits are competitive with others in our industry. Additional information about our employee benefit plans is included in Note 11 of the Notes to Consolidated Financial Statements.

We are committed to hiring, developing, and supporting a diverse and inclusive workplace. Our employees are expected to exhibit and promote honest, ethical, and respectful conduct. All of our employees must adhere to a business code of conduct that sets standards for appropriate behavior and ethics and includes required internal training on preventing, identifying, reporting, and stopping any type of discrimination.

Employee health and safety in the workplace is one of the Company's core values. Safety efforts are led by the Executive Safety Committee and supported by safety committees that operate at the local level. Hazards in the workplace are actively identified and management tracks incidents so remedial actions can be taken to improve workplace safety.

As evidenced by our internally created Future Leaders of Water Development Program, our management team supports a culture of developing future leaders from our existing workforce, enabling us to promote from within for many leadership positions. We believe this provides long-term focus and continuity to our operations while also providing opportunities for the growth and advancement of our employees. Our focus on retention is evident in the length of service of our management team. The average tenure of our management team is over 10 years.

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Employee levels are managed to align with the pace of business and management believes it has sufficient human capital to operate its business successfully. Management believes that the Company's employee relations are favorable. At December 31, 2023, we had 1,266 employees, including 1,118 at Cal Water, 82 at Washington Water, 48 at Hawaii Water, 18 at New Mexico Water, and no employees at Texas Water. In California, the Utility Workers Union of America (UWUA), AFL-CIO represents our non-exempt field, customer service, and non-confidential clerical employees and the International Federation of Professional and Technical Engineers (IFPTE), AFL-CIO represents our professional and technical engineering and water quality laboratory employees.

As of December 31, 2023, we had 667 employees represented by the UWUA and 90 employees represented by the IFPTE. In 2021, we reached a six-year agreement with both unions on a new contract that runs from May 14, 2021 (UWUA) and October 4, 2021 (IFPTE) through February 28, 2027. We believe this agreement continues to provide our employees with a market competitive pay and benefits package.

Employees at Hawaii Water, Washington Water, and New Mexico Water are not represented by a labor union.

Information About Our Executive Officers

Name	Positions and Offices with California Water Service Group	Age
Martin A. Kropelnicki (1)	Chairman, President and Chief Executive Officer since June 1, 2023. Formerly, President and Chief Executive Officer (2013-2023), President and Chief Operating Officer (2012-2013), Chief Financial Officer and Treasurer (2006-2012), served as Chief Financial Officer of Power Light Corporation (2005-2006), Chief Financial Officer and Executive Vice President of Corporate Services of Hall Kinion and Associates (1997-2004), Deloitte & Touche Consulting (1996-1997), held various positions with Pacific Gas & Electric Company (1989-1996).	57
David B. Healey (2)	Principal Financial Officer since January 3, 2024. Formerly, Vice President, Chief Financial Officer and Treasurer (2023-2024), Vice President, Corporate Controller and Assistant Treasurer (2015-2023), Corporate Controller and Assistant Treasurer (2012-2014), Director of Financial Reporting (2009-2012), served as Subsidiary Controller for SunPower Corporation (2005-2009), Corporate Controller for Hall, Kinion & Associates, Inc. (1997-2005), held various positions with Pacific Gas & Electric Company (1985-1997).	67
James P. Lynch (2)	Senior Vice President, Chief Financial Officer and Treasurer since January 3, 2024. Formerly, Manager of Special Projects (2023), Chief Accounting Officer for SJW Group, a water utility company (2022-2023), Chief Financial Officer and Treasurer for SJW Group (2010-2022), Audit Partner with KPMG LLP (1997-2010), held various other positions with KPMG LLP (1984-1997). Certified public accountant.	64
Michael B. Luu (2)	Senior Vice President, Corporate Services & Chief Risk Officer since June 1, 2023. Formerly, Vice President, Information Technology and Chief Risk Officer (2021-2023), Vice President of Customer Service and Chief Information Officer (2017-2020), Vice President of Customer Service and Information Technology (2013-2016), Acting California Water Service Company District Manager, Los Altos (2012-2013), Director of Information Technology (2008-2012), CIS Development Manager (2005-2008), held various other positions with California Water Service Company since 1999.	44
Shawn C. Bunting (2)	Senior Vice President, General Counsel & Business Development since January 1, 2024. Formerly, Vice President, General Counsel and Corporate Secretary (2023), Senior Vice President & Deputy General Counsel for American Water Works Company, Inc., a water utility holding company (2021-2022), Vice President and Deputy General Counsel (2015-2021), Vice President & Division General Counsel – Eastern Division (2015-2016), Vice President & Division General Counsel – Mid-Atlantic Division (2014-2015), held other various positions with American Water Works Company, Inc. (2008-2014), Assistant General Counsel (Director) at Allegheny Energy, Inc. (2005-2008), and attorney at K&L Gates LLP (1998-2005).	51
Shannon C. Dean (2)	Senior Vice President, Customer Service & Chief Sustainability Officer since January 1, 2024. Formerly, Vice President, Customer Service and Chief Citizenship Officer (2021-2023), Vice President of Corporate Communications & Community Affairs (2015-2020), Director of Corporate Communications (2000-2014), held various corporate communications, government, and community relations positions for Dominguez Water Company (1991-1999).	56

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Name	Positions and Offices with California Water Service Group	Age
Michael S. Mares, Jr (2)	Senior Vice President, Operations since January 1, 2024. Formerly, Vice President, Operations (2021-2023), Vice President, California Operations (2019-2020), California Water Service Company District Manager, Bakersfield (2017-2018), Hawaii Water Service Company General Manager (2014-2016), Hawaii Water Service Company Local Manager, Big Island (2012-2014), California Water Service Company, held various Superintendent positions in the Chico district (2002-2012), California Water Service Company, held various union positions in the Chico district (1992-2002).	57
Ronald D. Webb (2)	Vice President, Chief Human Resource Officer since January 1, 2022. Formerly, Vice President of Human Resources (2014-2021), Managing Director, Human Resources Partner for United Airlines (2006-2014), served as Vice President of Human Resources for Black & Decker Corporation (1995-2005), Human Resource Manager for General Electric Company (1990-1994), and held various labor relations positions for National Steel and Shipbuilding Company (1982-1989).	67
Michelle R. Mortensen (2)	Vice President, Corporate Secretary and Chief of Staff since January 1, 2022. Formerly, Vice President, Corporate Secretary (2021), Corporate Secretary (2015-2020), Assistant Corporate Secretary (2014), Treasury Manager (2012-2013), Assistant to the Chief Financial Officer (2011), Regulatory Accounting Manager (2008-2010), held various accounting positions at Piller Data Systems (2006-2007), Hitachi Global Storage (2005), Abbot Laboratories (2002-2004), and Symantec (1998-2001).	49
Elissa Y. Ouyang (2)	Vice President, Facilities, Fleet and Procurement since January 1, 2022. Formerly, Chief Procurement and Lead Continuous Improvement Officer (2016-2021), Interim Procurement Director (2013-2016), Acting District Manager - Los Altos (2013), Interim Vice President of Information Technology (2012-2013), Director of Information Technology - Architecture and Security (2008-2012), Business Application Manager (2003-2007), Project Lead/Senior Developer (2001-2003), held various business consulting positions at KPMG Consulting/BearingPoint (1998-2001), and RR Donnelley (1996-1998).	55
Greg A. Milleman (2)	Vice President, Rates & Regulatory Affairs since January 1, 2022. Formerly, Vice President, California Rates (2019-2021), Interim Director of Rates (2017-2018), Director of Field Administration & Finance (2014-2017), Manager of Special Projects (2013), and served as Senior Vice President of Administration and Corporate Secretary and various other management positions for Valencia Water Company (1992-2013).	61
Thomas A. Scanlon (2)	Corporate Controller and Principal Accounting Officer since January 1, 2023. Formerly, Director of Financial Reporting (2010-2022), Subsidiary Controller at Sun Power Systems Corporation (2007-2010), and Regional Controller at Swinerton Builders, Inc. (2000-2007).	61
Sophie M. James (2)	Vice President, Water Quality & Environmental Affairs since January 1, 2024. Formerly, Chief Water Quality Officer (2022-2023), Director of Water Quality (2014-2021), Manager of Laboratory Service (2006-2013), and Environmental Chemist, City of Sunnyvale (1992-2006).	55

(1) Holds the same position with California Water Service Company, CWS Utility Services, Hawaii Water Service Company, Inc., New Mexico Water Service Company, and TWSC, Inc.; Chief Executive Officer of Washington Water Service Company.

(2) Holds the same position with California Water Service Company, CWS Utility Services, Hawaii Water Service Company, Inc., New Mexico Water Service Company, Washington Water Service Company, and TWSC, Inc.

Item 1A. ***Risk Factors.***

In evaluating our business, you should carefully consider the following discussion of material risks, events, and uncertainties that make an investment in us speculative or risky in addition to the other information in this Annual Report on Form 10-K. A manifestation of any of the following risks and uncertainties could, in circumstances we may or may not be able to accurately predict, materially and adversely affect our business, growth, reputation, prospects, operating and financial results, financial condition, cash flows, liquidity, and stock price. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. It is not possible to predict or identify all such factors; our operations could also be affected by factors, events or uncertainties that are not presently known to us or that we currently do not consider to present significant risks to our operations. Therefore, you should not consider the following risks to be a complete statement of all the potential risks or uncertainties that we face.

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Risks Related to Our Regulatory Environment

Our business is heavily regulated by state and federal regulatory agencies and our financial viability depends upon our ability to recover costs and investments from our customers through rates that must be approved by state public utility commissions.

Cal Water, New Mexico Water, Washington Water, and Hawaii Water are regulated public utilities, which provide water and water-related service to our customers. Additionally, Hawaii Water and Texas Water own in whole or in part other companies which are regulated public utilities. The rates that we charge our water customers are subject to the jurisdiction of the regulatory Commissions in the states in which we operate. These Commissions may set water and water-related rates for each operating district independently because the systems are not interconnected. The Commissions authorize us to charge rates that they consider sufficient to recover normal operating expenses, to provide funds for adding new or replacing water infrastructure, and to allow us the opportunity to earn what the Commissions consider to be a fair and reasonable return on invested capital.

Our revenues and consequently our ability to meet our financial objectives are dependent upon the rates we are authorized to charge our customers by the Commissions and our ability to recover our costs in these rates. Our management uses forecasts, models and estimates in order to set rates that we believe will provide a fair and reasonable return on our invested capital. While our rates must be approved by the Commissions, no assurance can be given that our forecasts, models and estimates will be correct or that the Commissions will agree with our forecasts, models, and estimates. If our rates are set too low, our revenues may be insufficient to cover our operating expenses, capital expenditure requirements and desired dividend levels.

We periodically file rate increase applications with the Commissions. The ensuing administrative and hearing process may be lengthy and costly. The decisions of the Commissions are beyond our control and we can provide no assurances that our rate increase requests will be granted by the Commissions. Even if approved, there is no guarantee that approval will be given in a timely manner or at a sufficient level to cover our expenses and provide a reasonable return on our investment. If the rate increase decisions are delayed or approved at a level that is lower than what we have requested, our earnings may be adversely affected. For example, the CPUC has not issued its final decision on our 2021 GRC, which has resulted in lower revenues in 2023 and is leading to financial and operating uncertainty for the Company. Our ability to execute on our business strategy is expected to be adversely impacted if the CPUC issues a final decision on our 2021 GRC that results in approving lower rate increases than what we have requested.

Our evaluation of the probability of recovery of regulatory assets is subject to adjustment by regulatory agencies and any such adjustment could adversely affect our results of operations and financial condition.

Regulatory decisions may affect prospective revenues and earnings and the timing of the recognition of revenues and expenses and may overturn past decisions used in determining our revenues and expenses. While our management evaluates the anticipated recovery of regulatory assets and revenues subject to refund and provides for allowances and/or reserves as deemed necessary, no assurance can be given that any such allowances and/or reserves will be adequate to cover any loss or adjustment due to the absence of our limited recovery of regulatory assets and revenues as a result of regulatory decisions. Current accounting procedures allow us to defer certain costs if we believe it is probable that we will be allowed to recover those costs through future rate increases. If the Commissions determined that a portion of our assets were not recoverable in customer rates, we may suffer an asset impairment, which would require a write down in such asset's valuation that would be recorded through operations.

If our assessment as to the probability of recovery through the ratemaking process is later determined to be incorrect, the associated regulatory asset would be adjusted to reflect the change in our assessment of any regulatory disallowances. A change in our evaluation of the probability of recovery of regulatory assets or a regulatory disallowance of all or a portion of our cost could have a material adverse effect on our financial results.

Regulatory agencies may disagree with our valuation and characterization of certain of our assets.

If we determine that assets are no longer used or useful for utility operations, we may remove them from our rate base and subsequently sell those assets with any gain on sales accruing to the stockholders, subject to certain conditions. If the Commissions disagree with our characterization, there is a risk that the Commissions could determine that realized appreciation in property value should be awarded to customers rather than our stockholders.

Changes in laws, rules, and policies of our regulators or operating jurisdictions can significantly affect our business.

Regulatory agencies may change their rules and policies for various reasons, including changes in the local political environment. Regulators are elected by popular vote or are appointed by elected officials, and the election of a new administration or the appointment of new officials due to the results of elections may result in dramatic change to the long-established rules and policies of an agency. For example, in 2020 regulation regarding full decoupling WRAMs changed in California. Since 2008, the CPUC allowed full decoupling WRAMs. However, in 2020, the CPUC precluded companies from proposing full decoupling WRAMs in their next GRC filings. As a result, we have been precluded from recording WRAM revenue since the conclusion of the WRAM as of December 31, 2022.

We rely on policies and regulations promulgated by the various state commissions in order to recover capital expenditures, maintain favorable treatment on gains from the sale of real property, offset certain production and operating costs, recover the cost of debt, maintain an optimal equity structure without over-leveraging, and have financial and operational flexibility to engage in non-regulated operations. If any of the Commissions with jurisdiction over us implements policies and regulations that do not allow us to accomplish some or all of the items listed above, our future operating results may be adversely affected.

In addition, legislatures may repeal, relax or tighten existing laws, or enact new laws that affect the regulatory agencies with jurisdiction over our business or affect our business directly. If changes in existing laws or the implementation of new laws limit our ability to accomplish some of our business objectives, or make accomplishing such objectives more expensive, our future operating results may be adversely affected.

Finally, local jurisdictions may impose new ordinances, laws, fees, and regulations that could increase costs or limit our operations, which affect future operating results. Cities may impose or amend franchise requirements, impose conditions on underground construction or land use, impose various taxes and fees, or restrict our hours for construction, among other things. In the last decade, more cities have imposed excavation moratoria or paving rules, which has required more costly construction than anticipated.

We expect environmental health and safety regulation to increase, resulting in higher operating costs in the future and the potential that the company fails to meet these regulatory standards.

Our water and wastewater services are governed by various federal and state environmental protection, health and safety laws, and regulations. Although we have a water quality assurance program in place, we cannot guarantee that we will continue to comply with all standards. If we violate any federal or state regulations or laws governing health and safety, we could be subject to substantial fines or otherwise sanctioned, subject to potential civil liability for damages, and our customers' trust in our operations ability could be eroded.

Environmental health and safety laws are complex and change frequently. They have tended to become more stringent over time. As new or stricter standards are introduced, our operating costs could increase. Although we would likely seek permission to recover these costs through rate increases, we can give no assurance that the Commissions would approve rate increases to enable us to recover these additional compliance costs.

We are required to test our water quality for certain chemicals and potential contaminants on a regular basis. If the test results indicate that our water exceeds allowable limits, we may be required either to commence treatment to remove the contaminant or to develop an alternate water source. Either of these results may be costly. Although we would likely seek permission to recover these through rate increases, there can be no assurance that the Commissions would approve rate increases to enable us to recover these additional compliance costs.

Past events in the utility sector, including those in Flint, Michigan and related to Pacific Gas and Electric Company in California, show that failure to meet one or more water quality, environmental, or safety standards can have severe effects on customer trust, reputation, regulatory treatment, or civil and criminal liability.

New and/or more stringent water quality regulations could increase our operating costs.

We are subject to water quality standards set by federal, state, and local authorities that have the power to issue new regulations. Compliance with new regulations that are more stringent than current regulations could increase our operating costs and capital expenditures, including requirements for increased monitoring, additional treatment of underground water supplies, fluoridation of all supplies, more stringent performance standards for treatment plants, additional procedures to further reduce levels of disinfection by-products, and more comprehensive measures to monitor, reduce or eliminate known or newly identified contaminants. There are currently limited regulatory mechanisms and procedures available to us for the recovery of such costs and there can be no assurance that such costs will be fully recovered and failure to do so may adversely affect our operating results.

Attention is being given to contaminants of emerging concern, including, without limitation, chemicals and other substances that currently do not have any regulatory standard in drinking water or have been recently created or discovered. We believe these contaminants may form the basis for additional or increased federal or state regulatory initiatives and requirements in the future, which could significantly increase the cost of our operations.

For example, while there are currently no federal MCLs or state MCLs in states in which we operate for per- and polyfluoroalkyl substances (PFAS) compounds, we continue to closely monitor the regulatory process at state and federal levels, follow recommendations from our regulators, review existing and new treatment methods, and develop a response strategy to help prepare us to meet anticipated MCLs. Currently the federal government has proposed regulations for 6 PFAS compounds. Where detections of PFAS in our California systems have exceeded the state-established response levels, we have implemented procedures for removing the source from service or installing treatment for PFAS.

We also treat several affected water supplies for chromium-6, which experts suggest is harmful to human health and for which the California State Water Resources Control Board is developing a new MCL. To treat chromium-6, we use strong base anion exchange or reduction, coagulation, oxidation, and filtration treatment methods. We began treating water supplies in California for chromium-6 shortly after the state safe drinking water standard was set in 2014, which was subsequently remanded, and we have continued to meet the threshold for affected active water sources as regulations have evolved.

While there are no known lead service lines within Cal Water systems, the Revised Lead and Copper Rule from the EPA includes expanded requirements to complete service line inventories on both the water utility's and the customer's side of the water meter to identify lead in drinking water. As part of our compliance strategy for this updated rule, we are currently conducting an inventory to identify potential lead service lines on the customer side of the water meter.

Legislation and regulation designed to mitigate or adapt to climate change may affect our operations.

Future legislation or regulation regarding climate change may restrict our operations or impose new costs on our business. Our operations depend on power provided by other public utilities and, in emergencies, power generated by our portable and fixed generators. If future legislation or regulation limits emissions from the power generation process, our cost of power may increase. Although any increase in the cost of power would be expected to be passed along to our California customers through the ICBA or included in our cost of service paid by our customers as requested in our GRC filings in California, we can give no assurance that such costs would be passed along to our California customers or that the CPUC would approve rate increases to enable us to recover such expenditures or costs.

Legislation and regulation regarding greenhouse gas emissions may also impose new costs on our business. For example, in March 2022, the U.S. Securities and Exchange Commission proposed climate disclosure rules that would require public companies to significantly increase disclosure of greenhouse gas emissions and strategies, targets, costs and risks associated with climate change and the energy transition. Additionally, in October 2023, California enacted legislation addressing the disclosure of greenhouse gas emissions, climate-related risks, environmental claims, and the use or sale of voluntary carbon offsets. New and future laws and regulations could increase the complexity of and costs associated with compliance with such regulations, which could have a material adverse effect on our business, results of operations, and financial condition.

We have been and may in the future be party to environmental and product-related lawsuits, which could result in us paying damages not covered by insurance.

We have been and may be in the future, party to water contamination lawsuits, which may not be fully covered by insurance.

The number of environmental and product-related lawsuits against other water utilities has increased in frequency in recent years. If we are subject to additional environmental or product-related lawsuits, we might incur significant legal costs and it is uncertain whether we would be able to recover the legal costs from customers or other third parties. In addition, if current California law regarding CPUC's preemptive jurisdiction over regulated public utilities for claims about compliance with California Department of Health Services and United States EPA water quality standards changes, our legal exposure may be significantly increased.

Risks Related to Our Business Operations

We are at risk for litigation under the principle of inverse condemnation for activities in the normal course of business that are deemed to have a damaging effect on private property.

The California constitution may allow compensation to property owners for a public utility taking or damaging private property, even when damage occurs through no fault of the utility and regardless of whether the damage could be foreseen by the utility. As a result, this doctrine, which is known as inverse condemnation and is routinely invoked in California, imposes strict liability for damages,

including legal fees, because of the design, construction, maintenance and operation of utility facilities. In addition to claims that our water or wastewater systems damaged property, Cal Water could be sued under inverse

condemnation if its facilities or operations damage private property, or if it is unable to timely deliver sufficient quantities of water for firefighting because of system capacity limitations or water supply disruptions, including as a result of action taken by an electric utility pursuant to a PSPS program or other loss of power. Although the imposition of liability is premised on the assumption that utilities have the ability to recover these costs from their customers, there is no assurance that the CPUC would allow Cal Water to recover any such damage awards from customers. For example, in December 2017, the CPUC denied recovery of costs that San Diego Gas & Electric Company incurred because of inverse condemnation, holding that the inverse condemnation principles of strict liability are not relevant to the CPUC's prudent manager standard.

The effects of natural disasters, attacks by third parties, or poor water quality or contamination to our water supply may result in disruption in our services and litigation, which could adversely affect our business, operating results and financial condition.

We operate in areas that are prone to earthquakes, fires, mudslides, and other natural disasters. A significant seismic event or other natural disaster in California where our operations are concentrated could adversely affect our ability to deliver water and adversely affect our costs of operations. A major disaster could damage or destroy substantial capital assets. The CPUC has historically allowed utilities to establish a catastrophic event memorandum account as another possible mechanism to recover costs. However, we can give no assurance that the CPUC or any other commission would allow any such cost recovery mechanism in the future.

Our water supplies are subject to contamination, including contamination from the development of naturally-occurring compounds, chemicals in groundwater systems, pollution resulting from fabricated sources, such as 1,2,3-Trichloropropane (TCP) and PFAS, seawater incursion, and possible third-party attacks, including physical attacks, terrorist attacks, and cyber-attacks. If our water supply is contaminated, we may have to interrupt the use of that water supply until we are able to substitute the flow of water from an uncontaminated water source. In addition, we may incur significant costs in order to treat the contaminated source through expansion of our current treatment facilities, or development of new treatment methods. If we are unable to substitute water supply from an uncontaminated water source, or if we are unable to adequately treat the contaminated water source in a cost-effective manner, there may be an adverse effect on our revenues, operating results, and financial condition. The costs we incur to decontaminate a water source or an underground water system could be significant and may not be recoverable in rates. We could also be held liable for consequences arising out of human exposure to hazardous substances in our water supplies or other environmental damage. For example, private plaintiffs have the right to bring personal injury or other toxic tort claims arising from the presence of hazardous substances in our drinking water supplies. Our insurance policies may not be sufficient to cover the costs of these claims.

We have taken steps to increase security measures at our facilities and heighten employee awareness of threats to our water supply, to protect against third-party attacks, including physical attacks, terrorist attacks, and cyber-attacks. We have also improved our security measures regarding the delivery and handling of certain chemicals used in our business. We have and will continue to bear increased costs for security precautions to protect our facilities, operations, and supplies. These costs may be significant. Despite these improved security measures, we may not be able to prevent or deter any third-party attacks or be in a position to control the outcome of third-party attacks should they occur.

We depend upon our skilled and trained workforce for water delivery. Actual or threatened public health emergencies, including disease outbreaks, may also lead to the closure of our facilities or to the illness of our employees. We can give no assurance that we will be able to maintain sufficient human resources to provide service in all of the districts that we serve.

If any of these catastrophic events were to occur, we can give no assurance that our emergency preparedness plans would be adequate and that we would respond effectively, which could result in public or employee harm or adversely affect our revenues, operating results, and financial condition.

Failure of critical elements of our infrastructure could result in interruption of service, damage to others, or injuries, and could adversely affect our business, operating results, and financial condition.

We own physical infrastructure, which was installed over a long period of time, both underground and above-ground. This infrastructure is subject to potential failure due to age, operating conditions, or other unknown factors. Failure of any of our facilities or infrastructure could cause flooding, loss of service to our customers, contamination from chemicals we use in operations, or other damages.

We operate a dam. If the dam were to fail for any reason, we would lose a water supply and flooding likely would occur. Whether or not we were responsible for the dam's failure, we could be sued. We can give no assurance that we would be able to defend such a suit successfully.

We operate several water and wastewater treatment plants. If a major failure of these facilities were to occur, we would have an interruption in service, potential flooding, and could release potentially harmful material into the environment.

We operate over 7,000 miles of underground pipeline. Some failures of underground pipelines could release disinfection chemicals into the environment, which have a negative impact on sensitive habitats.

We rely on our information technology (IT), operational technology (OT), and a number of complex business systems to assist with the management of our business and customer and supplier relationships, and a disruption of these systems, including from cyber-attacks, could adversely affect our business.

Our IT and OT systems are an integral part of our business, and a serious disruption of these systems could significantly limit our ability to manage and operate our business efficiently, which, in turn, could cause our business and competitive position to suffer and adversely affect our results of operations. We rely on our IT and OT networks and applications to bill customers, process orders, provide customer service, manage construction projects, manage our financial records, track assets, remotely monitor certain of our plants and facilities and manage human resources, inventory and accounts receivable collections. Our systems also enable us to purchase products from our suppliers and bill customers on a timely basis, maintain cost-effective operations, and provide service to our customers. Some of our mission and business critical systems are older and the steps we have taken to protect our systems may be insufficient to protect them from damage or interruption from:

- power loss, computer systems failures, including hardware equipment and software applications, and internet, telecommunications or data network failures;
- operator negligence or improper operation by, or supervision of, employees;
- physical and electronic loss of customer data due to security breaches, cyber-attacks, misappropriation, acts of violence, war or terrorism, and similar events;
- computer viruses;
- intentional security breaches, hacking, denial of services actions, misappropriation of data, and similar events, including intentional cybersecurity breaches aimed at disrupting and interfering with water treatment processes; and
- earthquakes, floods, fires, mudslides, and other natural disasters or physical attacks.

These events may result in physical and/or electronic loss of customer or financial data; security breaches; misappropriation; disruption of service to our customers; loss of revenues, response costs, and other financial loss; loss of management time, attention, and resources from our regular business operations; damage to our reputation; and other adverse consequences, including liability or regulatory penalties under data privacy laws and regulations. In addition, the lack of redundancy for certain of our IT systems, including billing systems, could exacerbate the impact of any of these events on us, all of which could have a negative impact on our business, results of operations, and cash flows. These types of events, either impacting our facilities or the industry in general, could also cause us to incur additional security and insurance related costs. In addition, in the ordinary course of business, we collect and retain sensitive information, including personally identifiable information, about our customers, employees, and vendors. In many cases, we outsource the administration of certain functions to vendors that have been and will continue to be targets of cyber-attacks. Any theft, loss or fraudulent use of customer, employee, vendor, or proprietary data as a result of a cyber-attack on us or a vendor could also subject us to significant litigation, liability, and costs, as well as adversely impact our reputation with customers and regulators, among others.

In addition, we may not be successful in developing or acquiring technology that is competitive and responsive to the needs of our business, and we might lack sufficient resources to make the necessary upgrades or replacements of our outdated existing technology to allow us to continue to operate at our current level of efficiency, all of which could adversely impact our business and competitive position. We maintain cybersecurity insurance to provide coverage for a portion of the losses and damages that may result from a security breach, but such insurance is subject to a number of exclusions and may not cover the total loss caused by a breach. Other costs associated with cyber events may not be covered by insurance or recoverable in rates. The market for cybersecurity insurance continues to evolve and may affect the future availability of cyber insurance at reasonable rates.

The adequacy of our water supplies depends upon a variety of factors beyond our control. Interruption in the water supply may adversely affect our reputation and earnings.

We depend on an adequate water supply to meet the present and future needs of our customers. Whether we have an adequate supply varies depending upon a variety of factors, many of which are partially or completely beyond our control, including:

- the amount of rainfall;
- the amount of water stored in reservoirs;

- underground water supply from which well water is pumped;
- availability from water wholesalers;
- changes in the amount of water used by our customers;
- water quality and availability of appropriate treatment technology;
- legal limitations on water use such as rationing restrictions during a drought;
- changes in prevailing weather patterns and climate; and
- population growth.

We purchase our water supply from various governmental agencies and others, and, in many areas, purchased water is the only available source of water. Water supply availability may be affected by weather conditions, funding and other political and environmental considerations. In addition, our ability to use surface water is subject to regulations regarding water quality and volume limitations. If new regulations are imposed or existing regulations are changed or given new interpretations, the availability of surface water may be materially reduced. A reduction in surface water could result in the need to procure more costly water from other sources, thereby increasing our water production costs and adversely affecting our operating results if not recovered in rates on a timely basis.

We have entered into long-term water supply agreements, which commit us to making certain minimum payments whether or not we purchase any water. Therefore, if demand were insufficient to use our required purchases we would have to pay for water we did not receive.

From time to time, we enter into water supply agreements with third parties and our business is dependent upon such agreements in order to meet regional demand. For example, we have entered into a water supply contract with the SFPUC that expires on June 30, 2034. We can give no assurance that the SFPUC, or any of the other parties from whom we purchase water, will renew our contracts upon expiration, or that we will not be subject to significant price increases under any such renewed contracts.

The parties from whom we purchase water maintain significant infrastructure and systems to deliver water to us. Maintenance of these facilities is beyond our control. If these facilities are not adequately maintained or if these parties otherwise default on their obligations to supply water to us, we may not have adequate water supplies to meet our customers' needs.

If we are unable to access adequate water supplies, we may be unable to satisfy all customer demand, which could result in rationing. Rationing may have an adverse effect on cash flow from operations. We can make no guarantee that we will always have access to an adequate supply of water that will meet all required quality standards. Water shortages may affect us in a variety of ways. For example, shortages could:

- adversely affect our supply mix by causing us to rely on more expensive purchased water;
- adversely affect operating costs;
- increase the risk of contamination to our systems due to our inability to maintain sufficient pressure; and
- increase capital expenditures for building pipelines to connect to alternative sources of supply, new wells to replace those that are no longer in service or are otherwise inadequate to meet the needs of our customers and reservoirs and other facilities to conserve or reclaim water.

We may or may not be able to recover increased operating and construction costs on a timely basis, or at all, for our regulated systems through the ratemaking process. We can give no assurance, as to whether we may be able to recover certain of these costs from third parties that may be responsible, or potentially responsible, for any groundwater contamination.

Our water supplies and other aspects of our operations may be affected by climate change.

There is strong scientific consensus that human activity including carbon and methane emissions is impacting many planetary systems such as the heat-trapping capacity of the atmosphere; ocean temperature, circulation, acidity, and volume; weather patterns including the severity and frequency of severe weather events; ambient temperatures; and planetary ice cover. Because scientific investigations have been focused globally, there is tremendous uncertainty over the timing, extent, and types of impacts global climate change may have on our service areas and in our water supplies. Moreover, studies of tree ring data show long periods of drought conditions have occurred prior to significant human impacts in California and prior to our operation. Finally, in the last fifty years, California has experienced at least three severe multi-year droughts. We can give no assurance that any of our plans for water reliability and water shortages, including incorporating projected and potential climate

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change risks into our water supply planning activities, will be adequate or capable of effectively addressing any droughts or longer periods of drought conditions or other conditions affecting water quality and availability. Immediate physical risks could affect our operations and intensify over time as climate change worsens. More frequent flooding, wildfires, sea level rise, rising or falling groundwater levels, and uneven ground level sinking could damage our assets, including pressurized mains and other pipelines, wells, treatment facilities, and other infrastructure. Wildfires and changes in rainfall may also affect water quality, and both higher temperatures and wildfires can pose risks to employee safety. Farther into the mid-century and late-century horizon, temperature increases may cause declines in snowpack storage, and droughts could decrease surface water supply availability and groundwater recharge while causing increased outdoor demands, which, in each case, could adversely impact our ability to source adequate water supply to meet the needs of our customers.

Additional climate-related risks may influence our approach as we support the transition to a low-carbon economy. Transition risks include changes in the market and consumer demands, such as differences in generational behaviors, shifts in population locations due to different weather patterns, and variations in water needs and customer groups. Regulatory risks, such as emission trading systems and carbon taxes, may also financially affect our business. Additionally, federal and state regulations present requirements for managing water supplies and limiting impacts on local wildlife, while regional plans and legislation may directly affect how we address water issues.

We also periodically review the climate change plans of our wholesalers to determine whether alternative supplies may be necessary in the future. However, we can give no assurance that replacement water supplies will be available at a reasonable cost or a cost acceptable to our customers and Commissions.

Natural disasters, climate change, economic conditions, and other factors may change the population in our service areas.

In the event that some outside factor such as a wildfire, flood, changed climate pattern, actual or threatened public health emergency, or change in the local economy reduces or eliminates our customer base in a service area, or negatively affects the ability of a customer to pay, we could face unrecoverable costs. In those circumstances, the remaining customers might not be able to pay for the operating costs or capital costs of the water system. We may not be able to recover capital costs of property that is no longer used or useful in utility service. We may also encounter an increase in bad debt expense in times of economic difficulty. For example, we experienced an increase in bad debt expense in 2022, which we believe was due to economic impact of the COVID-19 pandemic. Although we would likely seek permission to recover any such future costs through rate increases on remaining customers or in statewide rates, we can give no assurance that the Commissions would approve rate increases to enable us to recover these costs.

Wastewater operations entail significant risks.

Wastewater collection and treatment involve many risks associated with damage to the environment, and we anticipate that wastewater collection and treatment will become an increasing significant part of our business. If collection or treatment systems fail or do not operate properly, untreated or partially treated wastewater could discharge onto property or into nearby streams and rivers, causing damage or injury to property, aquatic life, or human life. Our results of operations and financial condition could be materially and adversely affected by liabilities resulting from such damage.

Demand for our water is subject to various factors and is affected by seasonal fluctuations.

Demand for our water during the warmer, dry months is generally greater than during cooler or rainy months due primarily to additional requirements for water in connection with irrigation systems, swimming pools, cooling systems, and other outside water use. Throughout the year, and particularly during typically warmer months, demand will vary with temperature and rainfall levels. If temperatures during the typically warmer months are cooler than normal, or if there is more rainfall than normal, the demand for our water may decrease. Under the MWRAM mechanism, lower water usage in our California operations affects our cash flows in the year of usage, but results in higher cash flows in the following years.

In addition, governmental restrictions on water usage during drought conditions may result in a decreased demand for our water, even if our water reserves are sufficient to serve our customers during these drought conditions. The Commissions may not allow surcharges to collect lost revenues caused by customers' conservation during a drought. Regardless of whether we may surcharge our customers during a conservation period, they may use less water even after a drought has passed because of conservation patterns developed during the drought. Furthermore, our customers may wish to use recycled water as a substitute for potable water. If rights are granted to others to serve our customers recycled water, there will likely be a decrease in demand for our water.

Finally, changes in prevailing weather patterns due to climate change may affect customer demand. If increased ambient temperatures affect our service areas, water used for irrigation and cooling may increase. If rainfall patterns change, our customers may change their patterns of water use including the amount of outdoor irrigation and the type of landscape they install. Government agencies may also mandate changes to customer irrigation or landscape patterns in response to changes in weather and climate.

Changes in water supply costs affect our operations.

The cost to obtain water for delivery to our customers varies depending on the sources of supply, wholesale suppliers' prices, the quality of water required to be treated and the quantity of water produced to fulfill customer water demand. Our source of supply varies among our operating districts. Certain districts obtain all of their supply from wells; some districts purchase all of the supply from wholesale suppliers; and other districts obtain the supply from a combination of wells and wholesale suppliers. A small portion of supply comes from surface sources and is processed through Company-owned water treatment plants. On average, slightly more than half of the water we deliver to our customers is pumped from wells or received from a surface supply with the remainder purchased from wholesale suppliers. Water purchased from suppliers usually costs us more than surface supplied or well pumped water. The cost of purchased water for delivery to customers represented 31.2% of our total operating costs in 2023 and in 2022. Water purchased from suppliers will require renewal of our contracts upon expiration and may result in significant price increases under any such renewed contracts.

Wholesale water suppliers may increase their prices for water delivered to us based on factors that affect their operating costs. Purchased water rate increases are beyond our control. In California, our ability to recover increases in the cost of purchased water is expected to change with the adoption of the ICBA, which is pending approval of the 2021 GRC. With this change, actual per-unit purchased water costs are expected to be compared to authorized per-unit purchased water costs, with variances added to or netted against the variances in purchased power and pump taxes being recorded as a cost recovery. The balance in the ICBA is expected to be collected in the future by billing the ICBA accounts receivable balances over future periods, which may have a short-term negative impact on cash flow.

Dependency upon adequate supply of electricity, certain chemicals, and third-party suppliers of parts and skilled labor could adversely affect our results of operations.

Purchased electrical power is required to operate the wells and pumps needed to supply water to our customers. Although there are back-up power generators to operate a number of wells and pumps in emergencies, an extended interruption in power could affect the ability to supply water. In the past, California has been subject to rolling power blackouts due to insufficient power supplies. There is no assurance we will not be subject to power blackouts in the future. Additionally, we require sufficient amounts of certain chemicals in order to treat the water we supply. There are multiple sources for these chemicals but an extended interruption of supply could adversely affect our ability to adequately treat our water.

Purchased power is a significant operating expense. During 2023 and 2022, purchased power expense represented 6.4% and 6.2%, respectively, of our total operating costs. These costs are beyond our control and can change unpredictably and substantially. As with purchased water, purchased power costs are expected to be included in the ICBA. Cash flows between rate filings may be adversely affected until the Commission authorizes a rate change, but earnings will be minimally impacted. Cost of chemicals used in the delivery of water is not an element of the ICBA, and therefore, variances in quantity or cost could affect the results of operations.

We rely on outside contractors to supply us with materials and parts critical to the operation of our systems. Should parts and material become unavailable, or should the cost of necessary supplies rise substantially, it could adversely affect our ability to operate or have financial effects that are not recoverable through a regulatory process.

We also rely on outside contractors to complete large construction projects and provide emergency maintenance services. In the event these contractors are unavailable or cannot meet the demands imposed on them, we may face significantly lengthy interruptions of service or delays in constructing capital projects. We may face additional costs to acquire more resources to complete these activities.

Our business requires significant capital expenditures to replace or improve aging infrastructure that are dependent on our ability to secure appropriate funding. If we are unable to obtain sufficient capital or if the rates at which we borrow increase, there would be a negative impact on our results of operations.

The water utility business is capital-intensive. We invest significant funds to replace or improve aging infrastructure such as property, plant, and equipment. In addition, water shortages may adversely affect us by causing us to rely on more purchased water. This could cause increases in capital expenditures needed to build pipelines to secure alternative water sources. In addition, we require capital to grow our business through acquisitions. We fund our capital requirements from cash received from operations, from funds received from developers, by raising equity through common stock issuances or by issuing debt

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obligations. We cannot give any assurance that these sources will continue to be adequate or that the cost of funds will remain at levels permitting us to earn a reasonable rate of return. In the event we are unable to obtain sufficient capital, our expansion efforts could be curtailed, which may affect our growth and may affect our future results of operations.

Our ability to access the capital markets is affected by the ratings of certain of our debt securities. Standard & Poor's Rating Agency issues a rating on California Water Service Company's ability to repay certain debt obligations. The credit rating agency could downgrade our credit rating based on reviews of our financial performance and projections or upon the occurrence of other events that could affect our business outlook. Lower ratings by the agency could restrict our ability to access equity and debt capital. We can give no assurance that the rating agency will maintain ratings that allow us to borrow under advantageous conditions and at reasonable interest rates. A future downgrade by the agency could also increase our cost of capital by causing potential investors to require a higher interest rate due to a perceived risk related to our ability to repay outstanding debt obligations.

While the majority of our debt is long term at fixed rates, we do have interest rate exposure in our short-term borrowings, which have variable interest rates. We are also subject to interest rate risks on new financings. However, if interest rates were to increase on a long-term basis, our management believes that customer rates would increase accordingly, subject to approval by the appropriate commission. We can give no assurance that the Commission would approve such an increase in customer rates.

We are obligated to comply with specified debt covenants under certain of our loan and debt agreements. Failure to maintain compliance with these covenants could limit future borrowing, and we could face increased borrowing costs, litigation, acceleration of maturity schedules, and cross default issues. Such actions by our creditors could have a material adverse effect on our financial condition and results of operations.

Our inability to access the capital or financial markets could affect our ability to meet our liquidity needs at reasonable cost and our ability to meet long-term commitments. Changes in economic conditions in our markets could affect our customers' ability to pay for water services. Any of these could adversely affect our results of operations, cash flows, and financial condition.

We rely on our current credit facilities to fund short-term liquidity needs if internal funds are not available from operations. Specifically, given the seasonal fluctuations in demand for our water we commonly draw on our credit facilities to meet our cash requirements at times in the year when demand is relatively low. We also may occasionally use letters of credit issued under our revolving credit facilities. Disruptions in the capital and credit markets could adversely affect our ability to draw on our credit facilities. Our access to funds under our credit facilities is dependent on the ability of our banks to meet their funding commitments.

Many of our customers and suppliers also have exposure to risks that could affect their ability to meet payment and supply commitments. We operate in geographic areas that may be particularly susceptible to declines in the price of real property, which could result in significant declines in demand for our products and services. In the event that any of our significant customers or suppliers, or a significant number of smaller customers and suppliers, are adversely affected by these risks, we may face disruptions in supply, significant reductions in demand for our products and services, inability of customers to pay invoices when due, and other adverse effects that could negatively affect our financial condition, results of operations and/or cash flows.

Our operations and certain contracts for water distribution and treatment depend on the financial capability of state and local governments, and other municipal entities such as water districts. Major disruptions in the financial strength or operations of such entities, such as liquidity limitations, bankruptcy or insolvency, could have an adverse effect on our ability to conduct our business and/or enforce our rights under contracts to which such entities are a party.

We are a holding company that depends on cash flow from our subsidiaries to meet our obligations and to pay dividends on our common stock.

As a holding company, we conduct substantially all of our operations through our subsidiaries and our only significant assets are investments in those subsidiaries. In 2023, 90.6% of our total consolidated operating revenue was derived from the operations of California Water Service Company. As a result, we are dependent on cash flow from our subsidiaries, and California Water Service Company in particular, to meet our obligations and to pay dividends on our common stock.

Our subsidiaries are separate and distinct legal entities and generally have no obligation to pay any amounts due on California Water Service Group's debt or to provide California Water Service Group with funds for dividends. Although there are no contractual or regulatory restrictions on the ability of our subsidiaries to transfer funds to us, the reasonableness of our capital structure is one of the factors considered by state and local regulatory agencies in their ratemaking determinations. Therefore, transfer of funds from our subsidiaries to us for the payment of our obligations or dividends may have an adverse effect on ratemaking determinations. Furthermore, our right to receive cash or other assets upon the liquidation or

reorganization of a subsidiary is generally subject to the prior claims of creditors of that subsidiary. If we are unable to obtain funds from our subsidiaries in a timely manner, we may be unable to meet our obligations or pay dividends.

We can make dividend payments only from our surplus (the excess, if any, of our net assets over total paid-in capital) or if there is no surplus, the net profits for the current fiscal year or the fiscal year before which the dividend is declared. In addition, we can pay cash dividends only if after paying those dividends we would be able to pay our liabilities as they become due. Owners of our capital stock cannot force us to pay dividends and dividends will only be paid if and when declared by our board of directors (Board). Our Board can elect at any time, and for an indefinite duration, not to declare dividends on our capital stock.

An important element of our growth strategy is the acquisition of water and wastewater systems. Risks associated with potential acquisitions, divestitures or restructurings may adversely affect us.

We seek to acquire or invest in other companies, technologies, services, or products that complement our business from time to time. The execution of our growth strategy exposes us to different risks than those associated with our utility operations. We can give no assurance that we will succeed in finding attractive acquisition candidates or investments, or that we would be able to reach mutually agreeable terms with such parties. In addition, as consolidation becomes more prevalent in the water and wastewater industries, the prices for suitable acquisition candidates may increase to unacceptable levels and limit our ability to grow through acquisitions. If we are unable to find acquisition candidates or investments, our ability to grow may be limited.

Acquisition and investment transactions may result in the issuance of our equity securities that could be dilutive if the acquisition or business opportunity does not develop in accordance with our business plan. They may also result in significant write-offs and an increase in our debt. The occurrence of any of these events could have a material adverse effect on our business, financial condition, and results of operations.

Any of these transactions could involve numerous additional risks, including one or more of the following:

- problems integrating the acquired operations, personnel, technologies, physical and cybersecurity processes, or products with our existing businesses and products;
- liabilities inherited from the acquired companies' prior business operations;
- diversion of management time and attention from our core business to the acquired business;
- failure to retain key technical, management, and other personnel of the acquired business;
- difficulty in retaining relationships with suppliers and customers of the acquired business; and
- difficulty in obtaining required regulatory approvals.

In addition, the businesses and other assets we acquire may not achieve the sales and profitability expected. The occurrence of one or more of these events may have a material adverse effect on our business. There can be no assurance that we will be successful in overcoming these or any other significant risks encountered.

We may not be able to increase or sustain our recent growth rate, and we may not be able to manage our future growth effectively.

We may be unable to continue to expand our business or manage future growth. To successfully manage our growth and handle the responsibilities of being a public company, we must effectively:

- hire, train, integrate, and manage additional qualified engineers for engineering design and construction activities, new business personnel, and financial and information technology personnel;
- retain key management, augment our management team, and retain qualified and certified water and wastewater system operators;
- implement and improve additional and existing administrative, financial and operations systems, procedures and controls;
- expand our technological capabilities; and
- manage multiple relationships with our customers, regulators, suppliers, and other third parties.

If we are unable to manage our growth effectively, we may not be able to take advantage of market opportunities, satisfy customer requirements, execute our business plan, or respond to competitive pressures.

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We have a number of large-volume commercial and industrial customers and a significant decrease in consumption by one or more of these customers could have an adverse effect on our operating results and cash flows.

Our billed revenues and cash flows from operations will decrease if a significant business or industrial customer terminates or materially reduces its use of our water. Approximately $187.1 million, or 23.7%, of our 2023 water utility revenues was derived from business and industrial customers. In Hawaii, we serve a number of large resorts, which if their water usage was reduced or ceased could have a material impact to our Hawaii operation. The delay between such date and the effective date of the rate relief may be significant and could adversely affect our operating results and cash flows.

Our operating cost and costs of providing services may rise faster than our revenues.

Our ability to increase rates over time is dependent upon approval of such rate increases by the Commissions, or in the case of the City of Hawthorne and the City of Commerce, the City Council, which may be inclined, for political or other reasons, to limit rate increases. However, our costs, which are subject to market conditions and other factors, may increase significantly. The second largest component of our operating costs after water production is made up of salaries and wages. These costs are affected by the local supply and demand for qualified labor. Other large components of our costs are general insurance, workers compensation insurance, employee benefits, and health insurance costs. These costs may increase disproportionately to rate increases authorized by the Commissions and may have a material adverse effect on our future results of operations.

Demand for our stock may fluctuate due to circumstances beyond our control.

We believe that stockholders invest in public utility stocks, in part, because they seek reliable dividend payments. If there is an over-supply of stock of public utilities in the market relative to demand by such investors, the trading price of our securities could decrease. Additionally, if interest rates rise above the dividend yield offered by our equity securities, demand for our stock, and consequently its market price, may decrease. Additional factors that could cause fluctuations in the trading price of our stock include regulatory developments, such as the CPUC's ultimate decision regarding the 2021 GRC; general economic conditions and trends, including inflationary pressures, general economic slowdown or a recession, changes in monetary policy, adverse capital markets activity or macroeconomic conditions as a result of geopolitical conflicts, and the prospect of a shutdown of the U.S. federal government; price and volume fluctuations in the overall stock market; actual or anticipated changes or fluctuations in our results of operations; actual or anticipated changes in the expectations of investors or securities analysts; actual or anticipated developments in other utilities' businesses or the competitive landscape generally; litigation involving us or our industry; major catastrophic events, or sales of large blocks of our stock. A decline in demand for our stock may have a negative impact on our ability to finance capital projects.

Adverse investment returns and other factors may increase our pension liability and pension funding requirements.

A substantial number of our employees are covered by a defined benefit pension plan. At present, the pension plan is underfunded because our projected pension benefit obligation exceeds the aggregate fair value of plan assets. Under applicable law, we are required to make cash contributions to the extent necessary to comply with minimum funding levels imposed by regulatory requirements. The amount of such required cash contribution is based on an actuarial valuation of the plan. The funded status of the plan can be affected by investment returns on plan assets, discount rates, mortality rates of plan participants, pension reform legislation, and a number of other factors. There can be no assurance that the value of our pension plan assets will be sufficient to cover future liabilities. Although we contributed to our pension plan in recent years, it is possible that we could incur a pension liability adjustment, or could be required to make additional cash contributions to our pension plan, which would reduce the cash available for business and other needs.

Labor relations matters could adversely affect our operating results.

At December 31, 2023, 757 of our 1,266 total employees were union employees. Most of our unionized employees are represented by the UWUA, AFL-CIO, except certain engineering and laboratory employees who are represented by the IFPTE, AFL-CIO.

We believe our labor relations are good, but in light of rising costs for health care, pensions, and general inflation, our future contract negotiations may be difficult. Furthermore, changes in applicable law or regulations could have an adverse effect on management's negotiating position with respect to our currently unionized employees and/or employees that decide to unionize in the future. We are subject to a risk of work stoppages and other labor relations matters as we negotiate with the unions to address these issues, which could affect our results of operations and financial condition. We can give no assurance that issues with our labor forces will be resolved favorably to us in the future or that we will not experience work stoppages.

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Our operations are geographically concentrated in California and this lack of diversification may negatively affect our operating results.

Although we own facilities in a number of states, 90.6% of our total consolidated operating revenue was generated by our operations located in California in 2023. As a result, we are largely subject to political, regulatory, economic, water supply, weather, labor, and energy cost risks affecting California.

We are also affected by the real property market in California. In order to grow our business, we may need to acquire additional real estate or rights to use real property owned by third parties, the cost of which tends to be higher and more volatile in California than in other states. The value of our assets in California may decline if there is a decline in the California real estate market that results in a significant decrease in real property values.

Our business and financial performance may be adversely affected by high inflation and other macroeconomic conditions.

Inflation has the potential to adversely affect our liquidity, business, financial condition, and results of operations by increasing our overall cost structure, particularly if we are unable to achieve increases in the rates we charge our customers. There is no guarantee that any future rate increase requests will be approved and granted in a timely manner and/or will be sufficient to cover costs for the impact of high inflation. The existence of inflation in the economy has resulted in, and may continue to result in, higher interest rates and capital costs, shipping costs, supply shortages, increased costs of labor, and other similar effects. As a result of inflation, we have experienced, and may continue to experience, cost increases. Although we may take measures to mitigate the impact of this inflation, if these measures are not effective, our business, financial condition, results of operations, and liquidity could be materially adversely affected. Even if such measures are effective, there could be a difference between the timing of when these beneficial actions impact our results of operations and when the cost of inflation is incurred.

We may also be similarly impacted by stagnating or worsening business and economic conditions, including general economic slowdown or a recession, higher interest rates for a prolonged period of time, instability of certain financial institutions, changes in monetary policy, adverse capital markets activity or macroeconomic conditions as a result of geopolitical conflicts, and the prospect of a shutdown of the U.S. federal government.

Municipalities, water districts, and other public agencies may condemn our property by eminent domain action.

State statutes allow municipalities, water districts and other public agencies to own and operate water systems. These agencies are empowered to condemn water systems or real property owned by privately owned public utilities in certain circumstances and in compliance with California and federal law. Additionally, whenever a public agency constructs facilities to extend its utility system into the service area of a privately owned public utility, such an act may constitute the taking of property and require reimbursement to the public utility for its loss. If a public agency were to file an eminent domain lawsuit against us, we would incur substantial attorney's fees, consultant and expert fees, and other costs in considering a challenge to the right to take our utility property and/or its valuation for just compensation, as well as such fees and costs in any subsequent litigation if necessary. If the public agency prevailed and acquired our utility property, we would be entitled to just compensation for our loss, but we would no longer have access to the condemned property or water system. Neither would we be entitled to any portion of revenue generated from the use of such asset going forward.

General Risk Factors

We depend significantly on the services of the members of our management team, and the departure of any of those persons could cause our operating results to suffer.

Our success depends significantly on the continued individual and collective contributions of our management team. The loss of the services of any member of our management team could have an adverse effect on our business as our management team has knowledge of our industry and customers and would be difficult to replace.

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We retain certain risks not covered by our insurance policies.

We evaluate our risks and insurance coverage annually or more frequently if circumstances dictate. Our evaluation considers the costs, risks, and benefits of retaining versus insuring various risks as well as the availability of certain types of insurance coverage. Accordingly, we have determined or may determine to self-insure or to not obtain insurance in certain cases, or insurance may not be available at commercially acceptable terms or at all. Furthermore, we are also affected by increases in prices for insurance coverage; in particular, we have been, and will continue to be, affected by rising health insurance costs. Retained risks are associated with deductible limits, partial self-insurance programs, and insurance policy coverage ceilings. If we suffer an uninsured loss, we may be unable to pass all or any portion of the loss on to customers, because our rates are regulated by regulatory commissions. Consequently, uninsured losses may negatively affect our financial condition, liquidity, and results of operations. There can be no assurance that we will not face uninsured losses pertaining to the risks we have retained.

Our enterprise risk management processes may not be effective in identifying and mitigating the risks to which we are subject, or in reducing the potential for losses in connection with such risks.

Our enterprise risk management processes are designed to minimize or mitigate the risks to which we are subject, as well as any losses stemming from such risks. Although we seek to identify, measure, monitor, report, and control our exposure to such risks, and employ a broad and diversified set of risk monitoring and mitigation techniques in the process, those techniques are inherently limited in their ability to anticipate the existence or development of risks that are currently unknown and unanticipated. The ineffectiveness of our enterprise risk management processes in mitigating the impact of known risks or the emergence of previously unknown or unanticipated risks may result in our incurring losses in the future that could adversely affect our financial condition and results of operations.

The accuracy of our judgments and estimates about financial and accounting matters will affect our operating results and financial condition.

We make certain estimates and judgments in preparing our financial statements regarding, among others:

- the useful life of intangible rights;
- the number of years to depreciate certain assets;
- amounts to set aside for uncollectible accounts receivable, inventory obsolescence, and uninsured losses;
- our legal exposure and the appropriate accrual for claims, including medical claims and workers' compensation claims;
- future costs and assumptions for pensions and other postretirement benefits;
- regulatory recovery of regulatory assets;
- possible tax uncertainties; and
- projected collections of WRAM and MCBA receivables or receivables under subsequent recovery mechanisms, such as MWRAM and ICBA.

The quality and accuracy of those estimates and judgments may have an impact on our operating results and financial condition.

In addition, we must estimate unbilled revenues and costs as of the end of each accounting period. If our estimates are not accurate, we would be required to make an adjustment in a future period. Accounting rules permit us to use expense balancing accounts and memorandum accounts that include cost changes to us that are different from amounts incorporated into the rates approved by the Commissions. These accounts result in expenses and revenues being recognized in periods other than in which they occurred.

Our commitments and stakeholder expectations relating to environmental, social, and governance (ESG) considerations may expose us to liabilities, increased costs, reputational harm, and other adverse effects on our business.

We have announced, and may from time to time announce, certain initiatives, including goals, targets, and other objectives, related to ESG matters. These statements reflect our current plans and do not constitute a guarantee that they will be achieved. Our failure to accomplish or accurately track and report on these goals on a timely basis, or at all, could adversely affect our reputation, financial performance, and growth, and expose us to increased scrutiny from the investment community as well as enforcement authorities. In addition, statements about our sustainability goals, targets, and other objectives, and progress against those goals, targets, and other objectives, are or may be based on standards for measuring progress that are still

developing, internal controls and processes that continue to evolve, and assumptions that are subject to change in the future. Our selection of voluntary disclosure frameworks and standards, and the interpretation or application of those frameworks and standards, have changed and may change from time to time, or differ from those of others. Methodologies for reporting this data have been and may from time to time be updated and previously reported data has been or may be adjusted, as applicable, to reflect improvement in availability and quality of third-party data, changing assumptions, changes in the nature and scope of our operations, and other changes in circumstances, which could result in significant revisions to our current goals, reported progress in achieving such goals, or ability to achieve such goals in the future.

Investor and political advocacy groups, certain institutional investors, investment funds, other market participants, stockholders, and customers have focused increasingly on ESG initiatives, including the goals, targets, and objectives that we announce, and our methodologies and timelines for pursuing them. At the same time, stakeholders and regulators have increasingly expressed or pursued opposing views, legislation, and investment expectations with respect to sustainability initiatives, including the enactment or proposal of "anti-ESG" legislation or policies. Implementing our ESG programs involves risks and uncertainties, including increased costs, requires investments and often depends on third-party performance or data that is outside our control. For example, as a regulated utility, we must obtain approval from our state utilities commissions for our cost structure and capital investments, including capital expenditures for implementing ESG programs, and any changes that may affect customer rates need to be approved within the rate case process with the state public utilities commissions. In our experience, U.S. state utilities commissions have prioritized water affordability and physical climate change risk adaptation over emissions reductions. Additionally, in many areas, purchased water, which is a contributor to our emissions inventory, is the only available water source, and a large majority of these single-source suppliers have not published emission reduction targets. We cannot guarantee that we will achieve our announced ESG targets and commitments, satisfy all stakeholder expectations, or that the benefits of implementing or achieving these goals and initiatives will not surpass their projected costs. Any failure, or perceived failure, to achieve ESG goals and initiatives, as well as to manage ESG risks, adhere to public statements, comply with federal or state ESG laws and regulations or meet evolving and varied stakeholder expectations and standards could result in legal and regulatory proceedings against us and materially adversely affect our business, reputation, results of operations, financial condition, and stock price. Even if we achieve our goals, targets, and objectives, we may not realize all of the benefits that we expected at the time they were established.

Our ability to produce timely and accurate financial statements or comply with applicable laws and regulations could be impaired by a material weakness in our internal control over financial reporting, which could result in loss of investor confidence in the accuracy and completeness of our financial reports and materially adversely affect our results of operations and stock price.

The accuracy of our financial reporting is dependent on the effectiveness of our internal controls. We are required to provide a report from management to our stockholders on our internal control over financial reporting that includes an assessment of the effectiveness of these controls. As disclosed in our 2022 Annual Report on Form 10-K, management concluded that our internal control over financial reporting was not effective as of December 31, 2022 due to a material weakness in our internal control over the completeness of our accounting for regulatory assets and liabilities, specifically controls over the identification of regulatory filings by the Company during the period that are then reviewed to determine their potential accounting impact. This material weakness has since been remediated.

Internal control over financial reporting has inherent limitations, including human error, the possibility that controls could be circumvented or become inadequate because of changed conditions, and fraud. Because of these inherent limitations, internal control over financial reporting might not prevent or detect all misstatements or fraud. If we are unable to maintain effective internal control over financial reporting or disclosure controls and procedures, we could suffer harm to our reputation, incur incremental compliance costs, fail to meet our public reporting requirements on a timely basis, be unable to properly report on our business and our results of operations, or be required to restate our financial statements, which could result in loss of investor confidence in the accuracy and completeness of our financial reports, subject us to litigation or investigations requiring management resources and payment of legal and other expenses, and our results of operations and our stock price could be materially adversely affected.

Item 1B. ***Unresolved Staff Comments.***

None.

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Item 1C. ***Cybersecurity.***

Governance

The Board and Audit Committee are responsible for overseeing IT and OT risks from cybersecurity threats. The Board recognizes the importance of maintaining the trust and confidence of our customers, employees, and stockholders and the need to protect information stored on our and our vendors' systems, including personal and proprietary data.

Our Senior Vice President of Corporate Services & Chief Risk Officer (SVP & CRO), who reports directly to our Chairman, President & CEO leads a team that is responsible for managing our enterprise-wide information security strategy, policy, standards, architecture, and processes, including the prevention, detection, mitigation, and remediation of cybersecurity incidents. Our SVP & CRO holds a Master's Degree in Business Administration and a Bachelor's Degree in Management Information Systems, has over 25 years of information and operational technology experience, is a certified Project Management Professional, and is a Certified Information Security Manager from the Information Systems Audit and Control Association. He served for one year as the President of the Bay Area InfraGard chapter and four years on its Board. InfraGard is a collaboration between the Federal Bureau of Investigation (FBI) and members of the private sector that promotes the protection of U.S. critical infrastructure and enables the exchange of important information. Our Director of IT Security and Chief Information Security Officer (CISO), who reports to the SVP & CRO, has over 25 years of information technology and 15 years of cybersecurity experience and holds a Certified Information Systems Security Professional certification from the International Information System Security Certification Consortium.

The Board and Audit Committee receive regular reports from management no less than quarterly, and on an ad hoc basis, on information and operational technology risks, including cybersecurity and data security risks, as well as on the status of projects to strengthen our information security systems, assessments of our security program, and the emerging threat landscape.

The SVP & CRO receives reports on cybersecurity threats from the CISO who regularly reviews threat intelligence from various sources including the FBI and Department of Homeland Security (DHS). The SVP & CRO, in conjunction with management, also regularly reviews risk management measures implemented by us to identify and mitigate data security and cybersecurity risks. The significance of these threats is assessed by the SVP & CRO and his team and reported, as appropriate depending on the significance, to the Audit Committee.

Risk Management and Strategy

Our cybersecurity risk management approach is informed in part by multiple standards and regulations for cybersecurity and data privacy, including the following:

- National Institute of Standards and Technology (NIST) Cybersecurity Framework
- NIST 800-171 and Cybersecurity Maturity Model Certification (NIST 800-171 CMMC)
- Payment Card Industry Data Security Standard
- California Privacy Rights Act
- Health Insurance Portability and Accountability Act
- Defense Federal Acquisition Regulations Supplement (DFARS)

We regularly assess our adherence to these standards and maintain programs designed to support our compliance with these requirements. External firms audit our compliance with NIST 800-171 CMMC and DFARS every three years. In addition, our cybersecurity processes have been integrated into our overall enterprise risk management system and specific cybersecurity-focused disclosure controls and procedures have been developed. Management continues to support a variety of practices that are intended to align with recognized frameworks and reflect our approach to assess, identify, and manage material risks from cybersecurity threats:

- Incident response: We have adopted a Cybersecurity Incident Response Plan (IRP) that applies in the event of a cybersecurity threat or incident to provide a standardized framework for investigating, containing, documenting, and mitigating incidents, including reporting findings and keeping senior management and other key stakeholders informed and involved as appropriate. The IRP applies to all Company personnel and third-party contractors, vendors, and partners that perform functions or services that require access to secure our information, and to all devices and network services that are owned or managed by the Company.

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- Regular testing: We engage a third-party cybersecurity firm to conduct an annual network penetration test on our corporate and supervisory control and data acquisition networks. The annual penetration test enables us to assess our existing security controls to identify weaknesses and eliminate vulnerabilities to defend against cybersecurity threats proactively. Our Information Technology team also conducts rehearsals of our IRP to test and enhance our ability to respond to cybersecurity incidents.
- Monitoring for risks: We engage a third party cybersecurity firm to manage our Security Operations Center (SOC) who is responsible for monitoring our network traffic 24/7. Our SOC helps to identify and respond to cybersecurity issues in real time by assessing the level of threats and making recommendations on appropriate actions.
- Security controls: We incorporate physical- and software-based preventive, detective, and corrective security controls to prevent or detect unauthorized activities and proactively alert us should an unauthorized activity occur within the organization. Early detection can enable the security team to quickly contain and eradicate the unauthorized activity to reduce the time exposure window and the impact of the incident. Our Security Incident Event Management tool monitors security logs, includes detective controls, and helps to identify irregular activities.
- Detection and preventative technology: We have implemented multiple technologies designed to help protect our systems from cybersecurity threats, including an intrusion prevention system, next-generation antivirus program, end point protection system, and a data loss prevention security tool.
- Regular improvements: We regularly work to enhance our systems and integrate new information and technology to upgrade our systems. We review and approve software and hardware acquisitions to enhance our ability to detect and manage cybersecurity threats. We also engage the FBI, DHS, and Fusion Center for incident response support and collaborate to share critical information.

Management also shares knowledge to protect our infrastructure and learn from recent developments. In addition to InfraGard, our SVP & CRO is a member of The Northern California Regional Intelligence Center, which is part of the California State Threat Assessment System supporting public safety as an intelligence and information sharing nexus in Northern California. Our CISO also actively participates on the Safety and Security Committee of the National Association of Water Companies to collaborate with members of our industry and learn best practices.

Our employees represent the foundation of cybersecurity protection and are a key line of defense, and we seek to strengthen their ability to target risks by proactively training active employees and contractors each year. We update our online security awareness training annually to review key policies and practices for security. To engage our workforce and inform employees of applicable security topics, we provide a monthly internal cybersecurity newsletter. Our monthly campaign on mock phishing emails is designed to serve as a reminder to employees to refrain from clicking on fraudulent emails disguised as safe content. We also assign enhanced cybersecurity training to employees who have access to potentially sensitive governmental information.

In the last fiscal year, we have not identified risks from known cybersecurity threats, including as a result of any prior cybersecurity incidents, that have materially affected us, but we face certain ongoing cybersecurity risks threats that, if realized, are reasonably likely to materially affect us. Additional information on cybersecurity risks we face is discussed in Part I, Item 1A, "Risk Factors," under the heading "We rely on our information technology (IT) and a number of complex business systems to assist with the management of our business and customer and supplier relationships, and a disruption of these systems, including from cyber-attacks, could adversely affect our business."

Item 2. ***Properties.***

Our physical properties consist of offices and water and wastewater facilities to accomplish the production, storage, treatment, and distribution of water and the collection, treatment, and discharge of wastewater. These properties are located in or near the geographic service areas listed above in Item 1, "Business—Geographical Service Areas and Number of Customer Connections at Year-end." Our headquarters, which houses accounting, engineering, information systems, human resources, legal, purchasing, regulatory, water quality, and executive staff, is located in San Jose, California.

The real properties owned are held in fee simple title. Properties owned by Cal Water are subject to the lien of an Indenture of Mortgage and Deed of Trust dated May 11, 2021, June 11, 2019, November 22, 2010, and April 17, 2009 (the California Indenture), securing Cal Water's First Mortgage Bonds, of which $1,050.0 million was outstanding at December 31, 2023. The California Indenture contains certain restrictions common to such types of instruments regarding the disposition of property and includes various covenants and restrictions. At December 31, 2023, our California utility was in compliance with the covenants of the California Indenture.

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Cal Water owns 600 wells and operates ten leased wells. There are 408 owned storage tanks with a capacity of 290 million gallons, one leased storage tanks with a capacity of 0.25 million gallons, 28 managed storage tanks with a capacity of 32 million gallons, and three surface water reservoirs with a capacity of 241 million gallons. Cal Water owns and operates six surface water treatment plants with a combined capacity of 46 million gallons per day. There are 6,743 miles of supply and distribution mains in the various owned and managed systems.

In the leased City of Hawthorne and City of Commerce systems or in systems that are operated under contract for municipalities or private companies, title to the various properties is held exclusively by the municipality or private company.

Hawaii Water owns 29 wells, manages two potable wells, and manages five irrigation wells. There are 38 storage tanks with a storage capacity of 35.8 million gallons. There are 246 miles of supply and distribution lines. Hawaii Water operates seven wastewater treatment facilities with a combined capacity to process approximately 4.8 million gallons per day. There are 77.1 miles of sewer collection mains including force mains.

Washington Water owns 469 wells and manages 5 wells. There are 194 owned storage tanks with a storage capacity of 23.8 million gallons. There are 734 miles of supply and distribution lines. Washington Water operates one wastewater treatment plant with 1.3 miles of sewer collection mains.

New Mexico Water owns 29 wells. There are 29 storage tanks with a storage capacity of 11.0 million gallons. There are 210 miles of supply and distribution lines. New Mexico operates two wastewater treatment facilities with a combined capacity to process 0.62 million gallons per day. There are eight lift stations and 35 miles of sewer collection mains.

Washington Water has long-term bank loans that are secured primarily by utility plant owned by Washington Water.

Texas Water, through its majority ownership of BVRT, owns and operates four wastewater treatment plants. The plants have a treatment capacity of 795,000 gallons per day.

Item 3. ***Legal Proceedings.***

Information with respect to this item may be found under the subheading "Commitments and Contingencies" in Note 14 of the Notes to Consolidated Financial Statements in Item 8, which is incorporated herein by reference.

Item 4. ***Mine Safety Disclosures.***

Not applicable.

PART II

Item 5. ***Market for Registrant's Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.***

Our common stock is traded on the New York Stock Exchange under the symbol "CWT." At December 31, 2023, there were 57,723,738 common shares outstanding. There were 1,767 common stockholders of record as of February 12, 2024.

During 2023, we paid a cash dividend of $1.04 per common share, or $0.26 per quarter. During 2022, we paid a cash dividend of $1.00 per common share, or $0.25 per quarter. On January 25, 2024, our Board declared a quarterly cash dividend of $0.28 per common share payable on February 23, 2024, to stockholders of record on February 12, 2024. This represents an indicated annual cash dividend of $1.12, and would be our 57th consecutive year of increasing the annual dividend and marks the 316th consecutive quarterly dividend.

We presently intend to pay quarterly cash dividends in the future consistent with past practices, subject to our earnings and financial condition, restrictions set forth in our debt instruments, regulatory requirements and such other factors as our Board may deem relevant.

Five-Year Performance Graph

The following performance graph compares the changes in the cumulative shareholder return on California Water Service Group's common stock with the cumulative total return on the Robert W. Baird Water Utility Index (which is comprised of Artisan Resources Corporation, American Water Works Company, Inc, American States Water Company, Essential Utilities, SJW Group, and York Water) and the Standard & Poor's 500 Index during the last five years ended December 31, 2023. The comparison assumes $100 was invested on December 31, 2018, in California Water Service Group's common stock and in each of the forgoing indices and assumes reinvestment of dividends.

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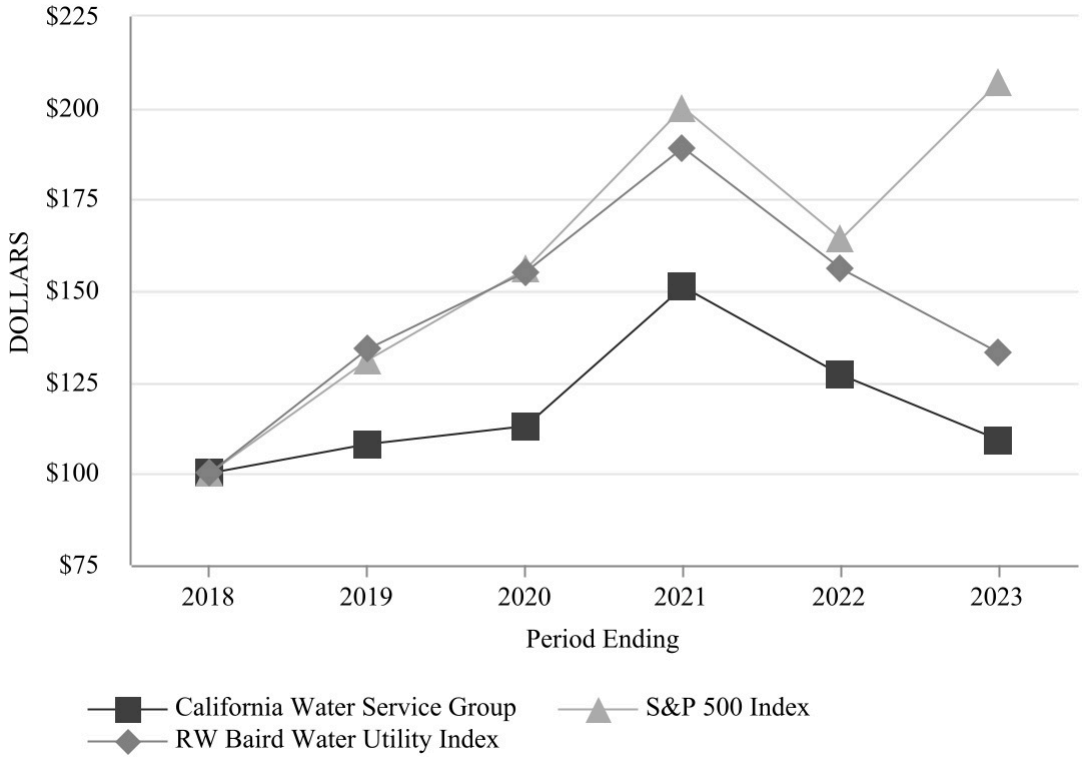
Performance Graph Data



The following descriptive data is supplied in accordance with Rule 304(d) of Regulations S-T:

	2018	2019	2020	2021	2022	2023
California Water Service Group	100	108	113	151	127	109
S&P 500	100	131	156	200	164	207
RW Baird Water Utility Index	100	134	155	189	156	133

An initial $100 investment in the common stock of California Water Service Group on December 31, 2018 including reinvestment of dividends would be worth $109 at the end of the 5-year period ending December 31, 2023.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. [Reserved]

Not applicable.

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Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations.***

The following sections include a discussion of results for fiscal 2023 compared to fiscal 2022 as well as certain 2021 results. The comparative results for fiscal 2022 with fiscal 2021 generally have not been included in this Form 10-K, but may be found in "Part II - Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of the Company's Annual Report on Form 10-K for the year ended December 31, 2022.

Overview

Net Income Attributable to California Water Service Group

In 2023 and 2022, net income attributable to California Water Service Group was $51.9 million and $96.0 million, respectively. Earnings per diluted common share decreased $0.86 from $1.77 to $0.91 or 48.6% in 2023.

The $44.1 million decrease in net income was primarily due to the delayed final decision from the CPUC on Cal Water's pending 2021 GRC to set new revenue, rates, and regulatory mechanisms. The 2021 GRC was originally scheduled to be completed on December 31, 2022 with new revenue, rates, and regulatory mechanisms effective on January 1, 2023. On January 24, 2024, the assigned CPUC ALJs issued a PD on the litigated 2021 GRC, and concurrently, the assigned CPUC Commissioner issued an APD opposing and modifying certain decisions made by the ALJs. The PD issued by the ALJs was closer aligned to Cal Water's requested revenue requirement whereas the APD issued by the assigned Commissioner was closer aligned to the Public Advocates' requested revenue requirement. On February 13, 2024, Cal Water filed a request to change several elements in the PD and APD, including correction of possible 2021 GRC technical issues. We are unable to determine which of the two proposed decisions will be adopted by the CPUC, or if a second alternate proposed decision will be issued by the CPUC. As a result of the uncertainty of the decision that will ultimately be made by the CPUC, we are unable to reasonably estimate the impact on 2023 operating revenue and expenses. The 2021 GRC cumulative adjustment plus interest which is retroactive to January 1, 2023, will be recorded when the final decision is issued by the CPUC.

IRMA, MWRAM, AND DREMA

The IRMA tracks the difference between the current rates that continue to be billed starting January 1, 2023 (considered to be interim rates), and the rates that will eventually be approved pursuant to the CPUC's decision concerning Cal Water's 2021 GRC, plus any additional revenue changes approved since July 1, 2021 (final rates). We expect to recognize the regulatory asset and corresponding operating revenue once the 2021 GRC is approved by the CPUC.

The MWRAM tracks the difference between the revenue received for actual metered sales through tiered volumetric rates and the revenue that would have been received with the same actual metered sales if a uniform rate had been in effect. The MWRAM will be effective retroactive to January 1, 2023. We expect to recognize the regulatory asset and corresponding operating revenue once the 2021 GRC is approved by the CPUC.

The DREMA tracks lost revenues associated with reduced sales revenue when customer demand is affected by requests for voluntary and mandatory usage reductions in California and is in effect for us in 2023 when our regulated service territories in California are under voluntary and mandatory usage reductions. The final value of the DREMA will depend on the resolution of the 2021 GRC. We expect to recognize the regulatory asset and corresponding operating revenue once the 2021 GRC is approved by the CPUC and an advice letter for recovery is approved by the CPUC.

Operating revenue for 2023 does not include any benefit of proposed revenue rate relief that will be tracked in the IRMA or regulatory mechanisms (MWRAM and DREMA) due to the delay in approval of our 2021 GRC.

California Extended Water and Wastewater Arrearages Payment Program

The California Water and Wastewater Arrearages Payment Program was created by the California Legislature to be administered by the State Water Resources Control Board (Water Board) in order to provide relief to community water and wastewater systems for unpaid bills (arrearages) related to the COVID-19 pandemic. The Legislature allocated $985 million in American Rescue Plan Act of 2021 funds to pay down residential and commercial arrearages accrued between March 4, 2020 and June 15, 2021. In response to the Water Board's survey, Cal Water reported $20.8 million in eligible customer arrearages and program administrative costs. Cal Water received 100% of the requested amount from the program in January 2022. Cal Water applied $17.2 million of these funds to identified past due customer balances during the first quarter of 2022 and returned the remaining balance.

In 2023, the California Extended Water and Wastewater Arrearages Payment Program was established and extended the relief period to include arrearages accrued from June 16, 2021 to December 31, 2022. In response to the extended program, Cal Water submitted an application for $83.0 million in eligible customer arrearages and program administrative costs that was subsequently accepted by the Water Board. Cal Water expects approval of the request in the first quarter of 2024.

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Critical Accounting Policies and Estimates

We maintain our accounting records in accordance with accounting principles generally accepted in the United States of America and as directed by the Commissions to which our operations are subject. The process of preparing financial statements requires the use of estimates on the part of management. The estimates used by management are based on historic experience and an understanding of current facts and circumstances. A summary of our significant accounting policies is listed in Note 2 of the Notes to Consolidated Financial Statements. The following sections describe those policies where the level of subjectivity, judgment, and variability of estimates could have a material impact on the financial condition, operating performance, and cash flows of the business.

Revenue Recognition

Revenue from contracts with customers

The Company principally generates operating revenue from contracts with customers by providing regulated water and wastewater services at tariff-rates authorized by the Commissions in the states in which they operate and non-regulated water and wastewater services at rates authorized by contracts with government agencies. Revenue from contracts with customers reflects amounts billed for the volume of consumption at authorized per unit rates, for a service charge, and for other authorized charges.

The Company satisfies its performance obligation to provide water and wastewater services over time as services are rendered. The Company applies the invoice practical expedient and recognizes revenue from contracts with customers in the amount for which the Company has a right to invoice. The Company has a right to invoice for the volume of consumption, for the service charge, and for other authorized charges. The measurement of sales to customers is generally based on the reading of their meters, which occurs on a systematic basis throughout the month.

Contract terms are generally short-term and at will by customers and, as a result, no separate financing component is recognized for the Company's collections from customers, which generally require payment within 30 days of billing. The Company applies judgment, based principally on historical payment experience, in estimating its customers' ability to pay.

Certain customers are not billed for volumetric consumption, but are instead billed a flat rate at the beginning of each monthly service period. The amount billed is initially deferred and subsequently recognized over the monthly service period, as the performance obligation is satisfied. The deferred revenue balance or contract liability, which is included in "other accrued liabilities" on the consolidated balance sheets, is inconsequential.

Regulatory balancing account revenue

Regulatory balancing account revenue is revenue related to revenue mechanisms authorized in California by the CPUC, which the Company recognizes as revenue when it is objectively determinable, probable of recovery and expected to be collected within 24 months following the end of the accounting period. Regulatory balancing account revenues are not considered contracts with customers. To the extent that revenue is estimated to be collectible beyond 24 months, recognition is deferred. Due to a delay in resolution of the 2021 GRC, the Company did not recognize a benefit from regulatory revenue mechanisms in 2023. For 2022, the Company's authorized regulatory revenue mechanisms included the WRAM.

The WRAM decoupled revenue from the volume of the sales and allowed the Company to recognize the adopted level of volumetric revenues. The variance between adopted volumetric revenues and actual billed volumetric revenues for metered accounts was recorded as regulatory balancing account revenue. The WRAM concluded on December 31, 2022.

Regulatory balancing accounts also include revenue that is recognized for balancing accounts when it is probable that future recovery of previously incurred costs or future refunds that are to be credited to customers will occur through the ratemaking process. These mechanisms, such as the Modified Cost Balancing Account (MCBA), Conservation Expense Balancing Account (CEBA), Pension Cost Balancing Account (PCBA), and Health Cost Balancing Account (HCBA), generally provide for recovery of the adopted levels of expenses for purchased water, purchased power, pump taxes, water conservation program costs, pension, and health care. Variances between adopted and actual costs were recorded as regulatory balancing account revenue in 2022. In 2023, in connection with the CPUC's decision to discontinue the use of the WRAM, the variances for CEBA, HCBA, and PCBA are recorded against the originating expense. The MCBA concluded on December 31, 2022.

The CPUC issued a decision effective August 27, 2020 requiring that Class A companies submitting GRC filings after the effective date be (i) precluded from proposing the use of a full decoupling WRAM in their next GRCs and (ii) allowed the use of MWRAM. In addition, the CPUC's decision allowed for ICBAs to replace the MCBA. The MWRAM tracks the difference between the revenue received for actual metered sales through the tiered volumetric rate and the revenue that would have been received with the same actual metered sales if a uniform rate had been in effect. The ICBA tracks differences between the authorized per-unit prices of water production costs and actual per-unit prices of water production costs. Cal Water complied with this decision in its 2021 GRC and the MWRAM and ICBAs are expected to be effective retroactive to January 1, 2023 once approved. The Company did not record a regulatory asset or regulatory liability for the MWRAM or ICBAs for 2023.

In September 2020, Cal Water filed an Application for Rehearing at the CPUC seeking to reverse the August 27, 2020 CPUC decision. In September 2021, the CPUC denied the Application for Rehearing. On or about October 27, 2021, Cal Water along with four other Class A California water utilities filed Petitions for a Writ of Review with the California Supreme Court (Court). On May 18, 2022, the Court issued writs granting review and ordered the CPUC and other filing parties to submit additional pleadings to the Court. The final pleadings were submitted on January 13, 2023. Cal Water anticipates that the Court will schedule an oral argument before it begins deliberations and issues its decision.

Regulated Utility Accounting

Because we operate almost exclusively in a regulated business, we are subject to the accounting standards for regulated utilities. The Commissions in the states in which we operate establish rates that are designed to permit the recovery of the cost of service and a return on investment. We capitalize and record regulatory assets for costs that would otherwise be charged to expense if it is probable that the incurred costs will be recovered in future rates. Regulatory assets are amortized over the future periods that the costs are expected to be recovered. If costs expected to be incurred in the future are currently being recovered through rates, we record those expected future costs as regulatory liabilities. In addition, we record regulatory liabilities when it is probable the Commissions will require a refund to be made to our customers over future periods.

Determining probability requires significant judgment by management and includes, but is not limited to, consideration of testimony presented in regulatory hearings, proposed regulatory decisions, final regulatory orders, and the strength or status of applications for rehearing or state court appeals.

If we determine that a portion of our assets used in utility operations is not recoverable in customer rates, we would be required to recognize the loss of the disallowed assets.

Income Taxes

We account for income taxes using the asset and liability method. Deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. We measure deferred tax assets and liabilities at enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. We recognize the effect on the deferred tax assets and liabilities of a change in tax rate in the period that includes the enactment date. We also assess the likelihood that deferred tax assets will be recovered in future taxable income and, to the extent recovery is not probable, a valuation allowance would be recorded.

We anticipate that future rate actions by the regulatory commissions will reflect revenue requirements for the tax effects of temporary differences recognized, which have previously been passed through to customers. The regulatory commissions have granted the Company permission to reflect the normalization of the tax benefits of the federal accelerated methods and available Investment Tax Credits (ITCs) for all assets placed in service after 1980. ITCs are deferred and amortized over the lives of the related properties for book purposes. The CPUC requires flow through accounting for state deferred taxes.

On December 22, 2017, the U.S. government enacted expansive tax legislation commonly referred to as the TCJA. Among other provisions, the TCJA reduced the federal income tax rate from 35 percent to 21 percent beginning on January 1, 2018 and eliminated bonus depreciation for utilities. The TCJA required the Company to re-measure all existing deferred income tax assets and liabilities to reflect the federal tax rate reduction.

As of December 31, 2023, the TCJA refund liability was $92.5 million. We continue working with other state regulators to finalize the refund to confirm compliance with federal normalization rules.

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Pension and Postretirement Benefits Other Than Pensions (PBOP)

We incur costs associated with our pension and PBOP plans. To measure the expense of these benefits, our management must estimate compensation increases, mortality rates, future health cost increases and discount rates used to value related liabilities and to determine appropriate funding. Different estimates used by our management could result in significant variances in the cost recognized for pension and PBOP plans. The estimates used are based on historical experience, current facts, future expectations, and recommendations from independent advisors and actuaries. We use an investment advisor to provide advice in managing the plan's investments. We anticipate any increases in funding for the pension benefits plans will be recovered in future rate filings, thereby mitigating the financial impact. We believe it is probable that future costs will be recovered in future rates and therefore have recorded a regulatory asset in accordance with generally accepted accounting principles. Changes to the pension benefits actuarial assumptions can significantly affect pension costs, regulatory assets, and liabilities.

The following table reflects the sensitivity of pension amounts reported for the year ended December 31, 2023, to changes in actuarial assumptions:

	Increase/(Decrease) in Pension Benefits Actuarial Assumption	Increase/(Decrease) in 2023 Net Periodic Benefit Cost	Increase/(Decrease) in Projected Benefit Obligation as of December 31, 2023
		Dollars in thousands	
Discount rate	(0.5)%	$ 3,494	$ 59,334
Long-term rate of return on plan assets	(0.5)%	3,502	—
Rate of compensation increases	(0.5)%	(3,218)	(15,000)
Cost of living adjustment (1)	(0.23)%	(2,561)	(15,387)
Discount rate	0.5 %	(6,084)	(52,558)
Long-term rate of return on plan assets	0.5 %	(3,502)	—
Rate of compensation increases	0.5 %	3,017	15,884
Cost of living adjustment	0.5 %	4,658	40,412

1. The cost of living adjustment was assumed at 2.23% and has a floor of 2.0%.

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Results of Operations

Operating Revenue

Operating revenue in 2023 was $794.6 million, a decrease of $51.8 million, or 6.1%, over 2022. Operating revenue in 2022 was $846.4 million, an increase of $55.5 million, or 7.0%, over 2021. The sources of change in operating revenue were:

	2023	2022
	Dollars in millions	
Net change due to rate changes, usage, and other (1)	$ 17.9	$ 6.2
WRAM revenue (2)	(74.3)	42.7
MCBA revenue (3)	7.4	(11.2)
Other balancing account revenue (4)	4.9	1.3
Deferral of revenue (5)	(7.7)	16.5
Net change	$ (51.8)	$ 55.5

(1) In 2023, the net change due to rate changes, usage, and other in the above table was primarily driven by rate increases in California of $30.7 million, which was partially offset by a 3.4% decrease in customer usage, which we believe is primarily due to higher winter precipitation in our California service territories and water conservation compared to 2022.

(2) WRAM revenue is the variance between adopted volumetric revenues and actual billed volumetric revenues for metered accounts. In 2023, the WRAM revenue decrease is due to the mechanism concluding as of December 31, 2022; as a result, no WRAM revenue was recorded for 2023. For 2022, we recognized $74.3 million of WRAM revenue as actual billed volumetric revenue was lower than adopted volumetric revenue.

(3) MCBA revenue is the variance between adopted water production costs and actual water production costs. In 2023, the MCBA revenue increase is due to the mechanism concluding as of December 31, 2022; as a result, no MCBA revenue was recorded for 2023. For 2022, we recorded a decrease to MCBA revenue of $7.4 million as actual water production costs were lower than adopted water production costs. As required by the MCBA mechanism, the difference in actual water production costs and adopted water production costs in California was recorded to operating revenue for 2022.

(4) The other balancing account revenue consists of the pension, conservation and health care balancing account revenues. Pension and conservation balancing account revenues are the differences between actual expenses and adopted rate recovery. Health care balancing account revenue is 85% of the difference between actual health care expenses and adopted rate recovery. In 2023, the adjustments for these balancing accounts were recorded as an increase to the originating expense accounts of $12.4 million rather than as an operating revenue decrease. In 2022, actual pension and health care costs were below the adopted costs and a decrease to revenue of $5.9 million was recognized for the difference. This was partially offset by an increase to revenue of $1.2 million recorded for the conservation balancing account as actual expenses were above adopted.

(5) The deferral of revenue consists of amounts that are expected to be collected from customers beyond 24 months following the end of the accounting period in which these revenues were recorded. Deferred revenue in 2023 remained flat, while the deferred revenue in 2022 decreased $7.7 million primarily due to the recognition of deferred balancing account revenue in 2022.

Water Production Expenses

Water production expenses, which consist of purchased water, purchased power, and pump taxes, comprise the largest segment of total operating expenses. Water production costs accounted for 40.2% and 39.7%, of total operating costs in 2023 and 2022, respectively. The rates charged for wholesale water supplies, electricity, and pump taxes are established by various public agencies. As such, these rates are beyond our control.

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The table below provides the change in water production expenses during the past 2 years:

	2023			2022		
	Amount	Change	% Change	Amount	Change	% Change
	Dollars in millions					
Purchased water	$ 223.8	$ (0.7)	(0.3)%	$ 224.5	$ (0.5)	(0.2)%
Purchased power	45.7	1.1	2.5 %	44.6	7.5	20.2 %
Pump taxes	19.0	2.8	17.3 %	16.2	0.9	5.9 %
Total water production expenses	$ 288.5	$ 3.2	1.1 %	$ 285.3	$ 7.9	2.8 %

The principal factors affecting water production expenses are the quantity, price, and source of the water. Generally, water pumped from wells costs less than water purchased from wholesale suppliers.

The table below provides the amounts, percentage change, and source mix for the respective years:

	2023			2022		
	MG	% of Total	% change from prior year	MG	% of Total	% change from prior year
	Millions of gallons (MG)					
Source:						
Wells	50,363	48.6 %	(4.1)%	52,534	49.1 %	—
Purchased	47,865	46.3 %	(5.2)%	50,473	47.2 %	(5.9)%
Surface	5,256	5.1 %	33.5 %	3,938	3.7 %	(10.1)%
Total	103,484	100.0 %	(3.2)%	106,945	100.0 %	(3.2)%

Purchased water expenses are affected by changes in quantities purchased, supplier prices, and cost differences between wholesale suppliers. The ICBA mechanism is designed to recover all changes in supplier prices for purchased water expenses and will be in effect for Cal Water once the 2021 GRC is resolved.

For 2023, the $0.7 million decrease in purchased water expenses is mostly due to a 5.2% decrease in purchased quantities offset by a blended purchased water wholesaler rate increase of 5.1%.

For 2023, the $2.8 million increase in pump taxes is primarily due to increases in pump tax rates.

Purchased power expenses are affected by the quantity of water pumped from wells and moved through the distribution system, rates charged by electric utility companies, and rate structures applied to usage during peak and non-peak times of the day or season. In 2023, purchased power expenses increased $1.1 million mainly due to an increase in rates from our power providers.

Changes in climate change regulations could increase the cost of power that in turn would result in an increase in the rates our power suppliers charge us. Any change in pricing of our purchased power expenses in California would be recovered from our customers through the ICBA mechanism once the 2021 GRC is resolved. Any change in power costs in other states would be requested to be recovered by the customers in those states. The impact of such regulations is dependent upon the enacted date, the factors that affect our suppliers' cost structure, and their ability to pass the costs to us in their approved tariffs. These items are not known at this time.

Administrative and General Expenses

Administrative and general expenses include payroll related to administrative and general functions, all employee benefits charged to expense accounts, insurance expenses, legal fees, expenses associated with being a public company, and general corporate expenses.

For 2023, administrative and general expenses increased $9.5 million, or 7.2%, compared to 2022. The increase was mainly due to an increase of $9.0 million in employee wages primarily driven by annual increases in employee wage rates and an increase in the number of employees.

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Other Operations Expenses

The components of other operations expenses include payroll, material and supplies, and contract service costs of operating the regulated water systems, including the costs associated with water transmission and distribution, pumping, water quality, meter reading, billing, operations of district offices, and water conservation programs.

For 2023, other operations expense decreased $3.7 million, or 3.2%, compared to 2022. The decrease was primarily due to an increase in deferred costs associated with deferred revenue of $6.3 million (see deferral of revenue above), a decrease in conservation expenses of $2.2 million, and a decrease in bad debt costs of $1.7 million, which was partially offset by an increase in employee labor costs of $3.6 million and an increase in water quality testing costs of $1.4 million.

Maintenance

For 2023, maintenance expenses increased $0.3 million, or 0.8%, compared to 2022 due to increases in reservoir, tank, well, and pumping equipment repairs.

Depreciation and Amortization

For 2023, depreciation and amortization increased $6.6 million, or 5.8%, compared to 2022 primarily due to utility plant placed in service in 2022.

Income Taxes

For 2023, income tax benefit increased $18.5 million, or 565.6%, to $15.2 million compared to 2022. The increase in 2023 was primarily due to a decrease in pre-tax operating income from the impact of the delayed final decision by the CPUC on Cal Water's pending 2021 GRC. The Company's effective combined income tax rate for 2023 was (15.2%) as compared to 6.2% for 2022.

Property and Other Taxes

For 2023, property and other taxes increased $1.2 million, or 3.4%, compared to 2022. The increase was mostly due to an increase in our assessed property values for utility plant placed in service during the year.

Other Income and Expenses

For 2023, net other income and expenses increased $12.1 million, or 101.4% compared to 2022. The increase was due primarily to a $12.1 million increase in the unrealized gains from certain non-qualified benefit plan investments due to market conditions, $5.7 million increase in other components of net periodic benefit credit, and a $1.4 million increase in allowance for equity funds used during construction, which was partially offset by a $2.8 million decrease in non-regulated revenue and a $5.3 million increase in income tax expense.

Net Interest Expense

For 2023, net interest expense increased $5.5 million, or 12.4%, compared to 2022. The increase was primarily due to higher short-term borrowing rates and higher outstanding borrowings on our short-term credit facilities.

Rates and Regulation

The following is a summary of 2023 rate filings. A description of the "Type of Filing" can be found in the "Item 1 - Rates and Regulation" section above. California decisions and resolutions may be found on the CPUC website at www.cpuc.ca.gov.

Type of Filing	Decision/Resolution	Effective Date	Increase (Decrease) Annual Revenue	CA District/ Subsidiary
GRC and Offset Filings				
2023 Expense Offset	AL 2465-A	Jan 2023	$5.1 million	5 Districts
2021 GRC Interim Rates	AL 2475	May 2023	4% or 1.5%	18 Districts
2023 Expense Offset	AL 2488	July 2023	$24.6 million	11 Districts
Cost of Capital	AL 2491	July 2023	($7 million)	21 Districts

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Water Supply

Our source of supply varies among our operating districts. Certain districts obtain all of their supply from wells; some districts purchase all of their supply from wholesale suppliers; and other districts obtain supply from a combination of wells and wholesale suppliers. A small portion of supply comes from surface sources and is processed through Company-owned water treatment plants. To the best of management's knowledge, we are meeting water quality, environmental, and other regulatory standards for all Company-owned systems.

California's normal weather pattern yields little precipitation between mid-spring and mid-fall. The Washington Water service areas receive precipitation in all seasons, with the heaviest amounts during the winter. New Mexico Water's rainfall is heaviest in the summer monsoon season. Hawaii Water receives precipitation throughout the year, with the largest amounts in the winter months. Water usage in all service areas is highest during the warm and dry summers and declines in the cool winter months. Rain and snow during the winter months replenish underground water aquifers and fill reservoirs, providing the water supply for subsequent delivery to customers. Management believes that supply pumped from underground aquifers and purchased from wholesale suppliers will be adequate to meet customer demand during 2024 and thereafter. However, water rationing may be required in future periods, if declared by the state or local jurisdictions. Long-term water supply plans are developed for each of our districts to help assure an adequate water supply under various operating and supply conditions. Some districts have unique challenges in meeting water quality standards, but management believes that supplies will meet current standards using current treatment processes.

Liquidity and Capital Resources

Cash flow from Operations

During 2023, we generated cash flow from operations of $217.8 million, compared to $243.8 million during 2022. The decrease in 2023 was primarily due to a decrease in net income that was primarily due to the delayed final decision from the CPUC on Cal Water's pending 2021 GRC and the net receipt of $17.2 million from the Water Arrearages Payment Program in 2022.

The water business is seasonal. Billed revenue is lower in the cool, wet winter months when less water is used compared to the warm, dry summer months when water use is the highest. This seasonality results in the possible need for short-term borrowings under the bank lines of credit in the event cash is not sufficient to cover operating costs during the winter period. The increase in cash flow during the summer allows for a pay down of short-term borrowings. Customer water usage can be lower than normal in years when more than normal precipitation falls in our service areas or temperatures are lower than normal, especially in the summer months. The reduction in water usage reduces cash flow from operations and increases the need for short-term bank borrowings. Aged accounts receivable past due more than 60 days decreased from $17.6 million as of December 31, 2022 to $15.5 million as of December 31, 2023 mostly due to the resumption of the customer account write off process and offering of a payment plan option for residential customers in California who have past-due balances larger than $50 dollars.

Investing Activities

During 2023 and 2022, we used $383.7 million and $327.8 million, respectively, of cash for capital expenditures, both Company-funded and developer-funded. Cash used in investing activities fluctuates each year largely due to the availability of construction resources and our ability to obtain construction permits in a timely manner.

Financing Activities

During 2023, we borrowed $227.8 million, and paid down $120.0 million on our unsecured revolving credit facilities for general corporate purposes. We also received $21.2 million of advances and contributions in aid of construction, which was reduced by refunds to developers of $9.4 million. We paid $1.8 million for matured First Mortgage Bonds and other long-term debt obligations. In addition, we issued $115.1 million of Company common stock through our at-the-market equity plan and our employee stock purchase plan.

On March 31, 2023, the Company and Cal Water entered into the Company and Cal Water credit facilities, which provide for unsecured revolving credit facilities of up to an initial aggregate amount of $600.0 million for a term of five years. The Company and subsidiaries that it designates may borrow up to $200.0 million under the Company's revolving credit facility (the Company facility). Cal Water may borrow up to $400.0 million under the Cal Water revolving credit facility (the Cal Water facility). Additionally, the credit facilities may be increased by up to an incremental $150.0 million under the Cal Water facility and $50.0 million under the Company facility, subject in each case to certain conditions.

The under-collected net WRAM and MCBA receivable balances were $64.2 million and $104.7 million as of December 31, 2023 and 2022, respectively. The decrease of $40.5 million from December 31, 2022 to December 31, 2023 was primarily due to customer billings during 2023. The under-collected net WRAM and MCBA receivable balances were primarily financed by Cal Water with short-term and long-term financing arrangements to meet operational cash requirements. Interest on the under-collected net WRAM and MCBA receivable balances, the interest recoverable from customers, is limited to the current 90-day commercial paper rate, which is significantly lower than Cal Water's short and long-term financing rates.

At the January 2024 meeting, the Board declared the quarterly dividend, increasing it for the 57th consecutive year. The quarterly dividend was raised from $0.26 to $0.28 per common share. This represents an indicated annual rate of $1.12 per common share. Dividends have been paid for 78 consecutive years. The annual dividends paid per common share in 2023, 2022, and 2021 were $1.04, $1.00 and $0.92, respectively. Earnings not paid as dividends are reinvested in the business for the benefit of stockholders. The dividend payout ratio was 113.8% in 2023, 56.5% in 2022, and 46.9% in 2021 for an average of 72.4% over the 3-year period. Our long-term targeted dividend payout ratio is 60%.

Short-Term Financing

Short-term liquidity is provided by the bank lines of credit described above and by internally generated funds. As of December 31, 2023, there were borrowings of $180.0 million outstanding on our unsecured revolving lines of credit, compared to $70.0 million outstanding on our unsecured revolving lines of credit as of December 31, 2022.

Given our ability to access our lines of credit on a daily basis, cash balances are managed to levels required for daily cash needs and excess cash is invested in short-term or cash equivalent instruments. Minimal operating levels of cash are maintained for Washington Water, New Mexico Water, Hawaii Water, and Texas Water.

The Company and subsidiaries that it designates may borrow up to $200.0 million under the Company facility. Cal Water may borrow up to $400.0 million under the Cal Water facility; however, all borrowings must be repaid within 12 months unless a different period is required or authorized by the CPUC. The proceeds from the Company and Cal Water facilities may be used for working capital purposes.

The Company and Cal Water facilities contain affirmative and negative covenants and events of default customary for credit facilities of this type including, among other things, limitations and prohibitions relating to additional indebtedness, liens, mergers, and asset sales. Also, the Company and Cal Water facilities contain financial covenants that require the Company and its subsidiaries' consolidated total capitalization ratio not to exceed 66.7% and an interest coverage ratio of three or more (each as defined in the respective credit agreements). As of December 31, 2023, our consolidated total capitalization ratio was 46.4% and the interest coverage ratio was greater than four. In summary, as of such date, we are in compliance with all of the covenant requirements and are eligible to use the full amount of the undrawn portion of the Company and Cal Water facilities.

Long-Term Financing

Long-term financing is accomplished using both debt and equity. Cal Water was authorized to issue $700.0 million of debt and common stock to finance capital projects and operations by a CPUC decision dated November 5, 2020. In addition, the decision retained approximately $94.0 million of prior financing authority and determined that refinancing long-term debt did not count against the authorization. The CPUC requires that any loans from Cal Water to the Company be at arm's length. This restriction did not materially affect the Company's ability to meet its cash obligations in 2023. Management does not expect this restriction to have a material impact on the Company's ability to meet its cash obligations in 2024 and beyond.

Long-term financing, which includes First Mortgage Bonds, senior notes, other debt securities, and common stock, has typically been used to replace short-term borrowings and fund capital expenditures. Internally generated funds, after making dividend payments, provide positive cash flow, but have not been at a level to meet the needs of our capital expenditure requirements. Management expects this trend to continue given our capital expenditures plan for the next five years. Some capital expenditures are funded by payments received from developers for contributions in aid of construction or advances for construction. Funds received for contributions in aid of construction are non-refundable, whereas funds classified as advances in construction are refundable. Management believes long-term financing is available to meet our cash flow needs through issuances in both debt and equity instruments.

Additional information regarding the bank borrowings and long-term debt is presented in Notes 7 and 8 in the Notes to Consolidated Financial Statements.

Equity Issuance

On April 29, 2022, we entered into an equity distribution agreement to sell shares of our common stock having an aggregate gross sales price of up to $350.0 million from time to time depending on market conditions through an at-the-market equity program over the next three years. We intend to use the net proceeds from these sales, after deducting commissions on such sales and offering expenses, for general corporate purposes, which may include working capital, construction and acquisition expenditures, investments and repurchases, and redemptions of securities. Additional information regarding this program is presented in Note 6 of the Notes to Consolidated Financial Statements.

Summarized Financial Information for Guarantors and the Issuer of Guaranteed Securities.

On April 17, 2009, Cal Water (Issuer) issued $100.0 million aggregate principal amount of 5.500% First Mortgage Bonds due 2040, all of which are fully and unconditionally guaranteed by the Company (Guarantor). Certain subsidiaries of the Company do not guarantee the security and are referred to as Non-guarantors. The Guarantor fully, absolutely, irrevocably and unconditionally guarantees the due and punctual payment when due, whether at stated maturity, by acceleration, by notice of prepayment or otherwise, of the principal of, premium, if any, and interest on the bonds. The bonds rank equally among Cal Water's other first mortgage bonds.

The following tables present summarized financial information of the Issuer subsidiary and the Guarantor. The information presented below excludes eliminations necessary to arrive at the information on a consolidated basis. In presenting the summarized financial statements, the equity method of accounting has been applied to the Guarantor interests in the Issuer. The summarized information excludes financial information of the Non-issuers, including earnings from and investments in these entities.

Summarized Statement of Operations

(in thousands)	2023		2022	
	Issuer	Guarantor	Issuer	Guarantor
Net sales	$ 720,577	$ —	$ 775,382	$ —
Gross profit	$ 449,221	$ —	$ 506,890	$ —
Income from operations	$ 82,157	$ 590	$ 124,464	$ 363
Equity in earnings of guarantor		$ 49,998	$ —	$ 94,339
Net income	$ 57,168	$ 51,376	$ 92,769	$ 95,263

Summarized Balance Sheet Information

(in thousands)	As of December 31, 2023		As of December 31, 2022	
	Issuer	Guarantor	Issuer	Guarantor
Current assets	$ 213,469	$ 10,126	$ 208,962	$ 31,913
Intercompany receivable from guarantor & non-issuer subsidiaries	3,664	44,882	3,339	34,100
Other assets	479,642	1,190,076	450,668	1,080,720
Long-term intercompany receivable from non-issuer subsidiaries	—	82,610	—	37,869
Net utility plant	3,487,788	—	2,805,242	—
Total assets	$ 4,184,563	$ 1,327,694	$ 3,468,211	$ 1,184,602
Current liabilities	$ 351,964	$ 53,069	$ 242,538	$ 35,260
Intercompany payable to non-issuer subsidiaries	—	—	562	—
Long-term debt	1,052,350	—	1,051,994	—
Other liabilities	1,595,852	3,068	1,098,378	2,485
Total Liabilities	$ 3,000,166	$ 56,137	$ 2,393,472	$ 37,745

Off-Balance Sheet Arrangements

We do not have commitments or obligations, including contingent obligations, arising from arrangements with unconsolidated entities or persons that have, or are reasonably likely to have, a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, cash requirements, or capital resources even when the arrangement results in no obligation being reported in our consolidated balance sheets.

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Contractual Obligations

The contractual obligations presented in the table below represent our estimates of future payments under fixed contractual obligations and commitments. Changes in our business needs, cancellation provisions and changes in interest rates, as well as action by third parties and other factors, may cause these estimates to change. Therefore, our actual payments in future periods may vary from those presented in the table below.

The following table summarizes our contractual obligations as of December 31, 2023. We generally expect to satisfy these commitments with cash on hand and cash provided by operating activities.

	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Long-term debt (a)	$ 1,054,396	$ 377	$ 70,711	$ 20,652	$ 962,656
Interest payments	942,402	44,124	85,116	81,983	731,179
Advances for construction	199,448	10,800	19,662	18,382	150,604
Pension and postretirement benefits (b)	387,158	27,599	61,926	71,892	225,741
Finance lease obligations (c)	4,244	1,034	3,210	—	—
Operating lease obligations	15,691	2,244	3,696	3,007	6,744
Water supply contracts (d)	599,722	33,362	65,420	65,422	435,518
Total contractual obligations	$ 3,203,061	$ 119,540	$ 309,741	$ 261,338	$ 2,512,442

a. Long-term debt payments include annual sinking fund payments on First Mortgage Bonds, maturities of long-term debt, and annual payments on other long-term obligations, exclusive of unamortized debt issuance costs of $4.9 million.
b. Pension and postretirement benefits include $2.8 million of short-term pension obligations.
c. Finance lease obligations represent total cash payments to be made in the future and includes interest expense of $0.3 million.
d. Estimated annual contractual obligations are based on the same payment levels as 2023.

For pension and postretirement benefits other than pensions obligations, see Note 11 of the Notes to the Consolidated Financial Statements.

Advances for construction represent annual contract refunds to developers for the cost of water systems paid for by the developers. The contracts are non-interest bearing, and refunds are generally on a straight-line basis over a 40-year period. System and facility leases include obligations associated with leasing water systems and rents for office space.

For finance and operating lease obligations, see Note 14 of the Notes to the Consolidated Financial Statements.

Cal Water has water supply contracts with wholesale suppliers in 13 of its operating districts and for the two leased systems in Hawthorne and Commerce. For each contract, the cost of water is established by the wholesale supplier and is generally beyond our control. The amount paid annually to the wholesale suppliers is charged to purchased water expense on our statements of operations. Most contracts do not require minimum annual payments and vary with the volume of water purchased. For more details related to water supply contracts, see Note 14 of the Notes to the Consolidated Financial Statements.

Capital Requirements

Capital requirements consist primarily of new construction expenditures for expanding and replacing utility plant facilities and the acquisition of water systems. They also include refunds of advances for construction.

Company-funded and developer-funded utility plant expenditures were $383.7 million and $327.8 million in 2023 and 2022, respectively. A majority of capital expenditures was associated with mains and water treatment equipment.

For 2024, our capital program is dependent in part on the timing and nature of regulatory approvals in connection with Cal Water's 2021 GRC. Capital expenditures in California for 2023, excluding developer-funded expenditures, were $326.5 million. Cal Water proposed to the CPUC spending $1.0 billion on water infrastructure investments in 2022-2024. Capital expenditures in California are evaluated in the context of the pending GRC and may change as the case moves forward. We expect our annual capital expenditure to continue to increase during the next five years due to increasing needs to replace and maintain infrastructure.

Management expects there will be developer-funded expenditures in 2024 and expects that these expenditures will be financed by developers through refundable advances for construction and non-refundable contributions in aid of construction. Developers are required to deposit the cost of a water construction project with us prior to our commencing construction work, or the developers may construct the facilities themselves and deed the completed facilities to us. Funds are generally received in advance of incurring costs for these projects. Advances are normally refunded over a 40-year period without interest. Future payments for advances received are listed under contractual obligations above. Because non-Company-funded construction activity is solely at the discretion of developers, we cannot predict the level of future activity. The cash flow impact is expected to be minor due to the structure of the arrangements.

Capital Structure

Total equity was $1,430.3 million at December 31, 2023, compared to $1,322.4 million at December 31, 2022. The Company sold 2,025,891 and 1,802,063 shares of its common stock in 2023 and 2022, respectively through its at-the-market equity program.

Total capitalization, including the current portion of long-term debt, was $2,483.8 million at December 31, 2023 and $2,378.2 million at December 31, 2022. Cal Water repaid $1.8 million of other long-term debt obligations in 2023 and $5.4 million 2022 for matured First Mortgage Bonds and other long-term debt obligations. In future periods, the Company intends to issue common stock and long-term debt to finance our operations. The capitalization ratios will vary depending upon the method we choose to finance our operations.

At December 31, capitalization ratios were:

	2023	2022
Equity	57.6 %	55.6 %
Long-term debt	42.4 %	44.4 %

The return (from both regulated and non-regulated operations) on average equity was 3.8% in 2023 compared to 7.7% in 2022. Cal Water does not include construction work in progress in its regulated rate base; instead, Cal Water was authorized to record allowance for funds used during construction (or AFUDC) on construction work in progress, effective January 1, 2017. Construction work in progress for Cal Water was $253.9 million at December 31, 2023 and $219.2 million at December 31, 2022.

Acquisitions

There were no significant acquisitions in 2023 or 2022.

Real Estate Program

We own real estate. From time to time, certain parcels are deemed no longer used or useful for water utility operations. Most surplus properties have a low-cost basis. We developed a program to realize the value of certain surplus properties through sale or lease of those properties. The program will be ongoing for a period of several years. There were no significant sales in 2023 and 2022. As sales are dependent on real estate market conditions, future sales, if any, may or may not be at prior year levels.

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Item 7A. ***Quantitative and Qualitative Disclosures about Market Risk.***

We do not participate in hedge arrangements, such as forward contracts, swap agreements, options, or other contractual agreements to mitigate the impact of market fluctuations on our assets, liabilities, production, or contractual commitments. We operate only in the United States and, therefore, are not subject to foreign currency exchange rate risks.

Interest Rate Risk

We are subject to interest rate risk, although this risk is lessened because we operate in a regulated industry. If interest rates were to increase, management believes customer rates would increase accordingly, subject to Commission approval in future GRC filings. The majority of our debt is long-term at a fixed rate. Interest rate risk does exist on short-term borrowings within our credit facilities, as these interest rates are variable. We also have interest rate risk on new financing, as higher interest cost may occur on new debt if interest rates increase.

Over the next 12 months, none of the $1,052.8 million of existing long-term debt instruments are expected to mature. Applying a hypothetical 10 percent increase in the rate of interest charged on those borrowings would not have a material effect on our earnings.

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Item 8. ***Financial Statements and Supplementary Data.***

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of California Water Service Group

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of California Water Service Group and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of operations, equity, and cash flows, for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company has maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Assets and Liabilities - Regulated Utility Accounting— Refer to Notes 2 and 4 to the financial statements

Critical Audit Matter Description

The Company provides regulated utility services under the rules and regulations of the California Public Utilities Commission (the "Commission") in California. The Commission establishes rates that are designed to permit the recovery of the cost of service and a return on investment. The Company's rates are subject to regulatory rate-setting processes including a General Rate Case proceeding. Because the Company operates almost exclusively in a regulated business, the Company is subject to the accounting standards for regulated entities.

The Company capitalizes and records regulatory assets for costs that would otherwise be charged to expense if it is probable that the incurred costs will be recovered in future rates. If costs expected to be incurred in the future are currently being recovered through rates, the Company records those expected future costs as regulatory liabilities. In addition, the Company records regulatory liabilities when it is probable the Commission will require a refund to be made to the Company's customers over future periods. Determining probability requires significant judgment by management and includes, but is not limited to, consideration of testimony presented in regulatory hearings, proposed regulatory decisions, final regulatory orders, and the strength or status of applications for rehearing or state court appeals. If the Company determines that a portion of the Company's assets used in utility operations is not recoverable in customer rates, the Company would be required to recognize the loss of the disallowed assets.

We identified regulated utility accounting as a critical audit matter due to the significant judgments made by management in (1) determining the probability that incurred costs will be recovered in future rates and (2) determining the probability the Commission will require a refund to be made to the Company's customers over future periods. Given that management considers regulatory hearings, proposed decisions, and final orders in making significant regulatory utility accounting judgments, auditing these judgments required specialized knowledge of regulatory utility accounting.

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How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the significant regulatory utility accounting judgments in determining the probability that incurred cost will be recovered in future rates and in determining the probability the Commission will require a refund to be made to the Company's customers over future periods included the following, among others:

- We tested the effectiveness of management's controls over the determination of regulatory assets or liabilities and the evaluation of (1) the probability determination of recovery in future rates of costs incurred as regulatory assets, and (2) the probability of a refund over future periods that should be reported as regulatory liabilities.
- We read relevant regulatory orders issued by the Commission for the Company, procedural filings, and other publicly available information, if applicable, to evaluate management's judgments in determining the probability that incurred cost will be recovered in future rates and in determining the probability the Commission will require a refund to be made to the Company's customers over future periods in accounting for regulatory assets and liabilities.
- For regulatory matters in process, we inspected the Company's filings with the Commission, if applicable, that may impact the Company's future rates, to evaluate whether information in such filings was consistent with the significant judgments made by management.
- We evaluated the Company's disclosures related to regulated utility accounting, including the balances recorded and regulatory developments.

/s/ DELOITTE & TOUCHE LLP)

San Francisco, California

February 29, 2024

We have served as the Company's auditor since 2008.

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CALIFORNIA WATER SERVICE GROUP
Consolidated Balance Sheets

	December 31,	
	2023	2022
	(In thousands, except per share data)	
ASSETS		
Utility plant:		
Land	$ 47,002	$ 45,861
Depreciable plant and equipment	4,557,964	4,215,619
Construction work in progress	287,596	247,013
Intangible assets	32,921	27,779
Total utility plant	4,925,483	4,536,272
Less accumulated depreciation and amortization	(1,152,228)	(1,063,341)
Net utility plant	3,773,255	3,472,931
Current assets:		
Cash and cash equivalents	39,591	62,100
Restricted cash	45,375	22,925
Receivables:		
Customers, net	59,349	55,079
Regulatory balancing accounts	64,240	66,826
Other, net	16,431	20,932
Unbilled revenue, net	36,999	33,140
Materials and supplies at weighted average cost	16,170	12,564
Taxes, prepaid expenses, and other assets	18,130	21,969
Total current assets	296,285	295,535
Other assets:		
Regulatory assets	257,621	283,620
Goodwill	37,039	36,814
Other	231,333	175,913
Total other assets	525,993	496,347
TOTAL ASSETS	$ 4,595,533	$ 4,264,813
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock, $0.01 par value; 136,000 shares authorized, 57,724 and 55,598 outstanding in 2023 and 2022, respectively	$ 577	$ 556
Additional paid-in capital	876,583	760,336
Retained earnings	549,573	556,698
Noncontrolling interests	3,579	4,804
Total equity	1,430,312	1,322,394
Long-term debt, net	1,052,768	1,052,487
Total capitalization	2,483,080	2,374,881
Current liabilities:		
Current maturities of long-term debt, net	672	3,310
Short-term borrowings	180,000	70,000
Accounts payable	157,305	140,986
Regulatory balancing accounts	21,540	12,240
Accrued other taxes	4,591	8,607
Accrued interest	6,625	6,490
Other accrued liabilities	59,606	53,017
Total current liabilities	430,339	294,650
Deferred income taxes	352,762	330,251
Regulatory liabilities	683,717	627,740
Pension	82,920	78,443
Advances for construction	199,448	199,832
Contributions in aid of construction	286,491	285,401
Other long-term liabilities	76,776	73,615
Commitments and contingencies (Note 14)		
TOTAL CAPITALIZATION AND LIABILITIES	$ 4,595,533	$ 4,264,813

See accompanying Notes to Consolidated Financial Statements.

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CALIFORNIA WATER SERVICE GROUP
Consolidated Statements of Operations

	For the Years Ended December 31,		
	2023	2022	2021
	(In thousands, except per share data)		
Operating revenue	$ 794,632	$ 846,431	$ 790,909
Operating expenses:			
Operations:			
Purchased water	223,833	224,529	225,020
Purchased power	45,656	44,566	37,112
Pump taxes	19,023	16,169	15,342
Administrative and general	142,235	132,718	126,686
Other operations	112,481	116,172	86,392
Maintenance	31,975	31,715	29,592
Depreciation and amortization	121,212	114,575	108,715
Income tax (benefit) expense	(15,189)	3,262	2,805
Property and other taxes	36,271	35,065	32,475
Total operating expenses	717,497	718,771	664,139
Net operating income	77,135	127,660	126,770
Other income and expenses:			
Non-regulated revenue	18,509	21,276	22,761
Non-regulated expenses	(11,807)	(24,821)	(17,234)
Other components of net periodic benefit credit	20,215	14,476	9,903
Allowance for equity funds used during construction	5,551	4,127	3,186
Gain on sale of non-utility property	—	—	94
Income tax expense on other income and expenses	(8,408)	(3,113)	(1,287)
Net other income	24,060	11,945	17,423
Interest expense:			
Interest expense	52,809	46,686	44,980
Allowance for borrowed funds used during construction	(2,990)	(2,344)	(1,766)
Net interest expense	49,819	44,342	43,214
Net income	51,376	95,263	100,979
Net loss attributable to noncontrolling interests	(535)	(748)	(146)
Net income attributable to California Water Service Group	$ 51,911	$ 96,011	$ 101,125
Earnings per share:			
Basic	$ 0.91	$ 1.77	$ 1.96
Diluted	$ 0.91	$ 1.77	$ 1.96
Weighted average number of common shares outstanding:			
Basic	56,952	54,320	51,633
Diluted	56,983	54,363	51,633

See accompanying Notes to Consolidated Financial Statements.

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CALIFORNIA WATER SERVICE GROUP
Consolidated Statements of Equity
For the Years Ended December 31, 2023, 2022 and 2021

	Common Stock		Additional Paid-in Capital	Retained Earnings	Noncontrolling Interests	Total Equity
	Shares	Amount				
				(In thousands)		
Balance at December 31, 2020	50,334	$ 503	$ 448,632	$ 461,146	$ —	$ 910,281
Net income (loss)	—	—	—	101,125	(146)	100,979
Issuance of common stock	3,415	34	204,494	—	—	204,528
Repurchase of common stock	(33)	—	(1,767)	—	—	(1,767)
Dividends paid on common stock ($0.9200 per share)	—	—	—	(47,398)	—	(47,398)
Acquisition of business with noncontrolling interest	—	—	—	—	5,294	5,294
Investment in business with noncontrolling interest	—	—	(238)	—	238	—
Balance at December 31, 2021	53,716	537	651,121	514,873	5,386	1,171,917
Net income (loss)	—	—	—	96,011	(748)	95,263
Issuance of common stock	1,916	19	111,742	—	—	111,761
Repurchase of common stock	(34)	—	(2,013)	—	—	(2,013)
Dividends paid on common stock ($1.0000 per share)	—	—	—	(54,186)	—	(54,186)
Investment in business with noncontrolling interest	—	—	(514)	—	514	—
Distribution to noncontrolling interest	—	—	—	—	(348)	(348)
Balance at December 31, 2022	55,598	556	760,336	556,698	4,804	1,322,394
Net income (loss)	—	—	—	51,911	(535)	51,376
Issuance of common stock	2,159	21	117,866	—	—	117,887
Repurchase of common stock	(33)	—	(1,844)	—	—	(1,844)
Dividends paid on common stock ($1.0400 per share)	—	—	—	(59,036)	—	(59,036)
Investment in business with noncontrolling interest	—	—	225	—	(225)	—
Distribution to noncontrolling interest	—	—	—	—	(465)	(465)
Balance at December 31, 2023	57,724	$ 577	$ 876,583	$ 549,573	$ 3,579	$ 1,430,312

See accompanying Notes to Consolidated Financial Statements.

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CALIFORNIA WATER SERVICE GROUP
Consolidated Statements of Cash Flows

	For the Years Ended December 31,		
	2023	2022	2021
	(In thousands)		
Operating activities:			
Net income	$ 51,376	$ 95,263	$ 100,979
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	123,124	117,364	111,581
Amortization of debt premium and expenses	262	369	366
Changes in normalized deferred income taxes	35,627	26,880	25,200
Change in value of life insurance contracts	(4,919)	7,161	(3,800)
Allowance for equity funds used during construction	(5,551)	(4,127)	(3,186)
Stock-based compensation	2,993	5,161	6,805
Gain on sale of non-utility properties	—	—	(94)
(Recovery) write-off of capital costs	(536)	702	524
Changes in operating assets and liabilities:			
Receivables	42,711	(40,687)	(12,833)
Water Arrearages Payment Program cash received	—	20,836	—
Water Arrearages Payment Program cash returned	—	(3,609)	—
Unbilled revenue	(3,859)	(381)	1,309
Taxes, prepaid expenses, and other assets	654	(5,104)	(2,745)
Accounts payable	9,896	(7,626)	(2,938)
Other current liabilities	(346)	7,941	1,141
Other changes in noncurrent assets and liabilities	(33,615)	23,629	9,409
Net cash provided by operating activities	217,817	243,772	231,718
Investing activities:			
Utility plant expenditures	(383,747)	(327,757)	(293,194)
Proceeds from sale of non-utility properties	—	—	108
Business acquisitions, net of cash acquired	(175)	—	(6,451)
Asset acquisitions	(2,816)	(7,766)	—
Return of investment	—	—	1,000
Purchase of life insurance	(2,681)	(6,688)	(2,335)
Life insurance proceeds	—	6,688	—
Net cash used in investing activities	(389,419)	(335,523)	(300,872)
Financing activities:			
Short-term borrowings	227,792	150,000	200,000
Repayment of short-term borrowings	(120,000)	(115,000)	(535,000)
Issuance of long-term debt, net of debt issuance costs of $0 for 2023, $0 for 2022, and $1,064 for 2021	—	—	278,936
Advances and contributions in aid of construction	21,156	25,822	28,171
Refunds of advances for construction	(9,355)	(9,468)	(10,634)
Retirement of long-term debt	(1,811)	(5,423)	(5,353)
Repurchase of common stock	(1,844)	(2,013)	(1,767)
Issuance of common stock	115,106	106,739	197,723
Dividends paid	(59,036)	(54,186)	(47,398)
Distribution to noncontrolling interest	(465)	(348)	—
Net cash provided by financing activities	171,543	96,123	104,678
Change in cash, cash equivalents, and restricted cash	(59)	4,372	35,524
Cash, cash equivalents, and restricted cash at beginning of year	85,025	80,653	45,129
Cash, cash equivalents, and restricted cash at end of year	$ 84,966	$ 85,025	$ 80,653
Supplemental disclosures of cash flow information:			
Cash paid during the year for:			
Interest (net of amounts capitalized)	$ 49,145	$ 43,768	$ 41,621
Income taxes (net of refunds)	(3,532)	—	3,661
Supplemental disclosure of investing and financing non-cash activities:			
Accrued payables for investments in utility plant	54,382	51,511	57,768
Utility plant contributed by developers	24,203	20,379	19,531
Litigation proceeds for TCP contamination reclassified from liability to depreciable plant and equipment	—	—	9,302

See accompanying Notes to Consolidated Financial Statements.

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CALIFORNIA WATER SERVICE GROUP
Notes to Consolidated Financial Statements
December 31, 2023, 2022, and 2021
Dollar amounts in thousands unless otherwise stated

NOTE 1. ORGANIZATION AND OPERATIONS

California Water Service Group (Company) is a holding company that provides water utility and other related services in California, Washington, New Mexico, Hawaii and Texas through its wholly-owned and non-wholly owned subsidiaries. California Water Service Company (Cal Water), Washington Water Service Company (Washington Water), New Mexico Water Service Company (New Mexico Water), and Hawaii Water Service Company, Inc. (Hawaii Water) provide regulated utility services under the rules and regulations of their respective state's regulatory commissions (jointly referred to as the Commissions). CWS Utility Services and HWS Utility Services LLC provide non-regulated water utility and utility-related services. TWSC, Inc. (Texas Water) holds regulated and contracted wastewater utilities.

The Company operates in one reportable segment, providing water and water-related utility services.

Basis of Presentation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and include the Company's accounts and those of its wholly and non-wholly owned subsidiaries. The non-wholly owned subsidiary refers to a 92.0% owned subsidiary of Texas Water and is consolidated using the voting interest model as the Company owns a majority of the voting interests in the non-wholly owned subsidiary. All intercompany transactions and balances have been eliminated from the consolidated financial statements. In the opinion of management, the consolidated financial statements reflect all adjustments that are necessary to provide a fair presentation of the results for the periods covered.

The preparation of the Company's consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the consolidated balance sheet dates and the reported amounts of revenues and expenses for the periods presented. These include, but are not limited to, estimates and assumptions used in determining the Company's regulatory asset and liability balances based upon probability assessments of regulatory recovery, utility plant useful lives, revenues earned but not yet billed, asset retirement obligations, allowance for credit losses, pension and other employee benefit plan liabilities, and income tax-related assets and liabilities. Actual results could differ from these estimates.

Noncontrolling Interests

Noncontrolling interests in the Company’s consolidated financial statements represents the 8.0% interest not owned by Texas Water in a consolidated subsidiary. Texas Water obtained control over the subsidiary on May 1, 2021. Since the Company controls this subsidiary, its financial statements are consolidated with those of the Company, and the noncontrolling owner’s 8.0% share of the subsidiary’s net assets and results of operations is deducted and reported as noncontrolling interests on the consolidated balance sheets and as net loss attributable to noncontrolling interests in the consolidated statements of operations. The Company reports noncontrolling interests in consolidated entities as a component of equity separate from the Company’s equity. The Company’s net income attributable to California Water Service Group excludes the net loss attributable to the noncontrolling interests.

CALIFORNIA WATER SERVICE GROUP
Notes to Consolidated Financial Statements (Continued)
December 31, 2023, 2022, and 2021
Dollar amounts in thousands unless otherwise stated

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Operating Revenue

The following table disaggregates the Company's operating revenue by source for the years ended December 31, 2023, 2022, and 2021:

	2023	2022	2021
Revenue from contracts with customers	$ 790,334	$ 772,616	$ 765,704
Regulatory balancing account revenue	4,298	73,815	25,205
Total operating revenue	$ 794,632	$ 846,431	$ 790,909

Revenue from contracts with customers

The Company principally generates operating revenue from contracts with customers by providing regulated water and wastewater services at tariff-rates authorized by the Commissions in the states in which they operate and non-regulated water and wastewater services at rates authorized by contracts with government agencies. Revenue from contracts with customers reflects amounts billed for the volume of consumption at authorized per unit rates, for a service charge, and for other authorized charges.

The Company satisfies its performance obligation to provide water and wastewater services over time as services are rendered. The Company applies the invoice practical expedient and recognizes revenue from contracts with customers in the amount for which the Company has a right to invoice. The Company has a right to invoice for the volume of consumption, for the service charge, and for other authorized charges.

The measurement of sales to customers is generally based on the reading of their meters, which occurs on a systematic basis throughout the month. At the end of each month, the Company estimates consumption since the date of the last meter reading and a corresponding unbilled revenue is recognized. The estimate is based upon the number of unbilled days that month and the average daily customer billing rate from the previous month (which fluctuates based upon customer usage).

Contract terms are generally short-term and at will by customers and, as a result, no separate financing component is recognized for the Company's collections from customers, which generally require payment within 30 days of billing. The Company applies judgment, based principally on historical payment experience, in estimating its customers' ability to pay.

Certain customers are not billed for volumetric consumption, but are instead billed a flat rate at the beginning of each monthly service period. The amount billed is initially deferred and subsequently recognized over the monthly service period, as the performance obligation is satisfied. The deferred revenue balance or contract liability, which is included in "other accrued liabilities" on the consolidated balance sheets, is inconsequential.

In the following table, revenue from contracts with customers is disaggregated by class of customers for the years ended December 31, 2023, 2022, and 2021:

	2023	2022	2021
Residential	$ 463,417	$ 458,448	$ 467,365
Business	159,050	153,570	144,565
Multiple residential	67,703	64,481	61,478
Industrial	28,055	26,622	26,569
Public authorities	40,811	41,150	40,501
Other*	31,298	28,345	25,226
Total revenue from contracts with customers	$ 790,334	$ 772,616	$ 765,704

* Other includes accrued unbilled revenue

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CALIFORNIA WATER SERVICE GROUP
Notes to Consolidated Financial Statements (Continued)
December 31, 2023, 2022, and 2021
Dollar amounts in thousands unless otherwise stated

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Regulatory balancing account revenue

Regulatory balancing account revenue is revenue related to revenue mechanisms authorized in California by the California Public Utilities Commission (CPUC), which the Company recognizes as revenue when it is objectively determinable, probable of recovery and expected to be collected within 24 months following the end of the accounting period. Regulatory balancing account revenues are not considered contracts with customers. To the extent that revenue is estimated to be collectible beyond 24 months, recognition is deferred. Due to a delay in resolution of Cal Water's most recent general rate case filing in July of 2021 (2021 GRC), the Company did not recognize a benefit from regulatory revenue mechanisms in 2023. For 2022, the Company's authorized regulatory revenue mechanisms included the Water Revenue Adjustment Mechanism (WRAM).

The WRAM decoupled revenue from the volume of the sales and allowed the Company to recognize the adopted level of volumetric revenues. The variance between adopted volumetric revenues and actual billed volumetric revenues for metered accounts was recorded as regulatory balancing account revenue. The WRAM concluded on December 31, 2022.

Regulatory balancing accounts also includes revenue that is recognized for balancing accounts when it is probable that future recovery of previously incurred costs or future refunds that are to be credited to customers will occur through the ratemaking process. These mechanisms, such as the Modified Cost Balancing Account (MCBA), Conservation Expense Balancing Account (CEBA), Pension Cost Balancing Account (PCBA), and Health Cost Balancing Account (HCBA), generally provide for recovery of the adopted levels of expenses for purchased water, purchased power, pump taxes, water conservation program costs, pensions, and health care. Variances between adopted and actual costs were recorded as regulatory balancing account revenue in 2022. In 2023, in connection with the CPUC's decision to discontinue the use of the WRAM, the variances for CEBA, HCBA, and PCBA are recorded against the originating expense. The MCBA concluded on December 31, 2022.

The CPUC issued a decision effective August 27, 2020 requiring that Class A companies submitting GRC filings after the effective date be (i) precluded from proposing the use of a full decoupling WRAM in their next GRCs and (ii) allowed the use of a Monterey-Style Water Revenue Adjustment Mechanism (MWRAM). In addition, the CPUC's decision allowed for Incremental Cost Balancing Accounts (ICBAs) to replace the MCBA. The MWRAM tracks the difference between the revenue received for actual metered sales through the tiered volumetric rate and the revenue that would have been received with the same actual metered sales if a uniform rate had been in effect. The ICBA tracks differences between the authorized per-unit prices of water production costs and actual per-unit prices of water production costs. Cal Water complied with this decision in its 2021 GRC and the MWRAM and ICBAs will be effective retroactive to January 1, 2023 once approved. The Company did not record a regulatory asset or regulatory liability for the MWRAM or ICBAs for 2023.

In September 2020, Cal Water filed an Application for Rehearing at the CPUC seeking to reverse the August 27, 2020 CPUC decision. In September 2021, the CPUC denied the Application for Rehearing. On or about October 27, 2021, Cal Water along with four other Class A California water utilities filed Petitions for a Writ of Review with the California Supreme Court (Court). On May 18, 2022, the Court issued writs granting review and ordered the CPUC and other filing parties to submit additional pleadings to the Court. The final pleadings were submitted on January 13, 2023. Cal Water anticipates that the Court will schedule an oral argument before it begins deliberations and issues its decision.

Non-Regulated Revenue

The following tables disaggregate the Company’s non-regulated revenue by source for the years ended December 31, 2023, 2022, and 2021:

	2023	2022	2021
Operating and maintenance revenue	$ 12,499	$ 12,860	$ 16,276
Other non-regulated revenue	3,506	5,774	3,741
Non-regulated revenue from contracts with customers	16,005	18,634	20,017
Lease revenue	2,504	2,642	2,744
Total non-regulated revenue	$ 18,509	$ 21,276	$ 22,761

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Operating and maintenance services are provided for non-regulated water and wastewater systems owned by private companies and municipalities. The Company negotiates formal agreements with the customers under which they provide operating, maintenance and customer billing services related to the customers' water system. The formal agreements outline the fee schedule for the services provided. The agreements typically call for a fee-per-service or a flat-rate amount per month. The Company satisfies its performance obligation of providing operating and maintenance services over time as services are rendered; as a result, the Company employs the invoice practical expedient and recognizes revenue in the amount that it has the right to invoice. Contract terms are generally short-term and, as a result, no separate financing component is recognized for its collections from customers, which generally require payment within 30 days of billing.

Other non-regulated revenue primarily relates to services for the design and installation of water mains and other water infrastructure for customers outside the regulated service areas and insurance program administration. In 2022, the Company recorded a gain of $2.7 million related to Company-owned life insurance as part of "other non-regulated revenue" in the table above.

Lease revenue is not considered revenue from contracts with customers and is recognized following operating lease standards. The Company is the lessor in operating lease agreements with telecommunications companies under which cellular phone antennas are placed on the Company's property. The Company provides the lessee the right to ingress and egress across lessor property to access the antennas. The minimum rents are recognized on a straight-line basis over the terms of the leases, which may span multiple years. The excess rents are recognized over amounts contractually due pursuant to the underlying leases and is included in a deferred receivable account in the accompanying balance sheet. The leases generally have terms of 5 to 10 years, with lessee options to extend the lease for up to 15 years. The exercise of lease renewal options is at the lessee's sole discretion. Most of the Company's lease agreements contain mutual termination options that require prior written notice by either lessee or lessor. A subset of the Company's leases contains variable lease payments that depend on changes in the consumer price index (CPI).

The Company determines if an arrangement is a lease at inception. Generally, a lease agreement exists if the Company determines that the arrangement gives the lessee control over the use of an identified asset and obtains substantially all of the benefits from the identified asset.

Maturities of lease payments to be received are as follows:

Year Ending December 31,	Operating Leases
2024	$ 3,120
2025	2,210
2026	1,485
2027	575
2028	179

Allowance for Credit Losses

The Company measures expected credit losses for Customer Receivables, Other Receivables, and Unbilled Revenue on an aggregated level. These receivables are generally trade receivables due in one year or less or expected to be billed and collected in one year or less. The expected credit losses for Other Receivables and Unbilled Revenue are inconsequential. Customer receivables include receivables for water and wastewater services provided to residential customers, business, industrial, public authorities, and other customers. The expected credit losses for business, industrial, public authorities, and other customers are inconsequential. The overall risks related to the Company's receivables are low as water and wastewater services are seen as essential services. The estimate for the allowance for credit losses is based on a historical loss ratio, in conjunction with a qualitative assessment of elements that impact the collectability of receivables to determine if the allowance for credit losses should be further adjusted in accordance with the accounting guidance for credit losses. Management contemplates available current information such as changes in economic factors, regulatory matters, industry trends, payment options and programs available to customers, and methods that the Company is able to use to ensure payment.

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The Company reviews its allowance for credit losses using a quantitative assessment, which includes a trend analysis of customer billings and collections, agings by customer class, and unemployment rates. The Company also uses a qualitative assessment, which considers the future collectability on customer outstanding balances, management's estimate of the cash recovery, and a general assessment of the economic conditions in the locations the Company serves. Based on these assessments, the Company adjusts its allowance for credit losses. The Company has also contemplated funds that the Company expects to receive from the California Extended Water and Wastewater Arrearages Payment Program (Program). The Program was created by the California Legislature, is administered by the State Water Resources Control Board and will provide relief to community water and wastewater systems for unpaid bills – arrearages – related to the COVID-19 pandemic. Based on the above assessments, the Company adjusted its allowance for credit losses accordingly.

The following table presents the activity in the allowance for credit losses for the periods ended December 31, 2023, 2022, and 2021:

	2023	2022	2021
Beginning Balance	$ 5,629	$ 3,743	5,246
Provision for credit loss expense	2,480	5,887	$ 1,088
Write-offs	(5,795)	(4,380)	$ (3,113)
Recoveries	540	379	$ 522
Total ending allowance balance	$ 2,854	$ 5,629	$ 3,743

Other Receivables

As of December 31, 2023 and 2022, other receivables were:

	2023	2022
Accounts receivables from developers	$ 6,391	$ 7,419
Income tax receivables	1,378	5,496
Other	8,662	8,017
Total other receivables	$ 16,431	$ 20,932

Utility Plant

Utility plant is carried at original cost when first constructed or purchased, or at fair value when acquired through acquisition. When depreciable plant is retired, the cost is eliminated from utility plant accounts and such costs are charged against accumulated depreciation. Maintenance of utility plant is charged to operating expenses as incurred. Maintenance projects are not accrued for in advance.

Intangible assets acquired as part of water systems purchased are recorded at fair value. All other intangibles have been recorded at cost and are amortized over their useful life.

The following table represents depreciable plant and equipment as of December 31:

	2023	2022
Equipment	$ 976,704	$ 915,322
Office buildings and other structures	354,628	339,682
Transmission and distribution plant	3,226,632	2,960,615
Total	$ 4,557,964	$ 4,215,619

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Depreciation of utility plant is computed on a straight-line basis over the assets' estimated useful lives including cost of removal of certain assets as follows:

	Useful Lives
Equipment	5 to 50 years
Transmission and distribution plant	40 to 65 years
Office Buildings and other structures	50 years

The provision for depreciation expressed as a percentage of the aggregate depreciable asset balances was 2.81% in 2023, 2.90% in 2022, and 2.96% in 2021.

Allowance for funds used during construction (AFUDC)

The AFUDC represents the capitalized cost of funds used to finance the construction of the utility plant. In general, AFUDC is applied to Cal Water construction projects requiring more than one month to complete. No AFUDC is applied to projects funded by customer advances for construction, contributions in aid of construction, or state-revolving fund loans. AFUDC includes the net cost of borrowed funds and a rate of return on other funds when used, and is recovered through water rates as the utility plant is depreciated.

The amount of AFUDC related to equity funds and to borrowed funds for 2023, 2022, and 2021 are shown in the table below:

	2023	2022	2021
Allowance for equity funds used during construction	$ 5,551	$ 4,127	$ 3,186
Allowance for borrowed funds used during construction	2,990	2,344	1,766
Total	$ 8,541	$ 6,471	$ 4,952

Asset Retirement Obligation

The Company has a legal obligation to retire wells in accordance with State Water Resources Control Board regulations. In addition, upon decommission of a wastewater plant or lift station, certain wastewater infrastructure would need to be retired in accordance with State Water Resources Control Board regulations. An asset retirement cost and corresponding retirement obligation is recorded when a well or waste water infrastructure is placed into service. As of December 31, 2023 and 2022, the retirement obligation is estimated to be $39.0 million and $36.7 million, respectively. The retirement obligation is recorded as part of "Other long-term liabilities" within the Consolidated Balance Sheet. Changes in the retirement obligation only impact the consolidated balance sheets as the Company recognizes a regulatory asset or liability for the timing differences between the recognition of expenses and costs recovered through the ratemaking process.

The following is a reconciliation of the beginning and ending aggregate carrying amount of asset retirement obligations, which are included in “Other long-term liabilities” on the consolidated balance sheets as of December 31, 2023 and 2022:

	2023	2022
Obligation at beginning of the year	$ 36,692	$ 29,459
Additional liabilities incurred	262	5,444
Liabilities settled	(128)	—
Accretion	2,209	1,789
Obligation at the end of the year	$ 39,035	$ 36,692

Cash, Cash Equivalents, and Restricted Cash

Cash and cash equivalents include highly liquid investments with remaining maturities of three months or less at the time of acquisition. In 2023 and 2022, restricted cash included $0.4 million of proceeds collected through a surcharge on certain customers' bills plus interest earned on the proceeds and is used to service California Safe Drinking Water Bond obligations. In 2023, restricted cash also included $43.8 million of committed cash in Texas Water for a pipeline project (see Note 14).

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The following table provides a reconciliation of cash, cash equivalents, and restricted cash within the Consolidated Balance Sheets that total to the amounts shown on the Consolidated Statements of Cash Flows as of December 31:

	2023	2022
Cash and cash equivalents	$ 39,591	$ 62,100
Restricted cash	45,375	22,925
Total cash, cash equivalents, and restricted cash shown in the statements of cash flows	$ 84,966	$ 85,025

Regulatory Assets and Liabilities

Because the Company operates almost exclusively in a regulated business, the Company is subject to the accounting standards for regulated utilities. The Commissions in the states in which the Company operates establish rates that are designed to permit the recovery of the cost of service and a return on investment. The Company capitalizes and records regulatory assets for costs that would otherwise be charged to expense if it is probable that the incurred costs will be recovered in future rates. Regulatory assets are amortized over the future periods that the costs are expected to be recovered. If costs expected to be incurred in the future are currently being recovered through rates, the Company records those expected future costs as regulatory liabilities. In general, the Company does not earn a return on regulatory assets if the related costs do not accrue interest. Accordingly, the Company earns a return only on its regulatory assets for net WRAM and MCBA, PCBA, HCBA, and IRMA receivables. In addition, the Company records regulatory liabilities when it is probable the Commissions will require a refund to be made to the Company's customers over future periods. As of the December, 31, 2022, the WRAM and MCBA mechanisms concluded.

Determining probability requires significant judgment by management and includes, but is not limited to, consideration of testimony presented in regulatory hearings, proposed regulatory decisions, final regulatory orders, and the strength or status of applications for rehearing or state court appeals.

If the Company determines that a portion of the Company's assets used in utility operations is not recoverable in customer rates, the Company would be required to recognize the loss of the assets disallowed.

See Note 4 - Regulatory Assets and Liabilities for details of the Company's regulatory assets and liabilities.

Impairment of Long-Lived Assets, Intangibles and Goodwill

The Company's long-lived assets include transmission and distribution plant, equipment, land, buildings, and intangible assets. Long-lived assets, other than land, are depreciated or amortized over their estimated useful lives, and are reviewed for impairment whenever changes in circumstances indicate the carrying value of the assets may not be recoverable. Such circumstances would include items such as a significant decrease in the market value of a long-lived asset, a significant adverse change in the manner in which the asset is being used or planned to be used or in its physical condition, or a history of operating or cash flow losses associated with the uses of the asset. In addition, changes in the expected useful life of these long-lived assets may also be an impairment indicator. When such events or changes occur, the Company estimates the fair value of the asset from future cash flows expected to result from the use and, if applicable, the eventual disposition of the assets, and compare that to the carrying value of the asset. If the carrying value is greater than the fair value, then an impairment loss is recognized equal to the amount by which the asset's carrying value exceeds its fair value. The key variables that must be estimated include assumptions regarding sales volume, rates, operating costs, labor and other benefit costs, capital additions, assumed discount rates and other economic factors. These variables require significant management judgment and include inherent uncertainties since they are forecasting future events. A variation in the assumptions used could lead to a different conclusion regarding the realizability of an asset and, thus could have a significant effect on the consolidated financial statements.

Goodwill is measured as the excess of the cost of an acquisition over the sum of the amounts assigned to identifiable assets acquired less liabilities assumed. Goodwill is not amortized but instead is reviewed annually in the fourth quarter for impairment or more frequently if impairment indicators arise. The impairment test is performed at the reporting unit level using fair-value based approach in which the fair value of the reporting unit is compared to the reporting unit's carrying value. If the fair value of the reporting unit is less than its carrying amount, then an impairment loss is recognized equal to the difference. The Company recorded no goodwill impairments in 2023, 2022, and 2021.

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Long-Term Debt Premium, Discount and Expense

The premiums, discounts, and issuance expenses on long-term debt are amortized over the original lives of the related debt on a straight-line basis which approximates the effective interest method. Premiums paid on the early redemption of certain debt and the unamortized original issuance discount and expense are amortized over the life of new debt issued in conjunction with the early redemption. Amortization expense included in interest expense for 2023 was $0.3 million and for each of 2022 and 2021 was $0.4 million.

Advances for Construction

Advances for construction consist of payments received from developers for installation of water production and distribution facilities to serve new developments. Advances are excluded from rate base for rate setting purposes. Annual refunds are made to developers without interest. Advances of $199.4 million and $199.8 million, at December 31, 2023 and 2022, respectively, will be refunded primarily over a 40-year period from the date the advance was received in equal annual amounts.

Estimated refunds of advances are shown in the table below.

Year Ending December 31,	Refunds of Advances
2024	$ 10,800
2025	10,011
2026	9,651
2027	9,381
2028	9,001
Thereafter	150,604
Total refunds	$ 199,448

Contributions in Aid of Construction

Contributions in aid of construction represent payments received from developers, primarily for fire protection purposes, which are not subject to refunds. Facilities funded by contributions are included in utility plant, but excluded from rate base. Depreciation related to assets acquired from contributions is charged to the Contributions in Aid of Construction liability account.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Measurement of the deferred tax assets and liabilities is at enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. The Company evaluates the need for a valuation allowance on deferred tax assets based on historical taxable income and projected taxable income for future tax years.

Historically the Commissions have reduced revenue requirements for the tax effects of certain originating temporary differences and have allowed recovery of these tax costs as the related temporary differences reverse. The Commissions have granted the Company rate increases to reflect the normalization of the tax benefits of the federal accelerated methods and available Investment Tax Credits (ITC) for all assets placed in service after 1980. ITCs are deferred and amortized over the lives of the related properties for book purposes. The CPUC sets rates utilizing the flow through method of accounting for state income taxes.

With the enactment of the Tax Cuts Jobs Act (TCJA), Contributions in Aid of Construction (CIAC) received from developers after December 22, 2017 became fully taxable for federal income tax purposes. On November 15, 2021, the Infrastructure Investment and Jobs Act was signed into law, which reverses the TCJA treatment of CIAC. Effective January 1, 2021, only the service portion of CIAC is taxable for federal income tax purpose.

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The accounting standards for accounting for uncertainty in income taxes allows the inclusion of interest and penalties related to uncertain tax positions as a component of income taxes (see Note 10 - Income Taxes).

Workers' Compensation

For workers' compensation, the Company estimates the liability associated with claims submitted and claims not yet submitted based on historical data. Expenses for workers compensation insurance are included in rates on a pay-as-you-go basis. Therefore, a corresponding regulatory asset has been recorded.

Earnings per Share

The computations of basic and diluted earnings per share are noted below. Basic earnings per share are computed by dividing net income attributable to California Water Service Group by the weighted average number of common shares outstanding during the period. Diluted earnings per share reflect the potential dilution that could occur if securities or other contracts were exercised or converted into common stock. Restricted Stock Awards (RSAs) are included in the common shares outstanding because the shares have all the same voting and dividend rights as issued and unrestricted common stock.

	2023	2022	2021
		(In thousands, except per share data)	
Net income	$ 51,376	$ 95,263	$ 100,979
Net loss attributable to noncontrolling interests	(535)	(748)	(146)
Net income attributable to California Water Service Group	$ 51,911	$ 96,011	$ 101,125
Weighted average common shares, basic	56,952	54,320	51,633
Weighted average common shares, dilutive	56,983	54,363	51,633
Earnings per share—basic	$ 0.91	$ 1.77	$ 1.96
Earnings per share—diluted	$ 0.91	$ 1.77	$ 1.96

Stock-based Compensation

Stock-based compensation cost is measured at the grant date based on the fair value of the award. The Company recognizes compensation expense on a straight-line basis over the requisite service period, which is the vesting period.

Comprehensive Income or Loss

Comprehensive income for all periods presented was the same as net income attributable to California Water Service Group.

Accumulated Other Comprehensive Income

The Company did not have any accumulated other comprehensive income or loss transactions as of December 31, 2023 and 2022.

New Accounting Standards

In November 2023, the Financial Standards Accounting Board (FASB) issued Accounting Standards Update (ASU) 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures which expands annual and interim disclosure requirements for reportable segments, primarily through enhanced disclosures about significant segment expenses. ASU 2023-07 is effective for the Company's annual periods beginning January 1, 2024, and for interim periods beginning January 1, 2025, with early adoption permitted. The guidance requires retrospective presentation of all prior periods presented in the financial statements. The Company is currently evaluating the potential effect that the updated standard will have on its financial statement disclosures.

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NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures to expand the disclosure requirements for income taxes, specifically related to the rate reconciliation and income taxes paid. ASU 2023-09 is effective for the Company's annual periods beginning January 1, 2025, with early adoption permitted. The guidance is applied prospectively with the option of retrospective application for each period presented. The Company is currently evaluating the potential effect that the updated standard will have on its financial statement disclosures.

NOTE 3. OTHER INCOME AND EXPENSES

The Company conducts various non-regulated activities as reflected in the table below:

	2023		2022		2021	
	Revenue	Expense	Revenue	Expense	Revenue	Expense
Operating and maintenance	$ 12,499	$ 10,786	$ 12,860	$ 11,959	$ 16,276	$ 16,344
Leases	2,504	26	2,642	46	2,744	230
Design and construction	652	536	416	328	619	611
Meter reading and billing	198	2	534	123	495	79
Interest income	303	—	177	—	171	—
Loss (gain) from non-qualified benefit plan investments	—	(4,919)	—	7,161	—	(3,800)
Other non-regulated income and expenses	2,353	5,376	4,647	5,204	2,456	3,770
Total	$ 18,509	$ 11,807	$ 21,276	$ 24,821	$ 22,761	$ 17,234

Operating and maintenance services and meter reading and billing services are provided for water and wastewater systems owned by private companies and municipalities. The agreements typically call for a fee-per-service or a flat-rate amount per month. Leases have been entered into with telecommunications companies for cellular phone antennas placed on the Company's property. Design and construction services are for the design and installation of water mains and other water infrastructure for others outside the Company's regulated service areas. Third-party insurance program gains and losses are included in other non-regulated income and expenses. In 2022, the Company recorded a gain of $2.7 million related to Company-owned life insurance as part of "revenue" in "other non-regulated income and expenses" in the table above.

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NOTE 4. REGULATORY ASSETS AND LIABILITIES

Regulatory assets and liabilities were comprised of the following as of December 31:

	Recovery Period	2023	2022
Regulatory Assets			
Property-related temporary differences (tax benefits flowed through to customers)	Indefinite	158,486	143,546
Other accrued benefits	Indefinite	25,363	24,946
Net WRAM and MCBA long-term accounts receivable	Various	10,738	41,558
Asset retirement obligations, net	Indefinite	26,686	24,548
Tank coating	Various	19,602	16,395
IRMA long-term accounts receivable	1-2 years	3,430	3,682
Recoverable property losses	Various	3,121	3,144
PCBA	Various	4,182	19,091
General district balancing account receivable	Various	390	377
Customer assistance program (CAP) and Rate support fund (RSF) accounts receivable	1 year	2,459	2,965
Other regulatory assets	Various	3,164	3,368
Total Regulatory Assets		$ 257,621	$ 283,620
Regulatory Liabilities			
Cost of removal		$ 447,356	$ 414,061
Future tax benefits due to customers		118,051	131,155
Pension and retiree group health		88,728	58,678
HCBA		3,242	14,318
PCBA		8,972	—
CEBA		1,200	6,036
Net WRAM and MCBA long-term payable		2,071	172
Other components of net periodic benefit cost		10,348	2,475
RSF regulatory liability		2,116	—
Other regulatory liabilities		1,633	845
Total Regulatory Liabilities		$ 683,717	$ 627,740

The property-related temporary differences are primarily due to: (i) the difference between book and federal income tax depreciation on utility plant that was placed in service before the regulatory Commissions adopted normalization for rate making purposes; and (ii) certain (state) deferred taxes for which flow through accounting continues to be applied to originating deferred taxes. The regulatory asset will be recovered in rates in future periods as the tax effects of the temporary differences previously flowed-through to customers reverse.

Other accrued benefits are accrued benefits for vacation, self-insured workers' compensation, and directors' retirement benefits.

The net WRAM and MCBA long-term accounts receivable is the under-collected portion of recorded revenues that are not expected to be collected from customers within 12 months.

The asset retirement obligation regulatory asset represents the difference between costs associated with asset retirement obligations and amounts collected in rates. Tank coating represents the maintenance costs for tank coating projects that are recoverable from customers.

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NOTE 4. REGULATORY ASSETS AND LIABILITIES (Continued)

The IRMA long-term accounts receivables is the additional amount the Company would have billed customers in 2020 and 2021 had the 2018 GRC been approved on time.

The CAP and RSF are two programs offered by Cal Water that assist qualifying customers with their monthly water bill. The programs are funded by the customers who do not qualify for the assistance. The CAP and RSF regulatory assets represent the amounts due from customers to fund the CAP and RSF credits that were provided to assist qualifying customers. The RSF regulatory liability represents RSF credits that will be provided to assist qualifying customers. The liability was funded by customers.

Cost of removal represents the cumulative differences between the recorded costs to remove assets and amounts collected in rates for expected costs to remove assets at the end of their estimated useful life. Subsequent to the issuance of the 2022 financial statements, the Company determined the cost of removal obligations previously presented in accumulated depreciation and amortization should have been presented as a regulatory liability. As a result, the consolidated balance sheet as of December 31, 2022, has been adjusted to increase regulatory liabilities and decrease accumulated depreciation and amortization by $414.1 million. The adjustment does not affect consolidated net income, earnings per share, total equity or cash flows. Management has concluded that the adjustment is immaterial to the previously issued consolidated financial statements.

The future tax benefits due to customers primarily resulted from federal tax law changes enacted by the TCJA on December 22, 2017. The TCJA reduced the federal corporate income tax rate from 35 percent to 21 percent beginning on January 1, 2018, and GAAP requires the Company to re-measure all existing deferred income tax assets and liabilities to reflect the reduction in the federal tax rate on the enactment date.

The pension and retiree group health regulatory liability represents the over funded obligation of the Company's postretirement benefit plans which the Company expects to refund to customers in the future. These plans are discussed in further detail in Note 11.

The PCBA regulatory asset/liability and the HCBA regulatory liability represent incurred pension and healthcare costs that exceeded/were below the cost recovery in rates and is recoverable/refundable from/to customers. The other components of net periodic benefit cost regulatory liabilities are authorized by the Commissions and are probable for customer refund through the capital program.

The conservation program regulatory liability is for incurred conservation costs that were below the cost recovery in rates and is refundable to customers.

Short-term regulatory assets and liabilities are excluded from the above table. The short-term regulatory assets as of December 31, 2023 and 2022 were $64.2 million and $66.8 million, respectively. The short-term regulatory assets, as of December 31, 2023 primarily consisted of net WRAM and MCBA, and PCBA receivables. As of December 31, 2022, the short-term regulatory assets primarily consisted of net WRAM and MCBA, IRMA, and PCBA receivables.

The short-term portion of regulatory liabilities as of December 31, 2023 and 2022 were $21.5 million and $12.2 million, respectively. The short-term regulatory liabilities as of December 31, 2023 primarily consisted of TCJA liabilities and HCBA liabilities. As of December 31, 2022, the short-term regulatory liabilities primarily consisted of TCJA liabilities.

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NOTE 5. INTANGIBLE ASSETS AND GOODWILL

Intangible assets

As of December 31, 2023 and 2022, intangible assets that will continue to be amortized and those not amortized were:

	Weighted Average Amortization Period (years)	2023 Gross Carrying Value	2023 Accumulated Amortization	2023 Net Carrying Value	2022 Gross Carrying Value	2022 Accumulated Amortization	2022 Net Carrying Value
Amortized intangible assets:							
Water pumping rights	usage	$ 1,084	$ 137	$ 947	$ 1,084	$ 132	$ 952
Water planning studies	13	19,470	10,214	9,256	16,354	9,222	7,132
Leasehold improvements and other	18	5,128	1,837	3,291	3,192	1,614	1,578
Total		$ 25,682	$ 12,188	$ 13,494	$ 20,630	$ 10,968	$ 9,662
Unamortized intangible assets:							
Perpetual water rights and other		$ 7,239	$ —	$ 7,239	$ 7,149	$ —	$ 7,149

Water pumping rights usage is the amount of water pumped from aquifers to be treated and distributed to customers.

For the year ended December 31, 2023, 2022, and 2021 amortization of intangible assets was $1.5 million, $1.5 million, and $1.4 million, respectively.

Estimated future amortization expense related to intangible assets are shown in the table below:

Year Ending December 31,	Estimated Future Amortization Expense Related to Intangible Assets
2024	$ 1,839
2025	1,720
2026	1,392
2027	1,144
2028	1,038
Thereafter	6,361
Total	$ 13,494

Goodwill

Changes in the carrying amount of goodwill for the years ended December 31, 2023 and 2022 were as follows:

	2023	2022
Beginning balance	$ 36,814	$ 36,814
Acquisitions	225	—
Total ending goodwill balance	$ 37,039	$ 36,814

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NOTE 6. EQUITY

As of December 31, 2023 and 2022, 57,723,738, and 55,597,855 shares, respectively, of common stock were issued and outstanding.

Effective January 1, 2019, the Company implemented an Employee Stock Purchase Plan (ESPP). Under the ESPP, qualified employees are permitted to purchase the Company's common stock at 90% of the market value of the common stock on the specified stock purchase date. The ESPP is deemed compensatory and compensation costs will be accounted for under ASC 718, Stock Compensation. Employees' payroll deductions for common stock purchases may not exceed 10% of their salaries. Employees may purchase up to 2,000 shares per period provided that the value of the shares purchased in any calendar year may not exceed $25,000, as calculated pursuant to the ESPP. The Company recorded expense of $0.3 million for 2023, and $0.2 million for 2022, and 2021. The Company issued 50,319, 40,095 and 37,460 shares of common stock related to the ESPP in 2023, 2022, and 2021, respectively.

On April 29, 2022, the Company entered into an equity distribution agreement to sell shares of its common stock having an aggregate gross sales price of up to $350.0 million from time to time depending on market conditions through an at-the-market equity program over the next three years. The Company intends to use the net proceeds from these sales, after deducting commissions on such sales and offering expenses, for general corporate purposes, which may include working capital, construction and acquisition expenditures, investments and repurchases, and redemptions of securities. The Company sold 2,025,891 shares of common stock through its at-the-market equity program and raised proceeds of $112.7 million, net of $1.1 million in sales commissions paid in 2023. The Company sold 1,802,063 shares of common stock through its at-the-market equity program and raised proceeds of $104.6 million net of $1.1 million in commissions paid under the equity distribution agreement in 2022. The Company also incurred $0.2 million and $0.1 million of equity issuance costs in 2023 and 2022, respectively.

As approved by the Company's stockholders at the 2022 Annual Meeting, effective July 26, 2022, the aggregate number of shares of common stock which the Company shall have authority to issue was increased from 68.0 million shares to 136.0 million shares. All of these shares are of one and the same series, namely shares of common stock with par value of $0.01 per share.

Dividend Reinvestment and Stock Repurchase Plan

The Company has a Dividend Reinvestment and Stock Purchase Plan (DRIP Plan). Under the DRIP Plan, stockholders may reinvest dividends to purchase additional Company common stock without commission fees. The DRIP Plan also allows existing stockholders and other interested investors to purchase Company common stock through the transfer agent up to certain limits. The Company's transfer agent operates the DRIP Plan and purchases shares on the open market to provide shares for the DRIP Plan.

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NOTE 7. SHORT-TERM BORROWINGS

On March 31, 2023, the Company and Cal Water entered into syndicated credit agreements, which provide for unsecured revolving credit facilities of up to an initial aggregate amount of $600.0 million for a term of five years. The Company and subsidiaries that it designates may borrow up to $200.0 million under the Company's revolving credit facility (the Company facility). Cal Water may borrow up to $400.0 million under its revolving credit facility (the Cal Water facility). Additionally, the credit facilities may be increased by up to an incremental $150.0 million under the Cal Water facility and $50.0 million under the Company facility, subject in each case to certain conditions. At the Company's or Cal Water's option, as applicable, borrowings under the Company and Cal Water facilities, as applicable, will bear interest annually at a rate equal to (i) the base rate, plus an applicable margin of 0.00% to 0.250%, depending on the Company and its subsidiaries' consolidated total capitalization ratio, or (ii) Term SOFR, plus an applicable margin of 0.800% to 1.250%, depending on the Company and its subsidiaries' consolidated total capitalization ratio.

The Company and Cal Water facilities contain affirmative and negative covenants and events of default customary for credit facilities of this type including, among other things, limitations and prohibitions relating to additional indebtedness, liens, mergers, and asset sales. Also, the Company and Cal Water facilities contain financial covenants governing the Company and its subsidiaries' consolidated total capitalization ratio and interest coverage ratio. As of December 31, 2023, the Company and Cal Water are in compliance with all of the covenant requirements and are eligible to use the full amount of the undrawn portion of the Company and Cal Water facilities, as applicable.

As of December 31, 2023 and 2022, the outstanding borrowings on the Company lines of credit were $50.0 million and $35.0 million, respectively. Outstanding borrowings on the Cal Water lines of credit as of December 31, 2023 were $130.0 million and $35.0 million as of December 31, 2022. The average borrowing rate for borrowings on the Company and Cal Water lines of credit during 2023 was 6.09% compared to 2.74% for the same period during the prior year.

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NOTE 8. LONG-TERM DEBT

As of December 31, 2023 and 2022, long-term debt outstanding was:

	Series	Interest Rate	Maturity Date	2023	2022
First Mortgage Bonds	ZZZ	2.870 %	2051	$ 130,000	$ 130,000
	1	3.020 %	2061	150,000	150,000
	YYY	4.170 %	2059	200,000	200,000
	WWW	4.070 %	2049	100,000	100,000
	VVV	3.400 %	2029	100,000	100,000
	TTT	4.610 %	2056	10,000	10,000
	SSS	4.410 %	2046	40,000	40,000
	QQQ	3.330 %	2025	50,000	50,000
	RRR	4.310 %	2045	50,000	50,000
	PPP	5.500 %	2040	100,000	100,000
	AAA	7.280 %	2025	20,000	20,000
	BBB	6.770 %	2028	20,000	20,000
	CCC	8.150 %	2030	20,000	20,000
	DDD	7.130 %	2031	20,000	20,000
	EEE	7.110 %	2032	20,000	20,000
	III	5.540 %	2023	—	909
	OOO	6.020 %	2031	20,000	20,000
Total First Mortgage Bonds				1,050,000	1,050,909
California Department of Water Resources Loans		1.30% - 1.69%	2027 - 2039	4,195	4,515
Other long-term debt				4,102	5,485
Unamortized debt issuance costs				(4,857)	(5,112)
Total long-term debt, net of unamortized debt issuance costs				1,053,440	1,055,797
Less current maturities of long-term debt, net				672	3,310
Long-term debt, net				$ 1,052,768	$ 1,052,487

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NOTE 8. LONG-TERM DEBT (Continued)

Maturities of long-term debt as of December 31, 2023 are as follows:

Year Ending December 31,	Long-term debt*
2024	$ 377
2025	70,354
2026	357
2027	334
2028	20,318
Thereafter	962,656

* Excludes maturities for finance lease obligations. See note 14 for maturities for finance lease obligations.

On October 4, 2011, Cal Water entered into a finance lease arrangement with the City of Hawthorne to operate the City's water system for a 15-year period. The $2.4 million and $3.2 million finance lease liability as of December 31, 2023 and 2022, respectively, is included in other long-term debt and current maturities set forth above.

NOTE 9. OTHER ACCRUED LIABILITIES

As of December 31, 2023 and 2022, other accrued liabilities were:

	2023	2022
Accrued and deferred compensation	$ 22,512	$ 23,188
Accrued benefits and workers' compensation claims	8,276	6,953
Unearned revenue and customer deposits	13,488	8,138
Uninsured loss reserve	5,954	5,320
Due to contracts and agencies	2,992	3,101
Current portion of operating lease	962	1,065
Other	5,422	5,252
Total other accrued liabilities	$ 59,606	$ 53,017

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NOTE 10. INCOME TAXES

Income tax expense (benefit) consisted of the following:

	Federal	State	Total
2023			
Current	$ —	$ 3	$ 3
Deferred	508	(7,292)	(6,784)
Total income tax	$ 508	$ (7,289)	$ (6,781)
2022			
Current	$ 1,857	$ 3	$ 1,860
Deferred	4,726	(211)	4,515
Total income tax	$ 6,583	$ (208)	$ 6,375
2021			
Current	$ —	$ 3,446	$ 3,446
Deferred	3,322	(2,676)	646
Total income tax	$ 3,322	$ 770	$ 4,092

The Company's December 31, 2023, 2022, and 2021 qualified tax repairs and maintenance deductions totaled $169.7 million, $128.0 million, and $125.5 million, respectively.

At December 31, 2023, the Company had U.S. federal and U.S. state tax net operating loss carry-forwards of approximately $93.3 million and $184.0 million respectively. The U.S. federal and U.S. state net operating loss carry-forwards will both expire at various dates beginning in tax year 2028.

The difference between the recorded and the statutory income tax expense is reconciled in the table below:

	2023	2022	2021
Statutory income tax	$ 9,365	$ 21,344	$ 22,065
Increase (reduction) in taxes due to:			
State income taxes net of federal tax benefit	3,718	7,383	7,334
Effect of regulatory treatment of fixed asset differences	(9,478)	(6,274)	(6,327)
Investment tax credits	(74)	(74)	(74)
AFUDC equity	(1,553)	(1,155)	(891)
Stock based stock compensation	677	455	791
TCJA refund	(11,618)	(13,919)	(19,417)
Other	2,182	(1,385)	611
Total income tax	$ (6,781)	$ 6,375	$ 4,092

The effect of regulatory treatment of fixed asset differences includes estimated repair and maintenance deductions and asset related flow through items.

On December 22, 2017, the U.S. government enacted expansive tax legislation commonly referred to as the TCJA. Among other provisions, the TCJA reduces the federal income tax rate from 35 percent to 21 percent beginning on January 1, 2018 and eliminated bonus depreciation for utilities. The TCJA required the Company to re-measure all existing deferred income tax assets and liabilities to reflect the reduction in the federal tax rate.

As of December 31, 2023, the TCJA refund liability was $92.5 million. The Company continues working with other state regulators to finalize the refund to confirm compliance with federal normalization rules.

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NOTE 10. INCOME TAXES (Continued)

The deferred tax assets and deferred tax liabilities as of December 31, 2023 and 2022, are presented in the following table:

	2023	2022
Deferred tax assets:		
Developer deposits for contributions in aid of construction	$ 33,244	$ 31,589
Net operating loss carry-forward and tax credits	29,406	18,329
Pension liability	16,896	13,860
Income tax regulatory liability	18,364	22,838
Operating leases liabilities	3,796	4,170
Other	3,614	4,264
Total deferred tax assets	105,320	95,050
Deferred tax liabilities:		
Property related basis and depreciation differences	437,224	393,007
WRAM/MCBA and interim rates balancing accounts	4,875	14,192
Operating lease-right to use asset	3,746	4,130
Other	12,237	13,972
Total deferred tax liabilities	458,082	425,301
Net deferred tax liabilities	$ 352,762	$ 330,251

Based on historical taxable income and future taxable income projections over the period in which the deferred assets are deductible, management believes it is more likely than not that the Company will realize the benefits of the deductible differences.

The following table reconciles the changes in unrecognized tax benefits for the periods ended December 31, 2023, 2022, and 2021:

	2023	2022	2021
Balance at beginning of year	$ 13,606	$ 15,850	$ 13,960
Additions for tax positions taken during current year	2,685	1,955	1,890
Lapse of statute of limitations	—	(4,199)	—
Balance at end of year	$ 16,291	$ 13,606	$ 15,850

The Company does not expect a material change in its unrecognized tax benefits within the next 12 months. The component of unrecognized tax benefits that, if recognized, would affect the effective tax rate as of December 31, 2023, was $5.0 million, with the remaining balance representing the potential deferral of taxes to later years.

The Company's federal income tax years subject to an examination are from 2017 to 2023 and the state income tax years subject to an examination are from 2013 to 2023.

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NOTE 11. EMPLOYEE BENEFIT PLANS

Savings Plan

The Company sponsors a 401(k) qualified defined contribution savings plan that allows participants to contribute up to 50% of pre-tax compensation. Effective January 1, 2010, the Company matches 75 cents for each dollar contributed by the employee up to a maximum Company match of 6.0% of eligible earnings. Company contributions were $8.2 million, $7.1 million, and $7.4 million for the years 2023, 2022, and 2021, respectively.

Pension Plans

The Company provides a qualified, defined-benefit, non-contributory pension plan for substantially all employees. The accumulated benefit obligations of the pension plan are $534.7 million and $505.9 million as of December 31, 2023 and 2022, respectively. The fair value of pension plan assets was $716.3 million and $637.3 million as of December 31, 2023 and 2022, respectively.

Prior to 2010, pension payment obligations were generally funded by the purchase of an annuity from a life insurance company. Beginning in 2010, the pension plan trust pays monthly benefits to retirees, rather than the purchase of an annuity.

The Company also maintains an unfunded, non-qualified, supplemental executive retirement plan (SERP). The unfunded SERP accumulated benefit obligations were $74.1 million and $69.3 million as of December 31, 2023 and 2022, respectively. Benefit payments under the SERP are paid currently. As a non-qualified plan, the SERP has no plan assets, however, the Company has a Rabbi trust designated to provide funding for SERP obligations. The Rabbi trust holds investments in marketable securities and corporate-owned life insurance. The recorded value of these investments was approximately $66.7 million and $59.0 million at December 31, 2023 and 2022, respectively, and is part of "Other" noncurrent assets on the Consolidated Balance Sheets.

Expected payments to be made for the pension and SERP plans are shown in the table below:

Year Ending December 31,	Pension	SERP	Total
2024	$ 20,301	$ 2,834	$ 23,135
2025	21,959	3,104	25,063
2026	23,695	3,381	27,076
2027	25,487	3,712	29,199
2028	27,340	4,024	31,364
2029-2033	165,184	24,590	189,774
Total payments	$ 283,966	$ 41,645	$ 325,611

The expected benefit payments are based upon the same assumptions used to measure the Company's benefit obligation at December 31, 2023, and include estimated future employee service.

The costs of the pension and retirement plans are charged to expense and utility plant. The Company makes annual contributions to fund the amounts accrued for pension cost.

Other Postretirement Plan

The Company provides substantially all active, permanent employees with medical, dental, and vision benefits through a self-insured plan. Employees retiring at or after age 58, along with their spouses and dependents, continue participation in the plan by payment of a premium. Plan assets are invested in mutual funds, short-term money market instruments and commercial paper based upon a similar asset mix to the pension plan. Retired employees are also provided with a $10,000 dollar life insurance benefit.

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NOTE 11. EMPLOYEE BENEFIT PLANS (Continued)

The Company records the costs of postretirement benefits other than pensions (PBOP) during the employees' years of active service. In 2023, the Company recorded postretirement benefit income of $2.9 million. In 2022 and 2021, postretirement benefit expense was recorded for $0.1 million and $0.2 million, respectively.

The expected benefit payments, net of retiree premiums and Medicare Part D subsidies, are shown in the table below.

Year Ending December 31,	Expected Benefit Payments Before Medicare Part D Subsidy	Effect of Medicare Part D Subsidy on Expected Benefit Payments	Expected Benefit Payments Net of Medicare Part D Subsidy
2024	$ 4,712	$ (248)	$ 4,464
2025	5,011	(275)	4,736
2026	5,353	(302)	5,051
2027	5,782	(329)	5,453
2028	6,234	(358)	5,876
2029-2033	38,176	(2,209)	35,967
Total payments	$ 65,268	$ (3,721)	$ 61,547

Benefit Plan Assets

The Company actively manages pension and PBOP trust (Plan) assets. The Company's investment objectives are:

- Maximize the return on the assets, commensurate with the risk that the Company deems appropriate to meet the obligations of the Plans, minimize the volatility of the pension expense, and account for contingencies;
- Generate a rate of return for the total portfolio that equals or exceeds the actuarial investment rate assumption;

Additionally, the rate of return of the total fund is measured periodically against an index comprised of 35% of the Standard & Poor's Index, 15% of the Russell 2000 Index, 10% of the MSCI EAFE Index, and 40% of the Bloomberg Barclays U.S. Aggregate Bond Index. The index is consistent with the Company's rate of return objective and indicates the Company's long-term asset allocation objective.

The Company applies a risk management framework for managing the risks associated with employee benefit plan trust assets. The guiding principles of this risk management framework are the clear articulation of roles and responsibilities, appropriate delegation of authority, and proper accountability and documentation. Trust investment policies and investment manager guidelines include provisions to ensure prudent diversification, manage risk through appropriate use of physical direct asset holdings and derivative securities, and identify permitted and prohibited investments. The Company retains an investment manager to be the Company's Outsourced Chief Investment Officer (OCIO) and the OCIO was required to make investment decisions for Plan assets within the parameters of the Company's investment policies and guidelines.

The Company's target asset allocation percentages for major categories of the plan assets are reflected in the table below:

	Minimum Exposure	Target	Maximum Exposure
Fixed Income	35 %	40 %	45 %
Total Domestic Equity:	35 %	40 %	45 %
Small/Mid Cap Stocks	5 %	12 %	25 %
Large Cap Stocks	25 %	28 %	45 %
Emerging markets	3 %	6 %	9 %
Non-U.S. Equities	11 %	14 %	17 %

The fixed income category includes money market funds, short-term bond funds, and cash. The majority of fixed income investments range in maturities from less than 1 to 5 years.

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NOTE 11. EMPLOYEE BENEFIT PLANS (Continued)

The Company's target allocation percentages for the PBOP trust is similar to the pension plan.

The Company uses the following criteria to select investment funds:

- Fund past performance;
- Fund meets criteria of Employee Retirements Income Security Act (ERISA);
- Timeliness and completeness of fund communications and reporting to investors;
- Stability of fund management company;
- Fund management fees; and
- Administrative costs incurred by the Plan.

Plan Fair Value Measurements

The fair value measurements standard establishes a framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements). The three levels of the fair value hierarchy under the standard are described below:

Level 1—Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

Level 2—Inputs to the valuation methodology include:

- Quoted market prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability.

Level 3—Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The following tables present the fair value of plan assets by major asset category at December 31, 2023 and 2022:

	December 31, 2023							
	Pension Benefits				Other Benefits			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Fixed Income	$ 407	$ —	$ —	$ 407	$ 21,891	$ —	$ —	$ 21,891
Domestic Equity: Small/Mid Cap Stocks	—	—	—	—	6,437	—	—	6,437
Domestic Equity: Large Cap Stocks	—	—	—	—	—	—	—	—
Non U.S. Equities	—	—	—	—	7,268	—	—	7,268
Emerging markets	—	—	—	—	3,090	—	—	3,090
Assets measured at net asset value (NAV)	—	—	—	715,866	—	—	—	124,681
Total Plan Assets	$ 407	$ —	$ —	$ 716,273	$ 38,686	$ —	$ —	$ 163,367

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NOTE 11. EMPLOYEE BENEFIT PLANS (Continued)

	December 31, 2022							
	Pension Benefits				Other Benefits			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Fixed Income	$ 588	$ —	$ —	$ 588	$ 18,060	$ —	$ —	$ 18,060
Domestic Equity: Small/Mid Cap Stocks	—	—	—	—	5,654	—	—	5,654
Domestic Equity: Large Cap Stocks	—	—	—	—	—	—	—	—
Non U.S. Equities	—	—	—	—	6,928	—	—	6,928
Emerging markets	—	—	—	—	3,027	—	—	3,027
Assets measured at NAV	—	—	—	636,742	—	—	—	111,017
Total Plan Assets	$ 588	$ —	$ —	$ 637,330	$ 33,669	$ —	$ —	$ 144,686

The pension benefits fixed income category includes $0.4 million and $0.6 million of money market fund investments as of December 31, 2023 and 2022, respectively. The other benefits fixed income category includes $0.3 million of money market fund investments as of December 31, 2023 and no money market fund investments as of December 31, 2022.

Assets measured at NAV include investments in commingled funds that are comprised of fixed income and equity securities. These commingled funds are not publicly traded, and therefore no publicly quoted market price is readily available. The values of the commingled funds are measured at estimated fair value, which is determined based on the unit value of the funds and have not been classified in the fair value hierarchy tables above. There are no restrictions on the terms and conditions upon which the investments may be redeemed.

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NOTE 11. EMPLOYEE BENEFIT PLANS (Continued)

Changes in Plan Assets, Benefits Obligations, and Funded Status

The following table reconciles the funded status of the plans with the accrued pension liability and the net postretirement benefit liability as of December 31, 2023 and 2022:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Change in projected benefit obligation:				
Beginning of year	$ 685,254	$ 887,477	$ 101,752	$ 142,470
Service cost	22,159	34,847	4,489	6,830
Interest cost	34,190	25,596	5,219	4,009
Actuarial (gain) loss (1)	(8,532)	(243,769)	27,208	(49,462)
Benefits paid, net of retiree premiums	(22,302)	(18,897)	(3,935)	(2,095)
End of year	$ 710,769	$ 685,254	$ 134,733	$ 101,752
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 637,330	$ 810,469	$ 144,686	$ 169,436
Actual return on plan assets	95,280	(171,517)	22,133	(23,326)
Employer contributions	5,965	17,275	189	671
Retiree contributions and Medicare part D subsidies	—	—	2,449	2,176
Benefits paid	(22,302)	(18,897)	(6,557)	(4,421)
Other adjustments	—	—	467	150
Fair value of plan assets at end of year	$ 716,273	$ 637,330	$ 163,367	$ 144,686
Funded status (2)	$ 5,504	$ (47,924)	$ 28,634	$ 42,934
Unrecognized actuarial gain	(66,073)	(19,512)	(26,764)	(44,555)
Unrecognized prior service cost	2,680	3,205	1,428	1,583
Net amount recognized	$ (57,889)	$ (64,231)	$ 3,298	$ (38)

1. The actuarial gain for pension and other benefits in 2022 was mainly due to a higher discount rate used in the calculation.

2. The short-term portion of the pension benefits was $2.8 million as of December 31, 2023 and $2.6 million as of December 31, 2022 and was recorded as part of other accrued liabilities on the Company's Consolidated Balance Sheets.

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NOTE 11. EMPLOYEE BENEFIT PLANS (Continued)

Amounts recognized on the balance sheet consist of:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Noncurrent assets (1)	$ 91,051	$ 32,848	$ 28,634	$ 42,934
Accrued benefit costs	—	(307)	(1)	(465)
Accrued benefit liability (2)	(85,547)	(80,772)	—	—
Regulatory assets (3)	—	—	—	171
Regulatory liabilities (3)	(63,393)	(16,000)	(25,335)	(42,678)
Net amount recognized	$ (57,889)	$ (64,231)	$ 3,298	$ (38)

1. Noncurrent assets represent the overfunded status of the employee pension plan and PBOP plan in 2023 and 2022. The amounts are recorded as part of "Other" noncurrent assets on the Consolidated Balance Sheets.

2. Accrued benefit liability represents the underfunded status of the SERP plan in 2023 and 2022. The amounts are recorded as part of "Pension" in the Consolidated Balance Sheets.

3. Changes in the funded status of the plans that would be recorded in accumulated other comprehensive income for an unregulated entity are recorded as a regulatory assets and liabilities as the Company believes it is probable that an amount equal to the regulatory asset or liability will be collected or refunded through the setting of future rates.

Valuation Assumptions

Below are the actuarial assumptions used in determining the benefit obligation for the benefit plans:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Weighted average assumptions as of December 31:				
Discount rate - employee pension plan	5.25 %	5.27 %	—	—
Discount rate - SERP	5.19 %	5.24 %	—	—
Discount rate - other benefits	—	—	5.25 %	5.27 %
Long-term rate of return on plan assets	7.56 %	7.50 %	7.41 %	7.36 %
Rate of compensation increases - employee pension plan	4.25 %	4.28 %	—	—
Rate of compensation increases - SERP	5.00 %	5.00 %	—	—
Cost of living adjustment	2.23 %	2.25 %	—	—

The long-term rate of return assumption is the expected rate of return on a balanced portfolio invested roughly 60% in equities and 40% in fixed income securities. Returns on equity investments were estimated based on estimates of dividend yield and real earnings added to a 2.23% long-term inflation rate. For the pension plans and other benefits, the assumed returns were 8.41% for domestic equities and 9.00% for foreign equities. Returns on fixed-income investments were projected based on investment maturities and credit spreads added to a 2.23% long-term inflation rate. For the pension and other benefit plans, the assumed returns were 5.43% and 5.15%, respectively, for fixed income investments. The Company is using a long-term rate of return of 7.56% for the pension plan and 7.41% for the other benefit plan.

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NOTE 11. EMPLOYEE BENEFIT PLANS (Continued)

Components of Net Periodic Benefit Cost

Net periodic benefit costs for the pension and other postretirement plans for the years ended December 31, 2023 and 2022, included the following components:

	Pension Plan			Other Benefits		
	2023	2022	2021	2023	2022	2021
Service cost	$ 22,159	$ 34,847	$ 35,055	$ 4,489	$ 6,830	$ 6,072
Interest cost	34,190	25,596	21,667	5,219	4,009	3,217
Expected return on plan assets	(53,684)	(45,228)	(39,472)	(10,543)	(9,927)	(8,769)
Net amortization and deferral	(3,043)	5,781	10,003	(2,019)	(824)	(293)
Net periodic (income) cost	$ (378)	$ 20,996	$ 27,253	$ (2,854)	$ 88	$ 227

Service cost portion of the pension plan and other postretirement benefits is recognized in administrative and general within the Consolidated Statements of Operations. Other components of net periodic benefit costs include interest costs, expected return on plan assets, amortization of prior service costs, and recognized net actuarial loss and are reported together as other components of net periodic benefit cost within the Consolidated Statements of Operations.

Below are the actuarial assumptions used in determining the net periodic benefit costs for the benefit plans, which uses the end of the prior year as the measurement date:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Weighted average assumptions as of December 31:				
Discount rate - employee pension plan	5.27 %	3.28 %	—	—
Discount rate - SERP	5.24 %	3.18 %	—	—
Discount rate - other benefits	—	—	5.27 %	3.27 %
Long-term rate of return on plan assets	7.50 %	6.34 %	7.36 %	5.88 %
Rate of compensation increases - employee pension plan	4.28 %	4.25 %	—	—
Rate of compensation increases - SERP	5.00 %	5.00 %	—	—
Cost of living adjustment	2.25 %	2.20 %	—	—

The health care cost trend rate assumption has a significant effect on the amounts reported. For 2023 measurement purposes, the Company assumed a 6.2% annual rate of increase in the per capita cost of covered benefits with the rate decreasing to 6.0% by 2024, then gradually grading down to 4.0% by 2060.

The Company intends to make annual contributions that meet the funding requirements of ERISA. The Company estimates in 2024 that the annual contribution to the pension plans will be $0.7 million and the annual contribution to the other postretirement plan will be $0.2 million.

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NOTE 12. STOCK-BASED COMPENSATION PLANS

The Company's equity incentive plan was approved and amended by stockholders on April 27, 2005 and May 20, 2014. The Company is authorized to issue awards up to 2,000,000 shares of common stock.

During 2023, the Company granted RSAs of common stock to Officers and to the Board of Directors (Board). An RSA share represents the right to receive a share of the Company's common stock and is valued based on the fair market value of the Company's common stock at the date of grant. RSAs granted to Officers vest over 36 months with the first year cliff vesting. In general, RSAs granted to Board vest at the end of 12 months. The RSAs are recognized as expense evenly over 36 months for the shares granted to Officers and 12 months for the shares granted to Board. As of December 31, 2023, there was approximately $1.8 million of total unrecognized compensation cost related to RSAs. The cost is expected to be recognized over a weighted average period of 1.6 years.

A summary of the status of the outstanding RSAs as of December 31, 2023 is presented below:

	Number of RSA Shares	Weighted-Average Grant-Date Fair Value
RSAs at January 1, 2023	52,066	$ 55.77
Granted	44,215	$ 55.33
Vested	(40,953)	$ 55.71
Forfeited	(2,025)	55.59
RSAs at December 31, 2023	53,303	$ 55.48

During 2023, the Company granted performance-based RSUs of common stock to Officers. Each award reflects a target number shares of common stock that may be issued to the award recipient. The Company may settle RSUs in shares of the Company's common stock, cash or a combination of both. The 2023 awards may be earned upon the completion of a 3-year performance period. Whether RSUs are earned at the end of the performance period will be determined based on the achievement of certain performance objectives set by the Organization and Compensation Committee of the Board in connection with the issuance of the RSUs. The performance objectives are based on the Company's business plan covering the performance period. The performance objectives include achieving the budgeted return on equity, growth in stockholders' equity, and environmental, social, and governance targets. Depending on the results achieved during the 3-year performance period, the actual number of shares that a grant recipient receives at the end of the performance period may range from 0% to 200% of the target shares granted, provided that the grantee is continuously employed by the Company through the vesting date. If prior to the vesting date employment is terminated by reason of death, disability or normal retirement, then a pro rata portion of this award will vest, which has typically been settled in cash. The RSUs are recognized as expense ratably over the 3-year performance period using a fair market value of the Company's common share at the date of grant and an estimated number of RSUs earned during the performance period. As of December 31, 2023, there was approximately $2.4 million of total unrecognized compensation cost related to RSUs. The cost is expected to be recognized over a weighted average period of 1.4 years.

A summary of the status of the outstanding RSUs as of December 31, 2023 is presented below:

	Number of RSU Shares	Weighted-Average Grant-Date Fair Value
RSUs at January 1, 2023	92,625	$ 54.06
Granted	43,633	$ 55.48
Performance share award adjustment	14,822	$ 56.84
Vested	(40,589)	$ 56.84
Forfeited	(17,413)	$ 54.43
RSUs at December 31, 2023	93,078	$ 55.41

The Company has recorded compensation costs for the RSAs and RSUs which are included in administrative and general operating expenses in the amount of $2.7 million for 2023 and $4.9 million for 2022.

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NOTE 13. FAIR VALUE OF FINANCIAL INSTRUMENTS

The accounting guidance for fair value measurements and disclosures provides a single definition of fair value and requires certain disclosures about assets and liabilities measured at fair value. A hierarchical framework for disclosing the observability of the inputs utilized in measuring assets and liabilities at fair value is established by this guidance. The three levels in the hierarchy are described in Note 11 - Employee Benefit Plans.

Specific valuation methods include the following:

Cash, Accounts receivable, short-term borrowings, and accounts payable carrying amounts approximated the fair value because of the short-term maturity of the instruments.

Long-term debt fair values were estimated using the published quoted market price, if available, or the discounted cash flow analysis, based on the current rates available using a risk-free rate (a U.S. Treasury securities yield curve) plus a risk premium of 0.6%.

	December 31, 2023				
		Fair Value			
	Cost	Level 1	Level 2	Level 3	Total
Long-term debt, including current maturities, net	$ 1,053,440	$ —	$ 965,444	$ —	$ 965,444

	December 31, 2022				
		Fair Value			
	Cost	Level 1	Level 2	Level 3	Total
Long-term debt, including current maturities, net	$ 1,055,797	$ —	$ 977,227	$ —	$ 977,227

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NOTE 14. COMMITMENTS AND CONTINGENCIES

Commitments

Water Supply Contracts

The Company has long-term commitments to purchase water from water wholesalers. The commitments are noted in the table below.

	Water Supply Contracts*
2024	$ 33,362
2025	32,708
2026	32,712
2027	32,713
2028	32,709
Thereafter	435,518

* Estimated annual contractual obligations are based on the same payment levels as 2023.

The Company has a long-term contract with Valley Water that requires the Company to purchase minimum annual water quantities. Purchases are priced at the districts then-current wholesale water rate. The Company operates to purchase sufficient water to equal or exceed the minimum quantities under the contract. The total paid to Valley Water was $12.6 million in 2023, $11.3 million in 2022, and $11.9 million in 2021.

The Company also has a water supply contract with Stockton East Water District (SEWD) that requires a fixed monthly payment. Each year, the fixed monthly payment is adjusted for changes to SEWD's costs. The total paid under the contract was $11.5 million in 2023, $15.3 million in 2022, and $12.9 million in 2021.

On September 21, 2005, the Company entered into an agreement with Kern County Water Agency (Agency) to obtain treated water for the Company's operations. The term of the agreement is to January 1, 2035, or until the repayment of the Agency's bonds (described hereafter) occurs. Under the terms of the agreement, the Company is obligated to purchase approximately 20,500 acre feet of treated water per year. The Company is obligated to pay the Capital Facilities Charge and the Treated Water Charge regardless of whether it can use the water in its operation, and is obligated for these charges even if the Agency cannot produce an adequate amount to supply the 20,500 acre feet in the year. This agreement supersedes a prior agreement with Kern County Water Agency for the supply of 11,500 acre feet of water per year.

Three other parties, including the City of Bakersfield, are also obligated to purchase a total of 32,500 acre feet per year under separate agreements with the Agency. Further, the Agency has the right to proportionally reduce the water supply provided to all of the participants if it cannot produce adequate supplies. If any of the other parties does not use its allocation, that party is obligated to pay its contracted amount.

If any of the parties were to default on making payments of the Capital Facilities Charge, then the other parties are obligated to pay for the defaulting party's share on a pro-rata basis. If there is a payment default by a party and the remaining parties have to make payments, they are also entitled to a pro-rata share of the defaulting party's water allocation.

The Company expects to use all its entitled water in its operations every year. In addition, if the Company were to pay for and receive additional amounts of water due to a default of another participating party; the Company believes it could use this additional water in its operations without incurring substantial incremental cost increases. If additional treated water is available, all parties have an option to purchase this additional treated water, subject to the Agency's right to allocate the water among the parties.

The total obligation of all parties, excluding the Company, is approximately $82.4 million to the Agency. Based on the credit worthiness of the other participants, which are government entities, it is believed to be highly unlikely that the Company would be required to assume any other parties' obligations under the contract due to their default.

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NOTE 14. COMMITMENTS AND CONTINGENCIES (Continued)

The Company pays a capital facilities charge and charges related to treated water that together total $11.5 million annually, which equates to $560.22 dollars per acre foot. Total treated water charge for 2023 was $4.7 million. As treated water is being delivered, the Company will also be obligated for the Company's portion of the operating costs; that portion is currently estimated to be $51.69 dollars per acre foot. The actual amount will vary due to variations from estimates, inflation, and other changes in the cost structure. Our overall estimated cost of $560.22 dollars per acre foot is less than the estimated cost of procuring untreated water (assuming water rights could be obtained) and then providing treatment.

On August 16, 2022, BVRT Utility Holding Company (BVRT), a majority owned subsidiary of Texas Water, entered into a long-term water supply agreement with the Guadalupe Blanco River Authority (GBRA) through its wholly owned subsidiary, Camino Real Utility (Camino Real). The Company has provided a limited guarantee to GBRA for the agreed upon obligations. GBRA is a water conservation and reclamation district established by the Texas Legislature that oversees water resources for 10 counties. Under the terms of the agreement with GBRA, Camino Real is contracted to receive up to 2,419 acre-feet of potable water annually. The GBRA agreement involves four off-takers, including Camino Real, and GBRA plans to extend a potable water pipeline from the City of Lockhart to the City of Mustang Ridge and surrounding areas. Camino Real is contracted to be the utility service provider in this area of the Austin metropolitan region and to provide potable water, recycled water, and wastewater services to portions of the City of Mustang Ridge and surrounding areas. In 2022, Camino Real committed $21.5 million for its share of the cost of the pipeline project. In 2023, Camino Real committed an additional $22.3 million for its share of the cost of the pipeline project. As of December 31, 2023, this committed cash has not been transferred to GBRA and is classified as part of restricted cash on the Consolidated Balance Sheets. The Company currently expects this committed cash to be transferred to GBRA in the first half of 2024.

Leases

The Company has operating and finance leases for water systems, offices, land easements, licenses, equipment, and other facilities. The leases generally have remaining lease terms of 1 year to 50 years, some of which include options to extend the lease for up to 25 years. The exercise of lease renewal options is at the Company’s sole discretion. Most of the Company’s lease agreements contain mutual termination options that require prior written notice by either lessee or lessor. The Company’s lease agreements do not contain any material residual value guarantees or material restrictive covenants. Certain leases include options to purchase the leased property. The depreciable life of the assets and leasehold improvements are limited by the expected lease term, unless there is a transfer of title or purchase option that is reasonably certain of exercise. Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet as the Company applied the short-term lease exception allowed by the Financial Accounting Standards Board guidance. Lease expense for these leases is recognized on a straight-line basis over the lease term. A subset of the Company’s leases contains variable lease payments that depend on changes in the CPI.

The Company determines if an arrangement is a lease at contract inception. Generally, a lease agreement exists if the Company determines that the arrangement gives the Company control over the use of an identified asset and obtains substantially all of the benefits from the identified asset.

The right-of-use (ROU) assets that are recorded represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent the Company’s obligation to make lease payments arising from the lease. Lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of the Company’s operating leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The ROU asset and lease liability may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Variable lease payments that are based on changes in CPI are included in the measurement of ROU asset and lease liability on the basis of the rate at lease commencement. Subsequent changes to the payments as a result of changes to the CPI rate are recognized in the period in which the obligation of these payments is incurred.

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NOTE 14. COMMITMENTS AND CONTINGENCIES (Continued)

Supplemental balance sheet information related to leases was as follows:

	As of December 31, 2023	As of December 31, 2022
Operating leases		
Other assets: Other	$ 13,387	$ 14,762
Other accrued liabilities	$ 962	$ 1,065
Other long-term liabilities	12,605	13,838
Total operating lease liabilities	$ 13,567	$ 14,903
Finance leases		
Depreciable plant and equipment	$ 19,087	$ 19,820
Accumulated depreciation and amortization	(14,339)	(14,017)
Net utility plant	$ 4,748	$ 5,803
Current maturities of long-term debt, net	$ 844	$ 2,555
Long-term debt, net	3,057	2,675
Total finance lease liabilities	$ 3,901	$ 5,230
Weighted average remaining lease term		
Operating leases	112 months	119 months
Finance leases	29 months	32 months
Weighted average discount rate		
Operating leases	3.6 %	3.5 %
Finance leases	5.5 %	4.4 %

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NOTE 14. COMMITMENTS AND CONTINGENCIES (Continued)

The components of lease expense were as follows:

	2023	2022
Operating lease cost	$ 2,520	$ 2,514
Finance lease cost:		
Amortization of right-of-use assets	$ 1,609	$ 1,606
Interest on lease liabilities	190	246
Total finance lease cost	$ 1,799	$ 1,852
Short-term lease cost	$ 1,442	$ 2,101
Variable lease cost	549	519
Total lease cost	$ 6,310	$ 6,986

Supplemental cash flow information related to leases was as follows:

	2023	2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 2,534	$ 2,498
Operating cash flows from finance leases	$ 190	$ 246
Financing cash flows from finance leases	$ 1,400	$ 824
Non-cash activities: right-of-use assets obtained in exchange for lease obligations:		
Operating leases	$ 558	$ 1,634
Finance leases	$ (61)	$ 326

Maturities of lease liabilities as of December 31, 2023 are as follows:

Year Ending December 31,	Operating Leases	Finance Leases
2024	$ 2,244	$ 1,034
2025	1,956	2,505
2026	1,740	705
2027	1,547	—
2028	1,460	—
Thereafter	6,744	—
Total lease payments	15,691	4,244
Less imputed interest	(2,124)	(343)
Total	$ 13,567	$ 3,901

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NOTE 14. COMMITMENTS AND CONTINGENCIES (Continued)

Contingencies

Groundwater Contamination

The Company has undertaken litigation against third parties to recover past and future costs related to ground-water contamination in our service areas. The cost of litigation is generally expensed as incurred and any settlement is first offset against such costs. The CPUC's general policy requires all proceeds from contamination litigation to be used first to pay transactional expenses, then to make customers whole for water treatment costs to comply with the CPUC's water quality standards. The CPUC allows for a risk-based consideration of contamination proceeds which exceed the costs of the remediation described above and may result in some sharing of proceeds with the shareholder, determined on a case-by-case basis. The CPUC has authorized various memorandum accounts that allow the Company to track significant litigation costs to request recovery of these costs in future filings and uses of proceeds to comply with CPUC's general policy.

Other Legal Matters

From time to time, the Company is involved in various disputes and litigation matters that arise in the ordinary course of business. The status of each significant matter is reviewed and assessed for potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount of the range of loss can be estimated, a liability is accrued for the estimated loss in accordance with the accounting standards for contingencies. Legal proceedings are subject to uncertainties, and the outcomes are difficult to predict. Because of such uncertainties, accruals are based on the best information available at the time. While the outcome of these disputes and litigation matters cannot be predicted with any certainty, management does not believe when taking into account existing reserves the ultimate resolution of these matters will materially affect the Company's financial position, results of operations, or cash flows. The Company has recognized a liability of $6.0 million for all known legal matters as of December 31, 2023 primarily due to potable water main leaks and other work related legal matters. The cost of litigation is expensed as incurred and any settlement is first offset against such costs. Any settlement in excess of the cost to litigate is accounted for on a case-by-case basis, dependent on the nature of the settlement.

NOTE 15. SUBSEQUENT EVENT

2021 GRC

On January 24, 2024, the assigned CPUC Administrative Law Judges (ALJs) issued a proposed decision (PD) on the litigated 2021 GRC, and concurrently, the assigned CPUC Commissioner issued an alternate proposed decision (APD) opposing and modifying certain decisions made by the ALJs. The PD issued by the ALJs was closer aligned to Cal Water’s requested revenue requirement whereas the APD issued by the assigned Commissioner was closer aligned to the Public Advocates’ requested revenue requirement. On February 13, 2024, Cal Water filed a request to change several elements in the PD and APD, including correction of possible 2021 GRC technical issues. The Company is unable to determine which of the two proposed decisions will be adopted by the CPUC, or if a second alternate proposed decision will be issued by the CPUC. As a result of the uncertainty of the decision that will ultimately be made by the CPUC, the Company is unable to reasonably estimate the impact on 2023 operating revenue and expenses. The 2021 GRC cumulative adjustment plus interest which is retroactive to January 1, 2023, will be recorded when the final decision is issued by the CPUC.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.***

None.

Item 9A. ***Controls and Procedures.***

Management's Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure.

In designing and evaluating the disclosure controls and procedures, management, including the Chief Executive Officer and Chief Financial Officer, recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Accordingly, our disclosure controls and procedures have been designed to provide reasonable assurance of achieving their objectives.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2023. Based on that evaluation, our management, including our Chief Executive Officer and Chief Financial Officer, have concluded that our disclosure controls and procedures were effective at a reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended). Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2023. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control—Integrated Framework (2013)". Management has concluded that, as of December 31, 2023 our internal control over financial reporting is effective based on these criteria. Our independent registered public accounting firm, Deloitte & Touche LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2023, as stated in their report, which is included in Item 8 and incorporated herein.

Changes to Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fourth quarter of 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information.***

(a)

On February 28, 2024, the Board adopted an amendment and restatement of the Company’s Amended and Restated Bylaws as previously adopted by the Board (as amended and restated, the “Amended and Restated Bylaws”), effective as of such date, in order to clarify the scope of certain information to be provided in connection with a notice of stockholder business and nominations.

(b) Trading Plans

During the last fiscal quarter, no director or Section 16 officer of the Company adopted or terminated any Rule 10b5-1 or non-Rule 10b5-1 trading arrangement (as defined under SEC rules).

Item 9C. ***Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.***

Not applicable.

PART III

Item 10. ***Directors and Executive Officers and Corporate Governance.***

The information required by this Item as to directors of the Company and the Company's Audit Committee is contained in the sections captioned "Board Structure," "Proposal No. 1—Election of Directors" and, as applicable, "Delinquent Section 16(a) Reports" of the definitive Proxy Statement for our Annual Meeting of Stockholders to be held on or about May 29, 2024 (the "2024 Proxy Statement"), and is incorporated herein by reference.

Information required by this Item regarding executive officers is included in a separate section captioned "Information About Our Executive Officers" contained in Part I of this annual report.

We have adopted codes of ethics that apply to all of our directors, officers, and employees, including our principal executive, financial and accounting officers, or persons performing similar functions. Our codes of ethics are posted on our corporate governance website located at http://www.calwatergroup.com. In addition, amendments to the codes of ethics and any grant of a waiver from a provision of the codes of ethics requiring disclosure under applicable SEC and NYSE rules will be disclosed at the same location as the codes of ethics on our corporate governance website located at http://www.calwatergroup.com within four business days of such amendment or waiver.

Item 11. ***Executive Compensation.***

The information required by this Item is contained under the captions "Compensation Discussion and Analysis," "Report of the Organization and Compensation Committee of the Board on Executive Compensation," and "Organization and Compensation Committee Interlocks and Insider Participation" of the 2024 Proxy Statement and is incorporated herein by reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

The information required by this Item regarding security ownership of certain beneficial owners and management is contained in the section captioned "Stock Ownership of Management and Certain Beneficial Owners" of the 2024 Proxy Statement and is incorporated herein by reference.

The following table represents securities authorized to be issued under our equity compensation plan:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Rights (a) (1)	Weighted-Average Exercise Price of Outstanding Rights (1)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plan (Excluding Securities Reflected in Column) (a)
Equity compensation plans approved by security holders	93,078	$ 55.41	1,679,724
Equity compensation plans not approved by security holders	—	—	—
Total	93,078	$ 55.41	1,679,724

1. Represents restricted stock units, which have no exercise price and are not included in the weighted-average exercise price of outstanding rights.

Item 13. ***Certain Relationships and Related Transactions and Director Independence.***

The information required by this Item is contained in the sections captioned "Certain Related Persons Transactions" and "Board Structure" of the 2024 Proxy Statement and is incorporated herein by reference.

Item 14. ***Principal Accountant Fees and Services.***

Information about aggregate fees billed to us by our principal accountant, Deloitte & Touche LLP (PCAOB ID No. 34) will be presented in the sections captioned "Report of the Audit Committee" and "Relationship with the Independent Registered Public Accounting Firm" of the 2024 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. ***Exhibits, Financial Statement Schedules.***

(a) As part of this Form 10-K, the following documents are being filed:

1. *Financial Statement:* See "Index to Consolidated Financial Statements" in Part II, Item 8 of this Form 10-K.
2. *Financial Statement Schedules:* No financial statement schedules are being included since the information otherwise required is included in the financial statements and the notes thereto.
3. *Exhibits:* The exhibits listed in the accompanying index to exhibits are filed or incorporated by reference.

EXHIBIT INDEX

Unless filed with this Form 10-K, the documents listed are incorporated by reference to the filings referred to:

Exhibit Number	
1.1	Equity Distribution Agreement, dated as of April 29, 2022, between California Water Service Group and Morgan Stanley & Co. LLC, Robert W. Baird & Co. Incorporated, Blaylock Van, LLC, Wells Fargo Securities, LLC, Janney Montgomery Scott LLC and Samuel A. Ramirez & Company, Inc. (incorporated by reference to the Company's Form 8-K filed April 29, 2022)
3.1	Certificate of Incorporation of California Water Service Group (Exhibit 3.1 to the Quarterly Report on Form 10-Q filed August 9, 2006)
3.2	Certificate of Amendment to Certificate of Incorporation of California Water Service Group (Exhibit 3.1 to the Current Report on Form 8-K filed June 10, 2011)
3.3	Certificate of Amendment to Amended Certificate of Incorporation of California Water Service Group (Exhibit 3.3 to the Quarterly Report on Form 10-Q filed July 28, 2022)
3.4	Certificate of Amendment to Amended Certificate of Incorporation of California Water Service Group (Exhibit 3.4 to the Quarterly Report on Form 10-Q filed July 27, 2023)
3.5	Amended and Restated Bylaws of California Water Service Group, as amended on February 28, 2024
4.1	Certificate of Designations regarding Series D Participating Preferred Stock, as filed with Delaware Secretary of State on September 16, 1999 (Exhibit 4.2 to Annual Report on Form 10-K for the year ended December 31, 2003)
4.2	Certificate of Elimination of the Series D Participating Preferred Stock, as filed with Delaware Secretary of State on February 27, 2019 (Exhibit 4.2 to Annual Report on Form 10-K for the year ended December 31, 2018)
4.3	Thirty-Ninth Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee (Exhibit 4.1 to Current Report on Form 8-K filed April 21, 2009)
4.4	Forty-Third Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 7.28% First Mortgage Bonds due 2025, Series AAA. (Exhibit 4.5 to Current Report on Form 8-K filed April 21, 2009)
4.5	Forty-Fourth Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 6.77% First Mortgage Bonds due 2028, Series BBB. (Exhibit 4.6 to Current Report on Form 8-K filed April 21, 2009)
4.6	Forty-Fifth Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 8.15% First Mortgage Bonds due 2030, Series CCC. (Exhibit 4.7 to Current Report on Form 8-K filed April 21, 2009)
4.7	Forty-Sixth Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 7.13% First Mortgage Bonds due 2031, Series DDD. (Exhibit 4.8 to Current Report on Form 8-K filed April 21, 2009)
4.8	Forty-Seventh Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 7.11% First Mortgage Bonds due 2032, Series EEE. (Exhibit 4.9 to Current Report on Form 8-K filed April 21, 2009)
4.9	Fifty-First Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 5.54% First Mortgage Bonds due 2023, Series III. (Exhibit 4.13 to Current Report on Form 8-K filed April 21, 2009)
4.10	Fifty-Seventh Supplemental Indenture dated as of April 17, 2009, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 6.02% First Mortgage Bonds due 2031, Series OOO. (Exhibit 4.19 to Current Report on Form 8-K filed April 21, 2009)
4.11	Fifty-Eighth Supplemental Indenture dated as of November 22, 2010, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 5.50% First Mortgage Bonds due 2040, Series PPP. (Exhibit 4.1 to Current Report on form 8-K filed November 22, 2010).
4.12	Sixty-Second Supplemental Indenture dated as of June 11, 2019, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 3.40% First Mortgage Bonds due 2029, Series VVV, 4.07% First Mortgage Bonds due 2049, Series WWW, and 4.17% First Mortgage Bonds due 2059, Series YYY (Exhibit 10.1 to the Current Report on Form 8-K filed June 18, 2019)
4.13	Sixty-Third Supplemental Indenture dated as of May 11, 2021, between California Water Service Company and U.S. Bank National Association, as Trustee, covering 2.87% First Mortgage Bonds due 2051, Series ZZZ and 3.02% First Mortgage Bonds due 2061, Series 1 (Exhibit 10.1 to the Current Report on Form 8-K filed May 11, 2021)

Exhibit Number	
4.14	The Company agrees to furnish upon request to the Securities and Exchange Commission a copy of each instrument defining the rights of holders of long-term debt of the Company.
4.15	Description of securities
10.1	Water Supply Contract between Cal Water and County of Butte relating to Cal Water's Oroville District; Water Supply Contract between Cal Water and the Kern County Water Agency relating to Cal Water's Bakersfield District; Water Supply Contract between Cal Water and Stockton East Water District relating to Cal Water's Stockton District. (Exhibits 5(g), 5(h), 5(i), 5(j), Registration Statement No. 2-53678, which exhibits are incorporated by reference to Annual Report on Form 10-K for the year ended December 31, 1974)
10.2	Water Supply Contract between the City and County of San Francisco and wholesale customers in Alameda County, San Mateo County and Santa Clara County for a term of twenty-five years beginning on July 1, 2009 and ending on June 30, 2034. The agreement was dated June 24, 2009. (Exhibit 10.3 to Quarterly Report on Form 10-Q for the quarter ending September 30, 2009).
10.3	Water Supply Contract dated July 1, 2009 between the City and County of San Francisco and California Water Service Company to provide water to Bear Gulch and Bayshore service areas for a term of twenty-five years beginning July 1, 2009 and ending June 30, 2034. (Exhibit 10.4 to Quarterly Report on Form 10-Q for the quarter ending September 30, 2009).
10.4	Water Supply Contract dated January 27, 1981, between Cal Water and the Santa Clara Valley Water District relating to Cal Water's Los Altos District (Exhibit 10.3 to Annual Report on Form 10-K for the year ended December 31, 1992)
10.5	Amendments No. 3, 6 and 7 and Amendment dated June 17, 1980, to Water Supply Contract between Cal Water and the County of Butte relating to Cal Water's Oroville District. (Exhibit 10.5 to Annual Report on Form 10-K for the year ended December 31, 1992)
10.6	Amendment dated May 31, 1977, to Water Supply Contract between Cal Water and Stockton East Water District relating to Cal Water's Stockton District. (Exhibit 10.6 to Annual Report on Form 10-K for the year ended December 31, 1992)
10.7	Second Amended Contract dated September 25, 1987, among Stockton East Water District, California Water Service Company, the City of Stockton, the Lincoln Village Maintenance District, and the Colonial Heights Maintenance District Providing for the Sale of Treated Water. (Exhibit 10.7 to Annual Report on Form 10-K for the year ended December 31, 1987)
10.8	Water Supply Contract dated April 19, 1927, and Supplemental Agreement dated June 5, 1953, between Cal Water and Pacific Gas and Electric Company relating to Cal Water's Oroville District. (Exhibit 10.9 to Annual Report on Form 10-K for the year ended December 31, 1992)
10.9	Water Supply Agreement dated September 25, 1996, between the City of Bakersfield and California Water Service Company. (Exhibit 10.18 to Quarterly Report on Form 10-Q for the quarter ended September 30, 1996)
10.10	Water Supply Contract dated November 16, 1994, between California Water Service Company and Alameda County Flood Control and Water Conservation District relating to Cal Water's Livermore District (Exhibit 10.15 to Annual Report on Form 10-K for the year ended December 31, 1994)
10.11	California Water Service Group Directors' Retirement Plan (As amended and restated on February 22, 2006) (Exhibit 10.14 to the Annual Report on Form 10-K for the year ended December 31, 2005)
10.12	Credit Agreement dated as of March 31, 2023 among California Water Service Group and certain of its subsidiaries from time to time party thereto, as borrowers, Bank of America, N.A., as administrative agent, swing line lender and letter of credit issuer, BofA Securities, Inc., as sole lead arranger and sole bookrunner, CoBank, ACB, and U.S. Bank National Association as co-syndication agents, Bank of China, Los Angeles Branch as documentation agent, and the other lender parties thereto (Exhibit 10.2 to the Current Report on Form 8-K filed April 5, 2023)
10.13	Credit Agreement dated as of March 31, 2023 among California Water Service Company as borrower, Bank of America, N.A., as administrative agent, swing line lender and letter of credit issuer, BofA Securities, Inc., as sole lead arranger and sole bookrunner, CoBank, ACB, and U.S. Bank National Association as co-syndication agents, Bank of China, Los Angeles Branch as documentation agent, and the other lender parties thereto (Exhibit 10.1 to the Current Report on Form 8-K filed April 5, 2023)
10.14	Executive Severance Plan (Exhibit 10.24 to Annual Report on Form 10-K for the year ended December 31, 1998)*
10.15	California Water Service Group Deferred Compensation Plan effective January 1, 2001 (Exhibit 10.22 to Annual Report on Form 10-K for the year ended December 31, 2000)*
10.16	California Water Service Company Supplemental Executive Retirement Plan effective January 1, 2001 (Exhibit 10.23 to Annual Report on Form 10-K for the year ended December 31, 2000)*
10.17	Amendment No. 1 to California Water Service Company Supplemental Executive Retirement Plan effective January 1, 2001 (Exhibit 10.22 to Quarterly Report on Form 10-Q for the quarter ended September 30, 2004)*

Exhibit Number	
10.18	Water Supply Contract 99-73 between the City of Bakersfield and California Water Service Company, dated March 31, 1999 (Exhibit 10.25 to Quarterly Report on Form 10-Q for the quarter ended September 30, 2003)
10.19	Amendment No. 1 to Water Supply Contract between the City of Bakersfield and California Water Service Company, dated October 3, 2001 (Exhibit 10.26 to Quarterly Report on Form 10-Q for the quarter ended September 30, 2003)
10.20	Amendment No. 2 to California Water Service Company Supplemental Executive Retirement Plan effective January 1, 2001 (Exhibit 10.27 to Quarterly Report on Form 10-Q for the quarter ended September 30, 2004)*
10.21	California Water Service Group Amended and Restated Equity Incentive Plan (filed as Appendix A of the California Water Service Group proxy statement dated April 8, 2014, for its Annual Meeting of Stockholders to be held on May 20, 2014, as filed with the SEC on April 8, 2014)*
10.22	The registrant's policy on option repricing under its Equity Incentive Plan (incorporated by reference to Item 8.01 Other Events in the registrant's Current Report on Form 8-K dated April 7, 2005)*
10.23	Water Supply Contract dated September 21, 2005, between Cal Water and the Kern County Water Agency. (Exhibit 10.1 to Current Report on Form 8-K filed on September 21, 2005)
10.24	Form of Restricted Stock Award Grant Notice under the California Water Service Group Equity Incentive Plan. (Exhibit 10.36 to the Annual Report on Form 10-K for the year ended December 31, 2005)
10.25	Form of Restricted Stock Award Agreement under the California Water Service Group Equity Incentive Plan with Assignment Separate From Certificate and Joint Escrow Instructions. (Exhibit 10.38 to the Annual Report on Form 10-K for the year ended December 31, 2005)
10.26	Form of Indemnification Agreement to be entered between California Water Service Group and its directors and officers. (Exhibit 10.44 to the Annual Report on Form 10-K for the year ended December 31, 2006)
10.27	Offer letter between James P. Lynch and California Water Service Group dated January 2, 2024
21.0	Subsidiaries of the Registrant
22.1	List of Subsidiary Issuers and Guarantors
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Chief Executive Officer certification of financial statements pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Chief Financial Officer certification of financial statements pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.0	Chief Executive Officer and Chief Financial Officer Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
97	Incentive Compensation Clawback Policy
101	The following materials from this Annual Report on Form 10-K formatted in iXBRL (Inline extensible Business Reporting Language): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Cash Flows, (iv) Consolidated Statements of Common Stockholders' Equity and (v) the Notes to the Consolidated Financial Statements.
104	The cover page from this Annual Report on Form 10-K, formatted in iXBRL (included as exhibit 101).

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* Management contract or compensatory plan or arrangement.

Item 16. ***Form 10-K Summary.***

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized

CALIFORNIA WATER SERVICE GROUP

By /s/ MARTIN A. KROPELNICKI
MARTIN A. KROPELNICKI,
Chairman, President and Chief Executive Officer

Date: February 29, 2024

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated. The members of the Board of Directors who have signed below constitute a majority of the Board of the Directors.

/s/ MARTIN A. KROPELNICKI MARTIN A. KROPELNICKI	President and Chief Executive Officer; Principal Executive Officer; Chairman, Board of Directors	Date: February 29, 2024
/s/ GREGORY E. ALIFF GREGORY E. ALIFF	Member, Board of Directors	Date: February 29, 2024
/s/ SHELLY M. ESQUE SHELLY M. ESQUE	Member, Board of Directors	Date: February 29, 2024
/s/ JEFFREY KIGHTLINGER JEFFREY KIGHTLINGER	Member, Board of Directors	Date: February 29, 2024
/s/ THOMAS M. KRUMMEL THOMAS M. KRUMMEL, M.D.	Member, Board of Directors	Date: February 29, 2024
/s/ YVONNE A. MALDONADO YVONNE A. MALDONADO	Member, Board of Directors	Date: February 29, 2024
/s/ SCOTT L. MORRIS SCOTT L. MORRIS	Member, Board of Directors	Date: February 29, 2024
/s/ CHARLES R. PATTON CHARLES R. PATTON	Member, Board of Directors	Date: February 29, 2024
/s/ CAROL M. POTTENGER CAROL M. POTTENGER	Member, Board of Directors	Date: February 29, 2024
/s/ LESTER A. SNOW LESTER A. SNOW	Member, Board of Directors	Date: February 29, 2024
/s/ PATRICIA K. WAGNER PATRICIA K. WAGNER	Member, Board of Directors	Date: February 29, 2024
/s/ DAVID B. HEALEY DAVID B. HEALEY	Principal Financial Officer	Date: February 29, 2024
/s/ THOMAS A. SCANLON THOMAS A. SCANLON	Corporate Controller, Principal Accounting Officer	Date: February 29, 2024

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-K

(Mark One)

☑ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2023

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 0-422

MIDDLESEX WATER COMPANY
(Exact name of registrant as specified in its charter)

New Jersey	**22-1114430**
(State of Incorporation)	(IRS employer identification no.)

485C Route 1 South, Suite 400, Iselin New Jersey 08830
(Address of principal executive offices, including zip code)

(732) 634-1500
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class:	**Trading Symbol:**	**Name of each exchange on which registered:**
Common Stock, No Par Value	MSEX	The NASDAQ Stock Market, LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on their corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrants were required to submit and post such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12(b)-2 of the Exchange Act.

Large accelerated filer ☑	Accelerated filer ☐	Non-accelerated filer ☐
Smaller reporting company ☐		Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No ☑

The aggregate market value of the voting stock held by non-affiliates of the registrant at June 30, 2023 was $1,395,620,526 based on the closing market price of $80.66 per share on the NASDAQ Global Select Market.

The number of shares outstanding for each of the registrant's classes of common stock, as of February 29, 2024:

Common Stock, No par Value 17,821,670 shares outstanding

Documents Incorporated by Reference

Proxy Statement to be filed in connection with the Registrant’s Annual Meeting of Stockholders to be held on May 21, 2024, which will be filed with the Securities and Exchange Commission within 120 days of the end of our 2023 fiscal year, is incorporated by reference into Part III of this Annual Report on Form 10-K to the extent described herein.

MIDDLESEX WATER COMPANY
FORM 10-K

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FORWARD-LOOKING STATEMENTS

Certain statements contained in this annual report and in the documents incorporated by reference constitute "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934 and Section 27A of the Securities Act of 1933. Middlesex Water Company (the Company) intends that these statements be covered by the safe harbors created under those laws. They include, but are not limited to statements as to:

- expected financial condition, performance, prospects and earnings of the Company;
- strategic plans for growth;
- the amount and timing of rate increases and other regulatory matters, including the recovery of certain costs recorded as regulatory assets;
- the Company's expected liquidity needs during the upcoming fiscal year and beyond and the sources and availability of funds to meet its liquidity needs;
- expected customer rates, consumption volumes, service fees, revenues, margins, expenses and operating results;
- financial projections;
- the expected amount of cash contributions to fund the Company's retirement benefit plans, anticipated discount rates and rates of return on plan assets;
- the ability of the Company to pay dividends;
- the Company's compliance with environmental laws and regulations and estimations of the materiality of any related costs;
- the safety and reliability of the Company's equipment, facilities and operations;
- the Company's plans to renew municipal franchises and consents in the territories it serves;
- trends; and
- the availability and quality of our water supply.

These forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results to differ materially from future results expressed or implied by the forward-looking statements. Important factors that could cause actual results to differ materially from anticipated results and outcomes include, but are not limited to:

- effects of general economic conditions;
- increases in competition for growth in non-franchised markets to be potentially served by the Company;
- ability of the Company to adequately control selected operating expenses which are necessary to maintain safe and proper utility services, and which may be beyond the Company's control;
- availability of adequate supplies of water;
- actions taken by government regulators, including decisions on rate increase requests;
- new or modified water quality standards and compliance with related legal and regulatory requirements;
- weather variations and other natural phenomena impacting utility operations;
- financial and operating risks associated with acquisitions and, or privatizations;
- acts of war or terrorism;
- cyber-attacks;
- changes in the pace of housing development;
- availability and cost of capital resources;
- timely availability of materials and supplies for operations and for critical infrastructure projects;
- effectiveness of internal control over financial reporting;
- impact of the Novel Coronavirus (COVID-19) or other pandemic; and
- other factors discussed elsewhere in this annual report.

Many of these factors are beyond the Company's ability to control or predict. Given these uncertainties, readers are cautioned not to place undue reliance on any forward-looking statements, which only speak to the Company's understanding as of the date of this report. The Company does not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date of this annual report or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

For an additional discussion of factors that may affect the Company's business and results of operations, see Item 1A - Risk Factors.

PART I

Item 1. Business.

Overview

Middlesex Water Company (Middlesex) was incorporated as a water utility company in 1897 and owns and operates regulated water utility and wastewater systems primarily in New Jersey and Delaware. Middlesex also operates water and wastewater systems under contract on behalf of municipal and private clients primarily in New Jersey and Delaware.

The terms "the Company," "we," "our," and "us" refer to Middlesex Water Company and its subsidiaries, including Tidewater Utilities, Inc. (Tidewater) and Tidewater's wholly-owned subsidiaries, Southern Shores Water Company, LLC (Southern Shores) and White Marsh Environmental Systems, Inc. (White Marsh). The Company's other subsidiaries are Pinelands Water Company (Pinelands Water) and Pinelands Wastewater Company (Pinelands Wastewater) (collectively, Pinelands), Utility Service Affiliates, Inc. (USA) and Utility Service Affiliates (Perth Amboy) Inc., (USA-PA).

The Company's principal executive offices are located at 485C Route 1 South, Suite 400, Iselin, New Jersey 08830. Our telephone number is (732) 634-1500. Our website address is http://www.middlesexwater.com. Information contained on our website is not part of this Annual Report on Form 10-K. We make available, free of charge through our website, reports and amendments filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, after such material is electronically filed with or furnished to the United States Securities and Exchange Commission (the SEC).

Middlesex System

Located in New Jersey, the Middlesex System provides water services to approximately 61,000 retail customers, primarily in eastern Middlesex County and under wholesale contracts to the City of Rahway, Townships of Edison and Marlboro, the Borough of Highland Park and the Old Bridge Municipal Utilities Authority. The Middlesex System treats, stores and distributes water for residential, commercial, industrial and fire protection purposes. The Middlesex System also provides water treatment and pumping services to the Township of East Brunswick under contract. The amount of water supply allocated to the Township of East Brunswick is granted directly to the Township by the New Jersey Water Supply Authority. The Middlesex System produced approximately 66% of our 2023 consolidated operating revenues.

The Middlesex System's retail customers are located in an area of approximately 55 square miles in Woodbridge Township, the City of South Amboy, the Boroughs of Metuchen and Carteret, portions of the Township of Edison and the Borough of South Plainfield, all in Middlesex County, and a portion of the Township of Clark in Union County. Retail customers include a mix of residential customers, large industrial concerns and commercial and light industrial facilities. These customers are located in generally well-developed areas of central New Jersey.

The contract customers of the Middlesex System comprise an area of approximately 110 square miles with a population of over 200,000. Contract sales to the Townships of Edison and Marlboro, the City of Rahway and the Old Bridge Municipal Utilities Authority are supplemental to the water systems owned and operated by these customers. Middlesex is the sole source of water for the Borough of Highland Park and the Township of East Brunswick.

Middlesex provides water service to approximately 300 customers in Cumberland County, New Jersey. This system is referred to as the Fortescue System, and is not physically interconnected with the Middlesex System. The Fortescue System produced less than 0.1% of our 2023 consolidated operating revenues.

Tidewater System

Tidewater, together with its wholly-owned subsidiary, Southern Shores, provides water services to approximately 59,000 retail customers for residential, commercial and fire protection purposes in over 470 separate communities

in New Castle, Kent and Sussex Counties, Delaware. The Tidewater System produced approximately 25% of our 2023 consolidated operating revenues.

USA-PA

USA-PA operates the City of Perth Amboy, New Jersey's (Perth Amboy) water and wastewater systems under a 10-year agreement, which expires in December 2028. In addition to performing day-to day operations, USA-PA is also responsible for emergency responses and management of capital projects funded by Perth Amboy. USA-PA produced approximately 4% of our 2023 consolidated operating revenues.

Pinelands Systems

Pinelands Water provides water services to approximately 2,500 residential customers in Burlington County, New Jersey. Pinelands Water is not physically interconnected with the Middlesex System. Pinelands Water produced approximately 1% of our 2023 consolidated operating revenues.

Pinelands Wastewater provides wastewater collection and treatment services to approximately 2,500 residential customers and one municipal wastewater system in Burlington County, New Jersey. Pinelands Wastewater produced approximately 1% of our 2023 consolidated operating revenues.

USA

USA operates the Borough of Avalon, New Jersey's (Avalon) water utility, sewer utility and storm water system under a ten-year operations and maintenance contract expiring in 2032. In addition to performing day-to-day service operations, USA is responsible for emergency responses and management of capital projects funded by Avalon.

USA operates the Borough of Highland Park, New Jersey's (Highland Park) water utility and sewer utility under a ten-year operations and maintenance contract expiring in 2030.

USA also provides water and wastewater services to several other New Jersey municipalities under contracts that are not regulated by a public utility commission as to rates and service.

Under a marketing agreement with HomeServe USA Corp. (HomeServe) expiring in 2031, USA offers residential customers in New Jersey and Delaware various water and wastewater related home maintenance programs. HomeServe is a leading national provider of such home maintenance service programs. USA receives a service fee for the billing, cash collection and other administrative matters associated with HomeServe's service contracts.

USA produced approximately 2% of our 2023 consolidated operating revenues.

White Marsh

White Marsh operates or maintains water and/or wastewater systems that serve approximately 4,300 service connections under 31 separate contracts. White Marsh also owns two commercial properties that are leased to Tidewater for its administrative office campus and its field operations center. White Marsh produced approximately 1% of our 2023 consolidated operating revenues.

Financial Information

Consolidated operating revenues, operating income and net income are as follows:

	(Thousands of Dollars) Years Ended December 31,		
	2023	2022	2021
Operating Revenues	$ 166,274	$ 162,434	$ 143,141
Operating Income	$ 39,223	$ 47,333	$ 33,211
Net Income	$ 31,524	$ 42,429	$ 36,543

Operating revenues were earned from the following sources:

	Years Ended December 31,		
	2023	2022	2021
Residential	52.1%	52.3%	54.3%
Commercial	14.4	14.0	11.7
Industrial	7.0	6.9	6.3
Fire Protection	7.6	7.8	8.8
Contract Sales	11.5	11.6	10.2
Contract Operations	7.4	7.4	8.6
Other	0.0	0.0	0.1
Total	100.0%	100.0%	100.0%

Water Supplies and Contracts

Our New Jersey and Delaware water supply systems are physically separate and are not interconnected. In New Jersey, the Pinelands System and Fortescue System are not interconnected with the Middlesex System or each other. We believe we have adequate sources of water supply to meet the current service requirements of our present customers in New Jersey and Delaware.

Middlesex System

Our Middlesex System produced approximately 13.8 billion gallons in 2023 from:

- The Carl J. Olsen Surface Water Treatment Plant (CJO Plant)-10.7 billion gallons;
- Twenty-seven Company-owned wells (ground water)-2.0 billion gallons; and
- The balance purchased from a non-affiliated water utility regulated by the New Jersey Board of Public Utilities (NJBPU) under an agreement which expires February 27, 2026. This agreement provides for minimum purchases of 3.0 million gallons per day (mgd) of treated water with provisions for additional purchases.

In November 2021, Middlesex temporarily ceased pumping from its Company-owned wells at the Park Avenue Wellfield Treatment Plant (Park Avenue Plant) in South Plainfield, New Jersey and alternate sources of supply were obtained in order to comply with new State of New Jersey water quality regulations relative to poly- and perfluoroalkyl substances, collectively referred to as PFAS, that became effective in 2021.

Prior to 2021, the Company began design for construction of an enhanced treatment process at the Park Avenue Plant to meet the expected PFAS water quality standards anticipated to be enacted by the State of New Jersey, which at that time were unknown as to their timing and extent. In June 2022, a portion of the enhanced treatment process was completed, placed into service and effectively treated the ground water in compliance with all state and federal drinking water standards. In June 2023, the Company completed the permanent construction of the entire Park Avenue Plant treatment upgrades and placed the upgrades into operation in full compliance with the new State of New Jersey PFAS water quality regulations.

The Middlesex System's distribution storage facilities are used to supply water to customers at times of peak demand, outages and emergencies.

The principal source of surface water for the Middlesex System is the Delaware & Raritan Canal, which is owned by the State of New Jersey and operated by the New Jersey Water Supply Authority (NJWSA). Middlesex is under contract with the NJWSA, which expires November 30, 2048, and provides for average purchases of 27.0 mgd, with a peak up to 47.0 mgd, of untreated water from the Delaware & Raritan Canal, augmented by the Round Valley/Spruce Run Reservoir System. The untreated surface water is pumped to, and treated at, the CJO Plant.

Water supply to customers of the Fortescue System is derived from two wells, which produced approximately 6.7 million gallons in 2023.

Tidewater System

Our Tidewater System produced approximately 2.9 billion gallons in 2023, primarily from 175 wells. Tidewater expects to submit applications to Delaware regulatory authorities for the approval of additional wells as growth, customer demand and water quality warrant. Tidewater augments its water production with annual purchases of up to 60.0 million gallons of treated water from the City of Dover, Delaware. Tidewater does not have a central water treatment facility for the over 470 separate communities it serves. As the number has grown, many of Tidewater's individual systems have been interconnected, forming several regional systems that are served by multiple water treatment facilities owned by Tidewater.

Pinelands Water System

Water supply to our Pinelands Water System is derived from four wells which produced approximately 134.7 million gallons in 2023. The aggregate pumping capacity of the four wells is 2.2 mgd.

Wastewater Facilities

Pinelands Wastewater System

The Pinelands Wastewater System discharges into the South Branch of the Rancocas Creek through a wastewater treatment plant that provides clarification, sedimentation, filtration and disinfection. The total capacity of the plant is 0.5 mgd, and the system treated approximately 94.8 million gallons in 2023.

Human Capital Management

The Company strives to attract and retain employees by offering competitive compensation and benefits along with career development and training opportunities in a safe, supportive and inclusive work environment. Our mission, our business philosophy and the manner in which we deliver value for our customers, our shareholders and our employees is inherent in what we, as an enterprise, profess to be our core values of Respect, Integrity, Growth, Honesty and Teamwork. Our employees' success is a key element of the Company's success.

Workforce

As of December 31, 2023, the Company had 355 employees. None of our employees are subject to a collective bargaining agreement. We believe our employee relations are positive.

Employee Compensation and Benefits

We offer comprehensive competitive employee compensation and benefit programs consistent with job functions, skill levels, experience, knowledge and geographic location. These programs are periodically independently evaluated by a nationally recognized consulting firm to gauge effectiveness and are benchmarked against industry peers and the overall markets in which we operate our businesses. Compensation increases and incentive compensation are based on merit, which is communicated to employees and documented in our bi-annual performance evaluation process. Benefits include a variety of programs to enhance employee overall physical, mental and financial health and well-being, including healthcare insurance, employer funded retirement savings plans, life insurance, disability insurance, accident insurance, tuition reimbursement, flu shots, wellness newsletters and webinars, flexible hybrid office and remote work capabilities, incentive programs for achieving fitness milestones, financial counseling, elder care assistance, substance abuse support and more.

Safety

The Company has implemented safety programs and management practices designed to promote a culture of safety to protect its employees. This includes required trainings for employees, as well as specific qualifications and certifications for certain operational employees. All employees have been empowered to report, and immediately stop, work which, in their personal judgement, is unsafe or is not consistent with our safety policies and procedures. They can take this action without fear of reprisal.

In response to the Coronavirus (COVID-19) pandemic, the Company continues to implement changes it determines are in the best interest of our employees and customers, as well as required to comply with government emergency orders and regulations. While the nature of our utility services business requires portions of our workforce to operate in the field and at treatment facilities, we employ and maintain a variety of processes to help ensure the safety of those employees and the public in light of the pandemic.

Employee Development and Training

The Company employs various training and other educational programs and has developed company-wide and project-specific training and educational programs, including tuition assistance for full-time employees enrolled in pre-approved undergraduate or graduate courses or professional licensing courses. All employees receive training to identify and report operational and financial risks, as well as risks to Company brand and reputation, which fosters a personal culture of accountability and reinforces our commitment to a safe and sustainable workplace. All employees receive cybersecurity training and other education regarding their use of sensitive data. Our Executive Management team and our Board of Directors continually assess succession plans, leadership development progress and policies and strategies regarding recruitment, retention, career development, diversity, equity and inclusion. Formalized succession planning strategies have been developed for key leadership positions.

Diversity, Equity & Inclusion (DEI)

The Company is committed to DEI based upon our belief that embracing DEI is consistent with our Company culture and benefits all stakeholders by maintaining a workforce with a variety of skills and perspectives as a result of their diverse backgrounds and experiences. The Company remains a signatory to CEO Action for Diversity and Inclusion, a business led initiative which encourages companies to cultivate environments that support dialogue on DEI, implement and expand bias education and training and engage boards of directors in the development and evaluation of inclusion and diversity strategies.

The Company is focused on recruitment and/or development of both external and internal candidates so that all prospective and current employees are provided an opportunity to advance their careers. We are intentional in our efforts to attract candidates from historically marginalized groups and seek a diverse pool of candidates for apprenticeships and internship opportunities. Statements on DEI and our Human Rights Policy can be found on our website. We continue to monitor the results of our DEI efforts and continually explore opportunities to further engage our employees and customers.

Competition

Our business in our franchised service areas is substantially free from direct competition for growth with other public utilities, municipalities and other entities. However, our ability to provide contract wholesale water supply and operations and maintenance services that are not under the jurisdiction of a state public utility commission is subject to competition from other public utilities, municipalities and other entities. Although Tidewater has been granted exclusive franchises for its existing community water systems, the ability to expand service areas can be affected by the Delaware Public Service Commission (DEPSC) awarding franchises to other regulated water utilities with whom we compete for such franchises and for projects.

Regulation

Our rates charged to customers for utility services, the quality of the services we provide and certain other matters are regulated by the NJBPU and DEPSC (collectively, the Public Utility Commissions).

Our USA, USA-PA and White Marsh subsidiaries are not regulated public utilities as related to rates and service quality. However, they are subject to federal and state environmental regulations with respect to water quality and wastewater effluent quality to the extent such services are provided.

We are subject to environmental and water quality regulation by the following regulatory agencies (collectively, the Government Environmental Regulatory Agencies):

- United States Environmental Protection Agency (USEPA);
- New Jersey Department of Environmental Protection (NJDEP) with respect to operations in New Jersey; and
- Delaware Department of Natural Resources and Environmental Control, the Delaware Department of Health and Social Services-Division of Public Health (DEDPH), and the Delaware River Basin Commission with respect to operations in Delaware.

In addition, our issuances of equity securities are subject to the prior approval of the NJBPU and require registration with the United States Securities and Exchange Commission. Our issuances of long-term debt securities are subject to the prior approval of the respective state Public Utility Commissions.

Regulation of Rates and Services

For regulated rate setting purposes, we account separately for our regulated utility operations to facilitate independent rate setting by the applicable Public Utility Commissions.

In determining our regulated utility rates, the respective Public Utility Commissions consider the revenue, expenses and utility infrastructure used and useful in providing service to the public. Rate determinations by the respective Public Utility Commissions do not guarantee achievement by our regulated utility companies of specific rates of return for our regulated utility operations. Thus, we may not achieve the rates of return authorized by the Public Utility Commissions. In addition, there can be no assurance that any future rate increases will be granted or, if granted, that they will be in the amounts requested.

Middlesex Rate Matters

In February 2024, Middlesex's petition to the NJBPU, filed in May 2023, seeking permission to increase its base water rates was concluded, based on a negotiated settlement that is expected to increase annual operating revenues by $15.4 million effective March 1, 2024. The approved tariff rates were designed to recover increased operating costs as well as a return on invested capital of $563.1 million, based on an authorized return on common equity of 9.6%. Middlesex has made capital infrastructure investments to ensure prudent upgrade and replacement of its utility assets to support continued regulatory compliance, resilience and overall quality of service. Net proceeds from the settlement of Middlesex's 3M Company (3M) lawsuit were used to recover costs for the construction of the Park Avenue Plant PFAS treatment upgrades, including depreciation and carrying costs. The rate case settlement will result in the reclassification of $48.3 million from Regulatory Liabilities to Contributions in Aid of Construction in the March 31, 2024 balance sheet. The Company will also record in the first quarter of 2024 the recovery of $0.7 million and $2.4 million of prior year depreciation and carrying costs, respectively, as well as the recovery of $1.4 million of prior year costs which were associated with the interim solution to comply with the Notice, all of which were approved in the rate case settlement.

For further information on the 3M settlement agreement, see *Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations*, *Regulatory Notice of Non-Compliance* and *Regulatory Matters*.

In January 2024, the NJBPU approved Middlesex's petition for the proposed cost recovery of its Lead Service Line Replacement (LSLR) Plan and cost recovery of project costs associated with replacing Middlesex customer-owned lead service lines. Replacement of Middlesex and Middlesex customer-owned lead service lines is required by the New Jersey LSLR Law. Under this legislation, the costs associated with replacing customer-owned lead service lines are recoverable through future customer surcharges. Cost recovery for replacing Company-owned lead service lines are recoverable through traditional base rate case filings. The current estimates for replacement of Middlesex and Middlesex customer-owned lead service lines are approximately $46 million to $77 million over a nine-year period.

In October 2023, the NJBPU approved Middlesex's petition for a Distribution System Improvement Charge (DSIC) Foundation Filing, which is a prerequisite to implementing a DSIC rate that allows water utilities to recover investments in, and generate a return on, qualifying capital improvements to their water distribution system made between base rate proceedings. Middlesex is authorized to recover DSIC revenues up to five percent (5%) of total revenues established in Middlesex's 2021 base rate proceeding, or approximately $5.5 million. Semi-annually, beginning in April 2024, the Company must file for a change in its DSIC rate seeking recovery for DSIC-eligible investments made during the period. DSIC rates remain in effect until Middlesex's next base rate case increase subsequent to the March 1, 2024 increase. Under the terms of the Foundational Filing, the Company is required to file a base rate petition before November 2026.

In September 2022, the NJBPU approved Middlesex's Emergency Relief Motion to reset its Purchased Water Adjustment Clause (PWAC) tariff rate to recover additional costs of $2.7 million for the purchase of treated water from a non-affiliated water utility. A PWAC is a rate mechanism that allows for recovery of increased purchased water costs between base rate case filings. The increase, effective October 1, 2022, was on an interim basis and subject to refund with interest, pending final resolution of this matter, which the NJBPU provided in August 2023. In connection with the full recovery of the $2.7 million of additional costs, Middlesex reset its PWAC rate to zero in October 2023.

In December 2021, Middlesex's petition to the NJBPU seeking permission to increase its base water rates was concluded, based on a negotiated settlement, resulting in an expected increase in annual operating revenues of $27.7 million. The approved tariff rates were designed to recover increased operating costs, as well as a return on invested capital of $513.5 million, based on an authorized return on common equity of 9.6%. The increase was implemented in two phases with $20.7 million of the increase effective January 1, 2022 and the remaining $7.0 million effective January 1, 2023. As part of the negotiated settlement, the PWAC was reset to zero.

Tidewater Rate Matters

In December 2023, the DEPSC approved Tidewater's application to implement a new DSIC. Effective January 1, 2024, Tidewater implemented a DSIC rate of 3.71%, which is expected to generate revenue of approximately $1.3 million annually. A Delaware DISC is subject to a semi-annual reset with an overall maximum rate of 7.5%.

In October 2023, the DEPSC issued an Order that made a temporary base rate reduction permanent. The initial DEPSC order required Tidewater to reduce its base rates charged to general metered and private fire customers by 6.0%, effective for service rendered on and after September 1, 2022. The rate reduction was ordered as a result of Tidewater earning in excess of its authorized return, and resulted in reduced annual revenues of approximately $2.1 million in 2023.

In March 2021, Tidewater was notified by the DEPSC that it had determined Tidewater's earned rate of return exceeded the rate of return authorized by the DEPSC. Consequently, Tidewater reset its DSIC rate to zero effective

April 1, 2021 and refunded approximately $1.0 million to customers primarily in the form of an account credit for DSIC revenue previously billed between April 1, 2020 and March 31, 2021.

Pinelands Rate Matters

In April 2023, Pinelands Water and Pinelands Wastewater concluded their base rate case matters when the NJBPU approved a combined $1.0 million increase in annual base rates, effective April 15, 2023. The requests were necessitated by capital infrastructure investments the companies have made as well as increased operations and maintenance costs.

Southern Shores Rate Matters

Effective January 1, 2020, the DEPSC approved the renewal of a multi-year agreement for water service to a 2,200 unit condominium community we serve in Sussex County, Delaware. Under the agreement, current rates were to remain in effect until December 31, 2024, unless there are unanticipated capital expenditures or regulatory related changes in operating expenses exceeding certain thresholds during this time period. In 2022, capital expenditures did exceed the established threshold and rates were increased by 5.39%, effective January 1, 2023. Beginning in 2025 and thereafter, inflation-based rate increases cannot exceed the lesser of the regional Consumer Price Index or, 3%. Inflation based increases are in addition to the threshold rate increases. This agreement expires on December 31, 2029.

Future Rate Filings

Management monitors the need for rate relief for our regulated entities on an ongoing basis. When capital improvements and/or increases in operation, maintenance or other costs indicate a need for rate relief, base rate increase requests are filed with the respective Public Utility Commissions.

Regulatory Service Matters

Twin Lakes Utilities, LLC (Twin Lakes) provides water services to approximately 115 residential customers in Shohola, Pennsylvania. Pursuant to the Pennsylvania Public Utility Code, Twin Lakes filed a petition requesting the Pennsylvania Public Utilities Commission (PAPUC) to order the acquisition of Twin Lakes by a capable public utility. The PAPUC assigned an Administrative Law Judge (ALJ) to adjudicate the matter and submit a recommended decision (Recommended Decision) to the PAPUC. As part of this legal proceeding the PAPUC also issued an Order in January 2021 appointing a large Pennsylvania based investor-owned water utility as the receiver (the Receiver Utility) of the Twin Lakes system until the petition is fully adjudicated by the PAPUC. In November 2021, the PAPUC issued an Order affirming the ALJ's Recommended Decision, ordering the Receiver Utility to acquire the Twin Lakes water system and for Middlesex, the parent company of Twin Lakes, to submit $1.7 million into an escrow account within 30 days. Twin Lakes immediately filed a Petition For Review (PFR) with the Commonwealth Court of Pennsylvania (the Commonwealth Court) seeking reversal and vacation of the escrow requirement on the grounds that it violates the Pennsylvania Public Utility Code as well as the United States Constitution. In addition, Twin Lakes filed an emergency petition for stay of the PAPUC Order pending the Commonwealth Court's review of the merits arguments contained in Twin Lakes' PFR. In December 2021, the Commonwealth Court granted Twin Lakes' emergency petition, pending its review. In August 2022, the Commonwealth Court issued an opinion upholding PAPUC's November 2021 Order in its entirety. In September 2022, Twin Lakes filed a Petition For Allowance of Appeal (Appeal Petition) to the Supreme Court of Pennsylvania seeking reversal of the Commonwealth Court's decision to uphold the escrow requirement on the grounds that the Commonwealth Court erred in failing to address Twin Lakes' claims that because the $1.7 million escrow requirement placed on Middlesex violated Middlesex's constitutional rights, Middlesex's refusal to submit this escrow payment would jeopardize the relief Twin Lakes was otherwise entitled to in the appointment of the Receiver Utility. In March 2023, the Supreme Court of Pennsylvania issued a decision denying Twin Lakes' Appeal Petition without addressing this claim on the merits. As a result of the Pennsylvania Courts' failure to address Twin Lakes' claim, Middlesex subsequently filed a Complaint with the United States District Court for the Middle District of Pennsylvania to address the issue of whether the PAPUC's Order violated Middlesex's rights under the

United States Constitution. On January 18, 2024, the District Court issued an Order dismissing Middlesex's Complaint without addressing the issue of whether the PAPUC's Order violated Middlesex's rights under the United States Constitution. On January 31, 2024, Middlesex filed a Notice of Appeal of the District Court's decision with the United States Court of Appeals for the Third Circuit.

The financial results, total assets and financial obligations of Twin Lakes are not material to Middlesex.

Water and Wastewater Quality and Environmental Regulations

Government environmental regulatory agencies regulate our operations in New Jersey and Delaware with respect to water supply, treatment and distribution systems and the quality of the water. They also regulate our operations with respect to wastewater collection, treatment and disposal.

Regulations relating to water quality require us to perform tests to ensure our water meets state and federal quality requirements. In addition, government environmental regulatory agencies continuously review current regulations governing the limits of certain organic compounds found in the water as byproducts of the treatment process. We participate in industry-related research to identify technologies that may reduce the level of organic, inorganic and synthetic compounds found in water. The cost to water utilities to comply with any proposed water quality standards depends in part on the limits set in the regulations and on the method selected to treat the water to the required standards. We regularly test our water to determine compliance with government environmental regulatory agencies' water quality standards.

In September 2021, the NJDEP issued a Notice of Non-Compliance (Notice) to Middlesex based on self-reporting by Middlesex that the level of Perfluorooctanoic Acid (PFOA) in water treated at its Park Avenue Plant in South Plainfield, New Jersey exceeded a standard promulgated in a NJDEP regulation that became effective in 2021. Middlesex was required by the regulation to notify its affected customers and complied within the required Notice period in November 2021.

The Notice further required the Company to take any action necessary to comply with the new standard by September 7, 2022. Consequently, in November 2021, the Company implemented an interim solution to meet the Notice requirements, which included putting the Park Avenue Wellfield Treatment Plant in off-line status and obtaining alternate sources of supply. In June 2022, the Company accelerated the in-service date for a portion of the enhanced treatment project based on engineering analysis that allowed a restart of the Park Avenue Wellfield Treatment Plant to ensure continued compliance with all state and federal drinking water standards.

On September 13, 2022, the Company entered into an Administrative Consent Order (ACO) with the NJDEP, which required the Company to take whatever actions necessary to achieve and maintain compliance with applicable regulations. As prescribed in the ACO, the Company was to issue periodic public notifications until the ACO was closed.

In June 2023, the Company completed the permanent construction of the entire Park Avenue Plant treatment upgrades and placed the upgrades into operation in full compliance with the NJDEP PFOA standards. In October 2023, the Company received confirmation from the NJDEP that it has complied with all requirements of the ACO and consequently, the ACO has been closed.

In addition to the enhanced groundwater treatment process for PFOA, we treat the groundwater supplies in our Middlesex System with chlorination for primary disinfection purposes and use air stripping for removal of volatile organic compounds.

Surface water treatment in our Middlesex System is by conventional treatment; coagulation, sedimentation and filtration. The treatment process includes pH adjustment, ozone and chlorination for disinfection, and corrosion control for the distribution system.

Treatment of groundwater in our Tidewater System is by chlorination for disinfection purposes and, in some cases, pH adjustment and filtration for nitrate and iron removal and granular activated carbon filtration for organics removal. Chloramination is used for final disinfection at Southern Shores.

Treatment of groundwater in the Pinelands Water and Fortescue Systems (primary disinfection only) is performed at individual well sites.

Treatment of wastewater in the Pinelands Wastewater System includes the use of rotating biological contactors.

The NJDEP and DEDPH monitor our activities and review the results of water quality tests that are performed for adherence to applicable regulations. Other applicable regulations include the Lead, Copper and Lead Service Line Rules, the Federal Surface Water Treatment Rule and the Federal Total Coliform Rule and regulations for maximum contaminant levels established for various volatile organic compounds.

The Company must comply with various environmental laws and regulations promulgated by the USEPA, NJDEP and other governmental agencies, including the Toxic Catastrophe Prevention Act, the Spill Prevention, Control, and Countermeasure Rule and the Discharge Prevention Program of the New Jersey Spill Compensation and Control Act.

Seasonality

Customer demand for our water during the warmer months is generally greater than other times of the year due primarily to additional consumption of water in connection with irrigation systems, swimming pools, cooling systems and other outside water use. Throughout the year, and particularly during typically warmer months, demand may vary with temperature and rainfall timing and overall levels. In the event that temperatures during the typically warmer months are cooler than normal, or if there is more rainfall than normal, the customer demand for our water may decrease and therefore, adversely affect our revenues.

Management

In May 2023, President and Chief Executive Officer, Dennis W. Doll announced a plan to retire upon turning age 65. On January 23, 2024, the Company named Nadine Leslie as its new President and Chief Executive Officer effective March 1, 2024. Ms. Leslie will also be appointed to the Board of Directors effective March 1, 2024. Mr. Doll will remain Chairman of the Company's Board of Directors through the expiration of his current term as a Director as of the May 21, 2024 Annual Meeting of Shareholders.

This table lists information concerning our executive management team in 2023:

Name	Age	Principal Position(s)
Dennis W. Doll	65	President, Chief Executive Officer and Chairman of the Board of Directors
A. Bruce O'Connor	65	Senior Vice President, Treasurer and Chief Financial Officer
G. Christian Andreasen, Jr.	64	Vice President-Enterprise Engineering
Robert K. Fullagar	57	Vice President-Operations
Lorrie B. Ginegaw	48	Vice President-Human Resources
Jay L. Kooper	51	Vice President-General Counsel and Secretary
Georgia M. Simpson	50	Vice President-Information Technology and Chief Technology Officer
Bernadette M. Sohler	63	Vice President-Corporate Affairs
Bruce E. Patrick	55	President-Tidewater
Robert J. Capko	50	Corporate Controller and Principal Accounting Officer

Dennis W. Doll – Mr. Doll joined the Company as Executive Vice President in November 2004 and was named President and Chief Executive Officer, and a Director of Middlesex, effective January 1, 2006. In May 2010, he was elected Chairman of the Board, also serving as Chairman of the Boards of the Company's subsidiary companies. He is a Past President of the National Association of Water Companies and past Chairman of the Board

of the New Jersey Utilities Association, representing the state's electric, gas, water and telecommunications industries. He is a past Chairman of the Board of The Water Research Foundation where he continues to serve as a non-Trustee member of the Audit Committee. He has also served as a Director and member of the Executive Committee of the Board of Directors of the American Water Works Association. He presently serves as Treasurer and member of the Board of Trustees of Court Appointed Special Advocates of Middlesex County, NJ serving the needs of children living in foster care.

A. Bruce O'Connor – Mr. O'Connor, a Certified Public Accountant, joined the Company in 1990 and was named Vice President and Chief Financial Officer in 1996 and Treasurer in 2014. On January 1, 2019, Mr. O'Connor was appointed Senior Vice President of Middlesex. Mr. O'Connor is also the principal financial officer and a Director of all Middlesex subsidiaries.

G. Christian Andreasen, Jr. – Mr. Andreasen, a licensed professional engineer, joined the Company in 1982, was named Assistant Vice President-Enterprise Engineering in January 2019 and promoted to Vice President-Enterprise Engineering in July 2019. He is President and a Director of Pinelands Water and Pinelands Wastewater. Mr. Andreasen serves as a Member and Vice Chair of the NJDEP's Water Supply Advisory Council.

Robert K. Fullagar – Mr. Fullagar, a licensed professional engineer, joined the Company in 1997, was named Assistant Vice President-Operations in January 2019 and promoted to Vice President-Operations in July 2019. He is President and a Director of USA-PA, USA and Twin Lakes. Mr. Fullagar serves as Sector Chair of the New Jersey Infrastructure Advisory Committee and is a Member of the NJDEP's Licensed Operator Advisory Committee.

Lorrie B. Ginegaw – Ms. Ginegaw joined Tidewater in 2004 and in 2007 was promoted to Director of Human Resources for Middlesex. In March 2012, Ms. Ginegaw was named Vice President-Human Resources. Prior to joining the Company, Ms. Ginegaw worked in various human resources positions in the healthcare and transportation/logistics industries. Ms. Ginegaw serves as a volunteer director on the Board of the New Jersey Utilities Association.

Jay L. Kooper – Mr. Kooper joined the Company in 2014 as Vice President and General Counsel and serves as Secretary for the Company and all subsidiaries. Prior to joining the Company, Mr. Kooper held various positions in private and public entities as well as in private law practice, representing electric, gas, water, wastewater, telephone and cable companies as well as municipalities and private clients before 17 state public utility commissions and legislatures, federal agencies and federal and state appellate courts. Mr. Kooper serves as a volunteer director on selected non-profit utility industry-related Boards including the National Association of Water Companies (current Director and Chairman of the New Jersey Chapter) and the New Jersey State Bar Association's Public Utility Law Section (current Consultor and Past Chairman) and on other non-profit boards based in New Jersey, including as President of Temple B'Nai Abraham in Livingston, New Jersey and as a Director of the Crohn's and Colitis Foundation's New Jersey Chapter.

Georgia M. Simpson – Ms. Simpson joined the Company in 2009, was named Assistant Vice President-Information Technology in January 2019 and promoted to Vice President- Information Technology in July 2019. In April 2022, Ms. Simpson was named Chief Technology Officer. Prior to joining the Company, Ms. Simpson held various Information Technology positions and has gained an extensive array of technical and business computer certifications. Ms. Simpson serves as a member of the Delaware Cyber Security Advisory Council, the Society for Information Management, New Jersey chapter and the Project Management Institute, New Jersey chapter.

Bernadette M. Sohler – Ms. Sohler joined the Company in 1994 after having served in several marketing and public relations management positions in the financial services industry. She was named Director of Communications in 2004 and promoted to Vice President-Corporate Affairs in March 2007 and also serves as Vice President of USA. Ms. Sohler is a volunteer director on area Chambers of Commerce and several other non-profit Boards supporting public safety and the arts. She is a past director of the National Association of Water Companies and former Chair of the New Jersey Utilities Association's Communications Committee.

Bruce E. Patrick – Mr. Patrick, a licensed professional engineer, joined Tidewater in February 2002 as Vice President of Engineering. He was promoted to Vice President and General Manager in April 2012, Executive Vice President in April 2023, and President in December 2023. Mr. Patrick has extensive experience in regulatory compliance, permitting, planning and design. Prior to joining Tidewater, he served as Kent County, Delaware Public Works Director and County Engineer where he had overall responsibility for the County's regional wastewater facilities. Mr. Patrick also held prior positions with the Delaware Department of Natural Resources and Environmental Control as well as the Delaware Division of Public Health.

Robert J. Capko – Mr. Capko, a Certified Public Accountant, joined the Company in 2009 as Corporate Controller. On March 28, 2023, Mr. Capko was appointed Principal Accounting Officer of Middlesex. Mr. Capko is also a Director and Treasurer of Tidewater and White Marsh and Controller of USA, USA-PA, Pinelands Water and Pinelands Wastewater. Prior to joining Middlesex, Mr. Capko was an Audit Senior Manager with Deloitte & Touche LLP, with a focus on publicly traded regulated utilities including several regulated public utility clients subject to the jurisdiction of the NJBPU.

ITEM 1A. RISK FACTORS.

Operational Risks

Weather conditions and overuse of underground aquifers may interfere with our sources of water, demand for water services and our ability to supply water to customers.

Our ability to meet current and future water demands of our customers depends on the availability of an adequate supply of water. Unexpected conditions may interfere with our water supply sources. Drought and overuse of underground aquifers may limit the availability of ground and/or surface water. Freezing weather may also contribute to water transmission interruptions caused by water main breakage. Any interruption in our water supply could cause a reduction in our revenue and profitability. These factors may adversely affect our ability to supply water in sufficient quantities to our customers. Governmental drought restrictions may result in decreased customer demand for water services and can adversely affect our revenue and earnings.

Our water sources or water service provided to customers may become contaminated by naturally-occurring or man-made compounds and events. This may cause disruption in services and impose operational and regulatory enforcement costs upon us to restore the water to required levels of quality as well as may damage our reputation and cause private litigation claims against us.

Our sources of water or water in our distribution systems may become contaminated by naturally-occurring or man-made compounds or other events. In the event that any portion of our water supply sources or water distribution systems is contaminated, we may need to interrupt service to our customers until we are able to remediate the contamination or substitute the flow of water from an uncontaminated water source through existing interconnections with other water purveyors or through our transmission and distribution systems, where possible. We may also incur significant costs in treating any contaminated water, or remediating the effects on our treatment and distribution systems, through the use of our current treatment facilities, or development of new treatment methods. Our inability to substitute water supply from an uncontaminated water source, or to adequately treat the contaminated water supply in a cost-effective manner, may reduce our revenues or increase our expenses and make us less profitable.

We may be unable to recover costs associated with treating water supplies through rates or, recovery of these costs may not occur in a timely manner. In addition, we could be subject to claims for damages arising from government enforcement actions or legal actions arising out of interruption of service or perceived human exposure to hazardous substances in our drinking water and water supplies. Such costs could adversely affect our financial results.

Contamination of the water supply or the water service provided to our customers could result in substantial injury or damage to our customers, employees or others and we could be exposed to substantial claims and litigation, which are inherently subject to uncertainties and are potentially subject to unfavorable regulatory and/or legal

actions. Negative impacts to our profitability and/or our reputation may occur even if we are not responsible for the contamination or the consequences arising out of human exposure to contamination or hazardous substances in the water supplies. Pending or future claims against us could have a material adverse impact on our financial condition, results of operations and cash flows.

The necessity for ongoing physical and technological security has resulted, and may continue to result, in increased operating costs.

Because of physical and technological threats to the health and security of the United States of America, we employ procedures to review and modify security measures. We provide ongoing training and communications to our employees about threats to our water supply, our assets and related systems and our employees' personal safety. We have incurred, and will continue to incur, costs for security measures in efforts to protect against such risks.

Climate variability may cause weather volatility in the future, which may impact water usage and related revenue or, may require additional expenditures to reduce risk associated with any increasing storm, flood, drought or other weather occurrences.

Increased climate variability may cause increased precipitation and flooding, increased frequency and severity of storms and other weather events, potential degradation of water quality, decreases in available water supply, changes in water usage patterns and disruptions in service. Because of the uncertainty of weather volatility related to climate variability, we cannot predict its potential impact on our financial condition, results of operations, cash flows and liquidity. Although some or all potential expenditures and costs with respect to our regulated businesses could be recovered through rates we charge to our customers, there can be no assurance that the NJBPU or the DEPSC would authorize recovery of such costs, in whole or in part.

Regulatory Risks

Our revenue and earnings depend on the rates we charge our customers. We cannot raise utility rates in our regulated businesses without petitioning the appropriate Public Utility Commissions. If these agencies modify, delay or deny our petition, our revenues will not increase and our earnings will decline unless we are able to reduce costs without degrading service quality.

The NJBPU regulates our public utility companies in New Jersey with respect to rates and charges for service, classification of accounts, awards of new service territory, acquisitions, financings and other matters. That means, for example, that we cannot raise the utility rates we charge to our customers without first petitioning the NJBPU and navigating a lengthy administrative process. Similarly, the DEPSC regulates our public utility companies in Delaware. We cannot provide assurance as to when we will request approval for any such matter, nor can we predict whether these Public Utility Commissions will approve, deny or reduce the amount of such requests.

Certain costs are not completely within our control. The failure to obtain any rate increase would prevent us from increasing our revenues and, unless we are able to reduce costs without degrading service quality, would result in reduced earnings.

We are subject to environmental laws and regulations, including water quality and wastewater effluent quality regulations, as well as other state and local regulations. Compliance with those laws and regulations requires us to incur costs and we are subject to fines or other sanctions for non-compliance.

Government environmental regulatory agencies regulate our operations in New Jersey and Delaware with respect to water supply, treatment and distribution systems and the quality of water. Government environmental regulatory agencies also regulate our operations in New Jersey and Delaware with respect to wastewater collection, treatment and disposal.

Government environmental regulatory agencies' regulations relating to water quality require us to perform expanded types of testing to ensure our water meets state and federal water quality requirements. We are subject to USEPA regulations under the Federal Safe Drinking Water Act and under the Federal Clean Water Act regarding

wastewater services. Regulations under the Safe Drinking Water Act include the Lead and Copper Rule, the maximum contaminant levels established for various volatile organic compounds, the Federal Surface Water Treatment Rule and the Total Coliform Rule. There are also similar NJDEP regulations for our New Jersey water systems. The NJDEP and DEDPH monitor our activities and review the results of water quality tests we perform for adherence to applicable regulations. In addition, Government Environmental Regulatory Agencies are continually reviewing regulations governing the limits of certain organic compounds found in the water as byproducts of treatment.

We are also subject to regulations related to fire protection services in New Jersey and Delaware. In New Jersey there is no state-wide fire protection regulatory agency. However, New Jersey regulations exist as to the size of piping required regarding the provision of fire protection services. In Delaware, fire protection is regulated statewide by the Office of State Fire Marshal.

The cost of compliance with the water and wastewater effluent quality standards depends in part on the limits set in the regulations and on the methods selected to comply with these standards. If new or more restrictive standards are imposed, the cost of compliance could increase and therefore, have an adverse impact on our revenues and results of operations if we cannot recover those costs through the rates we charge our customers. The cost of compliance with fire protection requirements could also increase and make us less profitable if we cannot recover those costs through our rates charged to our customers.

The Company must comply with various environmental laws and regulations promulgated by the USEPA, NJDEP and other governmental agencies, including the Toxic Catastrophe Prevention Act, the Spill Prevention, Control, and Countermeasure Rule and the Discharge Prevention Program of the New Jersey Spill Compensation and Control Act. If we fail to comply with environmental or other laws and regulations to which our business is subject, we could be fined or subject to other sanctions, which could adversely impact our business or results of operations.

Financial Risks

We depend upon our ability to raise money in the capital markets to finance some of the costs of complying with laws and regulations, including environmental laws and regulations or to pay for some of the costs of improvements to or the expansion of our utility system assets. Our regulated utility companies cannot issue debt or equity securities without prior regulatory approval.

We require financing from external sources to fund the ongoing capital program for the improvement in our utility system assets and for planned expansion of those systems. We expect to spend approximately $226 million for capital projects through 2026. We must obtain prior approval from our economic regulators to sell debt or equity securities to raise capital for these projects. If sufficient capital is not available, or the cost of capital is too high, or if the regulatory authorities deny our petition to sell debt or equity securities, we may not be able to meet the costs of complying with environmental laws and regulations or the costs of improving and expanding our utility system assets to the level we believe operationally prudent. This may result in the imposition of fines from environmental regulators or restrictions on our operations which could curtail our ability to upgrade or replace utility system assets.

We face competition from other utilities and service providers which might hinder our growth opportunities and mitigate our future profitability.

We face risks of competition from other utilities or other entities authorized by federal, state or local agencies to expand rate-regulated or contracted utility services. Once a state utility regulator grants a franchise to a public utility to serve a specific territory, that utility effectively has an exclusive right to service that territory. Although a new franchise offers some protection against competitors, the pursuit of franchises is often competitive, particularly in Delaware, where new franchises may be awarded to utilities based upon competitive negotiation. Competing entities have challenged, and may challenge in the future, our applications for new franchises. Also, third parties entering into agreements to operate municipal utility systems may adversely affect the management of our long-term agreements to supply water or wastewater services on a contract basis to those municipalities, which could adversely affect our financial results.

We have short-term and long-term contractual obligations for water, wastewater and storm water system operation and maintenance under which we may incur costs in excess of payments received.

USA-PA and USA operate and maintain water and wastewater systems for three New Jersey municipalities under 10-year contracts expiring in 2028, 2030 and 2032, respectively. These contracts do not protect us against incurring costs in excess of revenues we earn pursuant to the contracts. There can be no absolute assurance we will not experience losses resulting from these contracts. Losses under these contracts, or our failure or inability to perform or renew such agreements, may have a material adverse effect on our financial condition and results of operations.

Capital market conditions and key assumptions may adversely impact the value of our postretirement benefit plan assets and liabilities.

Market factors can adversely affect the rate of return on assets held in trusts to satisfy our future postretirement benefit obligations, as well as negatively affect interest rates, which impacts the discount rates used in the determination of our postretirement benefit actuarial valuations. In addition, changes in demographics, such as increases in life expectancy assumptions, can increase future postretirement benefit obligations. Any negative impact to these factors, either individually or a combination thereof, may have a material adverse effect on our financial condition and results of operations.

An element of our growth strategy is the acquisition of water and wastewater assets, operations, contracts or companies. Any pending or future acquisitions we decide to undertake will involve risks.

The acquisition and/or operation of water and wastewater systems is an element of our growth strategy. This strategy depends on identifying suitable opportunities that meet our risk/reward profile and reaching mutually agreeable terms with acquisition candidates or contract parties. Further, acquisitions may result in dilution in the value of our equity securities, incurrence of debt and contingent liabilities and fluctuations in financial results. In addition, the assets, operations, contracts or companies we acquire may not achieve the revenues and profitability projected.

Our ability to achieve organic customer growth in our market area is dependent on the residential building market. New housing starts and home sale closings are one element that impacts our rate of growth and therefore, may not meet our expectations.

We expect our revenues to increase from customer growth for our regulated water operations as a result of anticipated construction, sale and close of new housing units. If housing starts decline, or do not increase as we have projected, or home sales closing cycle times increase as a result of economic conditions or otherwise, the timing and extent of our organic revenue growth may not meet our expectations, our deferred project costs may not produce revenue-generating projects in the timeframes anticipated and our financial results could be negatively impacted.

There can be no assurance we will continue to pay dividends in the future or, if dividends are paid, that they will be in amounts similar to past dividends.

We have paid dividends on our common stock each year since 1912 and have increased the amount of dividends paid each year since 1973. Our earnings, financial condition, capital requirements, applicable regulations and other factors, including the timeliness and adequacy of rate increases, will determine both our ability to pay dividends and the amount of those dividends. There can be no assurance we will continue to pay dividends in the future or, if dividends are paid, that they will be in amounts similar to past dividends.

If we are unable to pay the principal and interest on our indebtedness as it comes due or we default under certain other provisions of our loan documents, our indebtedness could be accelerated and our results of operations and financial condition could be adversely affected.

Our ability to pay the principal and interest on our indebtedness as it comes due will depend upon our current and future performance. Our performance is affected by many factors, some of which are beyond our control.

We believe cash generated from operations and, if necessary, borrowings under existing credit facilities, will be sufficient to enable us to make our debt payments as they become due. If, however, we do not generate sufficient cash, we may be required to refinance our obligations or sell additional equity, which may be on terms that are less favorable than we desire.

No assurance can be given that any refinancing or sale of equity will be possible when needed, or that we will be able to negotiate acceptable terms. In addition, our failure to comply with certain provisions contained in our trust indentures and loan agreements relating to our outstanding indebtedness could lead to a default under these documents, which could result in an acceleration of our indebtedness.

Our business is subject to seasonal fluctuations, which could affect demand for our water service and our revenues.

Demand for our water during the warmer months is generally greater than during colder months due primarily to additional consumption of water in connection with irrigation systems, swimming pools, cooling systems and other outdoor water use. Throughout the year, and particularly during typically warmer months, demand may vary with temperature and rainfall levels. In the event that temperatures during the typically warmer months are cooler than normal, or if there is more rainfall than normal, the demand for our water may decrease and adversely affect our revenues.

General economic conditions may materially and adversely affect our financial condition and results of operations.

Adverse economic conditions could negatively impact our customers' water usage demands, particularly the level of water usage demand by our commercial and industrial customers in our Middlesex System. If water demand by our commercial and industrial customers in our Middlesex System decreases, our financial condition and results of operations could be negatively impacted until completion of a subsequent base rate filing.

The current concentration of our business in central New Jersey and in Delaware makes us susceptible to adverse developments in local regulatory, economic, demographic, competitive and weather conditions.

Our Middlesex System provides water services to customers located primarily in eastern Middlesex County, New Jersey. Water service is provided under wholesale contracts to the Townships of Edison, East Brunswick and Marlboro, the Borough of Highland Park, the Old Bridge Municipal Utilities Authority and the City of Rahway. We also provide water services to customers in the State of Delaware. Our revenues and operating results are therefore subject to local regulatory, economic, demographic, competitive and weather conditions in a relatively concentrated geographic area. A change in any of these conditions could make it more costly for us to conduct our business.

We are subject to anti-takeover measures that may be used to discourage, delay or prevent changes of control that might benefit non-management shareholders.

Subsection 10A of the New Jersey Business Corporation Act, known as the New Jersey Shareholders Protection Act, applies to us. The Shareholders Protection Act deters merger proposals, tender offers or other attempts to effect changes in control that are not approved by our Board of Directors. In addition, we have a classified Board of Directors, which means only a portion of the Director population is elected each year. A classified Board can make it more difficult for an acquirer to gain control of the Company by voting its candidates onto the Board of Directors and may also deter merger proposals and tender offers. Our Board of Directors also has the ability, subject to obtaining NJBPU approval, to issue one or more series of preferred stock having such number of shares, designation, preferences, voting rights, limitations and other rights as the Board of Directors may fix. This could be used by the Board of Directors to discourage, delay or prevent an acquisition the Board of Directors determines is not in the best interest of the common shareholders.

We identified material weaknesses in our internal controls which, if not remediated appropriately or timely, could result in loss of investor confidence and adversely impact our stock price.

Internal controls related to the operation of technology systems are critical to maintaining adequate internal control over financial reporting. During the fourth quarter of 2023, management identified a material weakness in internal control related to ineffective information technology general controls (ITGCs) in the areas of user access and change management over certain information technology (IT) systems that support the Company's financial reporting processes. Certain of those controls were found to be deficient because of a lack of sufficient IT control processes designed to prevent or detect unauthorized changes in applications and data in selected IT environments. In December 2023, management implemented various auditing and monitoring solutions that provide greater transparency into changes made within our IT systems. These control solutions are supported by a timely review process that focuses on the proper authorization and approval of IT system changes. Due to the timing of implementing the solutions, the controls implemented did not operate over a sufficient time period to adequately test and validate the remediation and reassess other ITGCs, which may require further remediation actions. In addition, there were ineffective controls related to income tax accounting for a non-routine transaction, which management has identified as a material weakness in internal controls over financial reporting.

Therefore, management concluded that our internal control over financial reporting was not effective as of December 31, 2023. Until remediation measures are completed, fully tested and determined effective, we will not be able to conclude that the material weaknesses have been remediated. If we are unable to determine that our remediation measures are effective or otherwise remediate the material weaknesses, or are otherwise unable to maintain effective internal control over financial reporting or disclosure controls and procedures, our ability to record, process and report financial information accurately, and to prepare financial statements within required time periods, could be adversely affected, which could subject us to litigation or investigations requiring management resources and payment of legal and other expenses, negatively affecting investor confidence in our financial statements and adversely impacting our stock price.

General Risks

We rely on our information technology systems to help manage our operations.

Our information technology systems require periodic modifications, upgrades and/or replacement which subject us to costs and risks including potential disruption of our internal control structure, substantial unanticipated capital expenditures, additional operating expenses, retention of sufficiently skilled personnel and other risks in transitioning to new systems or integrating new systems. A failure to modify, upgrade or replace our information technology systems could have an adverse impact on our business. In addition, challenges implementing new technology systems may cause disruptions in our business operations and have an adverse effect on our business operations.

Our information technology systems may be subject to physical and cyber attacks.

We rely on our computer, information and communications technology systems in connection with the operation of our business, especially with respect to customer service and billing, accounting and, in some cases, the monitoring and operation of our operating facilities. Our computer and communications systems and operations could be damaged or interrupted by natural disasters, cyber-attacks, power loss and internet, telecommunications or data network failures or acts of war or terrorism or similar events or disruptions. Any of these or other events could cause service interruption, delays and loss of critical data or, impede aspects of operations and therefore, adversely affect our financial results.

Cyber-attacks could result in the loss, or compromise, of customer, financial or operational data, disruption of billing, collections or normal field service activities, disruption of electronic monitoring and control of operational systems and delays in financial reporting and other management functions. Possible impacts associated with a cyber-incident may include remediation costs related to lost, stolen, or compromised data, repairs to data processing systems, increased cyber security protection costs, adverse effects on our compliance with regulatory and environmental laws and regulations, including standards for drinking water, litigation and reputational damage.

We depend significantly on the technical and management services of our team, and the departure of any of certain persons could cause our operating results to temporarily be short of our expectations.

Our success depends significantly on the continued individual and collective contributions of our team. If we lose the services of certain members of our team, or are unable to attract and retain qualified personnel in key roles, our operating results could be negatively impacted.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 1C. CYBERSECURITY

Cybersecurity Program
The Company's cybersecurity program is an integral element of the Company's overarching strategic plan. The robustness of the cybersecurity initiatives directly impact the realization of the Company's mission, vision, and goals. Aligned with the National Institute of Standards and Technology Cyber Security Framework, the Company employs a comprehensive "defense-in-depth" strategy, deploying multiple security measures to safeguard its operational environment and data integrity systems.

The Company continually evaluates and refines its cybersecurity program in response to key factors such as evolving threat landscapes, program maturation, gap analysis, and guidance from external security consultants. The Company's cybersecurity program relies on three key pillars: People, Process and Technology (PPT) to deliver a robust cybersecurity program. The cybersecurity program includes various aspects of PPT, including, but not limited to:

- **Technology:** Encryption, threat management, backups, monitoring, investigative support utilizing artificial intelligence embedded tools;

- **Identity and Access Control Management Tools:** Multi-factor authentication, monitoring and alerting of privilege account access;

- **Cybersecurity Processes:** Vulnerability scanning, penetration testing, and periodic assessments conducted by external security consultants;

- **Incident Response Training:** Regularly assessed incident response preparedness through various incident response and disaster recovery exercises; and

- **Cyber Risk Awareness and Training:** Frequent simulation exercises to heighten awareness of cybersecurity threats and educate our user community on preventative measures and reporting protocols. All employees participate in required periodic training with respect to cybersecurity risk and risk mitigation.

Our Chief Technology Officer (CTO), with over 25 years of experience in various disciplines of information technology, oversees the cybersecurity program. Reporting to the Chief Executive Officer, the CTO provides regular briefs to the Board of Directors (the Board) and executive management, informing them about prevention, detection, mitigation, and remediation of cybersecurity incidents, as well as ongoing risks and threats.

In our industry, the continuous functioning of information systems is of the utmost importance. Leveraging information technology systems, we collect, process and safeguard sensitive data and utilize automated tools to operate our plants.

Identified as a critical risk factor, cybersecurity threats encompass potential hazards such as malicious code, employee misconduct, advanced persistent threats, fraud, and phishing attacks. These risks have the potential to lead to information technology system failures, threat to water supply, or compromise of sensitive information.

Our cybersecurity program aims to protect the uninterrupted availability of critical information technology resources. Regular assessments, conducted both internally and by third parties, evaluate our program against industry standards, including the National Institute of Standards and Technology Cybersecurity Standard and the Risk Management Framework.

Although we have not experienced cybersecurity breaches or incidents that have significantly impacted our financial condition, results of operations, or business strategy, the effectiveness of our measures to prevent, detect, mitigate, or recover is based on currently known threats and recovery methods. There is no guarantee that cybersecurity breaches or incidents will not impact our business operations, strategy, financial condition, or operations.

The ever-evolving landscape of cybersecurity threats introduces ongoing challenges. The Company recognizes the increasing frequency and sophistication of these threats. Despite implementing measures to secure operational and technology systems and fostering a culture of continuous improvement, the dynamic nature of cyber-attacks and vulnerabilities implies that these defenses may not be foolproof.

Cybersecurity Risk Management Program and Strategy
Cybersecurity risk management strategy is an integral component of our operations and our overall risk management process. Recognizing the dynamic nature of cybersecurity threats, we have implemented a comprehensive risk management program that aims to identify, assess, and mitigate potential risks. Our strategy involves a proactive approach, incorporating preventative measures, continuous monitoring, and adaptive response mechanisms. We prioritize the safeguarding of our operational network environment, sensitive data, including confidential business information and personal details of our customers and employees. Regular assessments conducted both internally and by third parties ensure our cybersecurity program aligns with industry standards. In addition to a dedicated cybersecurity team, we employ a defense-in-depth strategy, utilizing multiple security measures to protect our information technology system. Collaboration with third-party experts, industry peers and ongoing training initiatives ensures our cybersecurity strategy remains robust and responsive to evolving threats. We understand the importance of maintaining a vigilant and adaptive stance in the ever-evolving landscape of cybersecurity to safeguard our business operations, financial stability, and as a direct result, our overall success.

Key elements of our cybersecurity risk mitigation approach are comprised of:

- A dedicated cybersecurity team;
- Collaboration with a third-party managed detection and response company for 24/7 monitoring and response;
- Cybersecurity insurance to cover a portion of losses and damages resulting from cyber-attacks or security breaches;
- An incident response team that is comprised of various departments required for an effective response;
- Conducting periodic drills and exercises, including industry collaborations and participation from the executive team;
- Continuous information security awareness training and phishing simulation exercises;
- Regular security assessments to address evolving risks and threats;
- Deployment of automation solutions to strengthen detection and response capabilities; and
- Utilizing services offered by the United States Department of Homeland Security to assist with resiliency planning.

Third-Party Relationships
The Company utilizes partners and third-party service providers to help deliver safe and reliable water and wastewater services across its regulated operations. In connection with these relationships, we perform due diligence, cyber risk scoring, cybersecurity related contractual obligations, and periodic reviews of third-party control environments to ensure alignment with the Company's risk exposure, business requirements, and risk tolerances.

We extend our cybersecurity focus to third-party service providers by evaluating and monitoring their cybersecurity risks. High-risk vendors undergo continuous monitoring, and we maintain contractual agreements that mandate our third-party providers' commitment to managing cybersecurity risks, providing incident notifications, and being subject to cybersecurity audits.

Cybersecurity Governance
The Corporate Governance and Nominating Committee of the Board is tasked with overseeing cybersecurity risk. Management, including the CTO, provides regular reports to the Board covering aspects such as risks, threats, the evolving threat landscape, enhancements to the cybersecurity program, and the preparedness of internal responses.

ITEM 2. PROPERTIES.

Utility Plant

The water utility plant in our systems consists of source of supply, pumping, water treatment, transmission and distribution, general facilities and all appurtenances, including all connecting pipes.

The wastewater utility plant in our systems consist of pumping, treatment, collection mains, general facilities and all appurtenances, including all connecting pipes.

We believe our water and wastewater utility plant facilities are sufficient for the operations of the Company.

Middlesex System

The Middlesex System's principal source of surface supply is the Delaware & Raritan Canal owned by the State of New Jersey and operated as a water resource by the NJWSA.

Water is withdrawn from the Delaware & Raritan Canal at New Brunswick, New Jersey through our intake and pumping station, located on state-owned land bordering the canal. Water is transported through two raw water pipelines for treatment and distribution at our CJO Plant in Edison, New Jersey.

The CJO Plant includes chemical storage and chemical feed equipment, two dual rapid mixing basins, four upflow clarifiers which are also called superpulsators, three ozone contactors, twelve rapid filters containing gravel, sand and anthracite for water treatment and a steel washwater tank. The CJO Plant also includes a computerized Supervisory Control and Data Acquisitions system to monitor and control the CJO Plant and the water supply and distribution system in the Middlesex System. There is a State of New Jersey certified on-site laboratory capable of performing bacteriological, chemical, process control and advanced instrumental chemical sampling and analysis. The firm design capacity of the CJO Plant is 55 mgd (60 mgd maximum capacity). The five electric motor-driven, vertical turbine pumps presently installed have an aggregate capacity of 85 mgd.

In addition, there is a 15 mgd auxiliary pumping station on-site at the CJO Plant location. It has a dedicated substation and emergency power supply provided by a diesel-driven generator. It pumps from the 10 million gallon distribution storage reservoir directly into the distribution system.

The transmission and distribution system is comprised of 746 miles of mains and includes 24,300 feet of 48-inch concrete transmission main and 23,400 feet of 42-inch ductile iron transmission main connecting the CJO Plant to our distribution pipe network and related storage facilities. Also included are a 58,600 foot transmission main and a 38,800 foot transmission main, augmented with a long-term, non-exclusive agreement with East Brunswick to transport water through the East Brunswick system to several of our other contract customers.

The Middlesex System's storage facilities consist of a 10 million gallon reservoir at the CJO Plant, 5 million gallon and 2 million gallon reservoirs in Edison and a 2 million gallon reservoir at the Park Avenue Plant.

In New Jersey, we own the properties on which the Middlesex System's 27 wells are located, the properties on which our storage tanks are located as well as the property where the CJO Plant is located. We own our operations center located at 1500 Ronson Road, Iselin, New Jersey, consisting of a 27,000 square foot office building, 16,500 square foot maintenance facility and a 1.96 acre equipment and materials storage and staging yard. We lease 29,036 square feet of commercial office space adjacent to the Ronson Road complex. The leased space, which is under contract through 2028, houses our corporate administrative functions including executive, accounting, customer service and billing, engineering, human resources, information technology and legal.

Tidewater System

The Tidewater System is comprised of 85 production plants that vary in pumping capacity from 46,000 gallons per day to 4.4 mgd. Water is transported to our customers through 917 miles of transmission and distribution mains. Storage facilities include 48 tanks, with an aggregate capacity of 9.9 million gallons. The Delaware office property, located on an eleven-acre parcel owned by White Marsh, consists of two office buildings totaling approximately 17,000 square feet. In addition, Tidewater maintains a field operations center servicing its largest service territory in Sussex County, Delaware. The operations center is located on a 2.9 acre parcel owned by White Marsh, and consists of three buildings totaling approximately 12,000 square feet.

Pinelands Water System

Pinelands Water owns well site and storage properties in Southampton Township, New Jersey. The Pinelands Water storage facility is a 1.3 million gallon standpipe. Water is transported to our customers through 18 miles of transmission and distribution mains.

Pinelands Wastewater System

Pinelands Wastewater owns a 12 acre site on which its 0.5 mgd capacity wastewater treatment plant and connecting pipes are located. Its wastewater collection system is comprised of approximately 24 miles of sewer lines.

Fortescue System

The Fortescue System includes two well sites, which are located in Downe Township, Cumberland County, New Jersey. Water is transported to its customers through our 4.2 mile distribution system.

USA-PA, USA and White Marsh

Our non-regulated subsidiaries, namely USA-PA, USA and White Marsh, do not own utility plant property.

ITEM 3. LEGAL PROCEEDINGS.

In September 2021, the NJDEP issued a Notice to Middlesex based on self-reporting by Middlesex that the level of PFOA in water treated at its Park Avenue Plant in New Jersey exceeded a recently promulgated NJDEP standard effective in 2021. Neither the NJDEP nor Middlesex characterized this exceedance as an acute health emergency. However, Middlesex was required to notify its affected customers and the Company complied in due course. Water currently being delivered to customers is in compliance with all USEPA and NJDEP drinking water standards, including the newly established water quality standard for PFOA.

In 2021, the Company was served with two PFOA-related class action lawsuits seeking restitution for medical, water filter replacement and other claimed related costs. These lawsuits are in the early stages of the legal process and their ultimate resolution cannot be predicted at this time. The following summarizes the legal complaints brought against Middlesex related to this matter:

Vera et al. v. Middlesex Water Company - On October 29, 2021, a complaint was filed in the Superior Court of New Jersey, Middlesex County seeking restitution, equitable and injunctive relief for the costs of (1) seeking medical advice; (2) installing home water filters; (3) purchasing bottled water; and (4) court-supervised medical monitoring/testing going forward. On November 19, 2021, a first amended complaint was filed together with motions for Class Certification and Injunctive Relief. On December 17, 2021, the parties entered into a Stipulation where it was agreed that Plaintiff's motion for injunctive relief would be withdrawn. On February 16, 2022, Middlesex filed a Motion To Dismiss Plaintiffs' complaint for: (1) failure to include an indispensable party, 3M, whom Middlesex claims is the source of the PFOA in the Company's wells; and (2) failure to state legally cognizable claims in support of all of the counts set forth in the complaint. Plaintiff's motion for Class Certification and further discovery was postponed pending the outcome of Middlesex's Motion To Dismiss. On April 21, 2022, the Judge granted Vera's Motion for Class Certification and granted in part and denied in part Middlesex's Motion to Dismiss. On May 4, 2022, the Company impleaded 3M as a third-party defendant in this lawsuit. On July 6, 2022, the Company filed a Motion to Remove this case from New Jersey Superior Court to the United States District Court for the District of New Jersey. Vera challenged Middlesex's Motion To Remove at the United States District Court for the District of New Jersey in an attempt to remand the case back to the Superior Court of New Jersey. On March 21, 2023, the United States District Court for the District of New Jersey issued an order remanding the case back to the Superior Court of New Jersey. Discovery is underway in this matter. On August 29, 2023, the Company executed a settlement agreement with 3M to resolve a lawsuit related to perfluoroalkyl substances in which Middlesex and 3M agreed to enter into joint mediation to resolve this and another PFOA-related class action lawsuit against Middlesex and 3M seeking restitution for medical, water replacement and other claimed related costs. A mediation session among the parties was held on November 17, 2023. The Superior Court of New Jersey has set a deadline of February 29, 2024 for the parties to submit a final settlement agreement with the Court should the parties be able to reach a settlement.

Lonsk et al. v. Middlesex Water Company and 3M Company - On November 9, 2021, a complaint was filed in the United States District Court, District of New Jersey seeking Class Certification and restitution, equitable and injunctive relief for the costs of (1) seeking medical advice; (2) installing home water filters; (3) purchasing bottled water; and (4) all other claimed related costs. On December 23, 2021, the parties agreed to postpone the filing date of Middlesex's and 3M's answers to the complaint to January 14, 2022 at the earliest. This filing date was subsequently further postponed to March 1, 2022. On March 4, 2022, Middlesex filed a Motion to Dismiss Plaintiffs' complaint. On April 15, 2022, Plaintiffs filed an Amended Complaint. On July 7, 2022, this case was reassigned to a new trial judge at the United States District Court for the District of New Jersey. On October 31, 2022, the trial judge in this matter dismissed Middlesex's and 3M's motions to dismiss the Plaintiffs' complaint and Middlesex and 3M filed answers to Plaintiffs' amended complaint on November 21, 2022. On August 29, 2023 the Company executed a settlement agreement with 3M to resolve a lawsuit related to perfluoroalkyl substances in which Middlesex and 3M agreed to enter into a joint mediation, scheduled for November 2023, to resolve this and another PFOA-related class action lawsuit against Middlesex and 3M seeking restitution for medical, water replacement and other claimed related costs. Discovery in this case is currently underway and continues. A mediation session among the parties was held on November 17, 2023. The Superior Court of New jersey has set a deadline of March 4, 2024 for the parties to submit a final settlement agreement with the Court should the parties be able to reach a settlement.

For further discussion of the 3M settlement and the case above, see *Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations, Regulatory Notice of Non-Compliance.*

The Company is a defendant in other lawsuits in the normal course of business. We believe the resolution of these pending claims and legal proceedings will not have a material adverse effect on the Company's consolidated financial statements.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

The Company's common stock is traded on the NASDAQ Stock Market, LLC, under the symbol MSEX. As of December 31, 2023, there were 1,717 holders of record.

The Company has paid dividends on its common stock each year since 1912. The payment of future dividends is contingent upon the future earnings of the Company, its financial condition and other factors deemed relevant by the Board of Directors at its discretion.

If four or more quarterly dividends are in arrears, the preferred shareholders, as a class, are entitled to elect two members to the Board of Directors in addition to Directors elected by holders of the common stock. In the event dividends on the preferred stock are in arrears, no dividends may be declared or paid on the common stock of the Company.

The Company issues shares of its common stock in connection with its Middlesex Water Company Investment Plan (the Investment Plan), a direct share purchase and dividend reinvestment plan for the Company's common stock. Since the inception of the Investment Plan and its predecessor plan, the Company has periodically replenished the level of authorized shares in the plans. Currently, 0.7 million shares remain registered with the SEC and available for issuance to participants under the Investment Plan. The Company raised approximately $12.1 million through the issuance of shares under the Investment Plan during 2023.

On March 1, 2023, the Company began offering shares of its common stock for purchase at a 3% discount to participants in the Investment Plan. The discount offering ended December 1, 2023. The discount applied to all common stock purchases made under the Investment Plan during that time period, whether by optional cash payment or by dividend reinvestment.

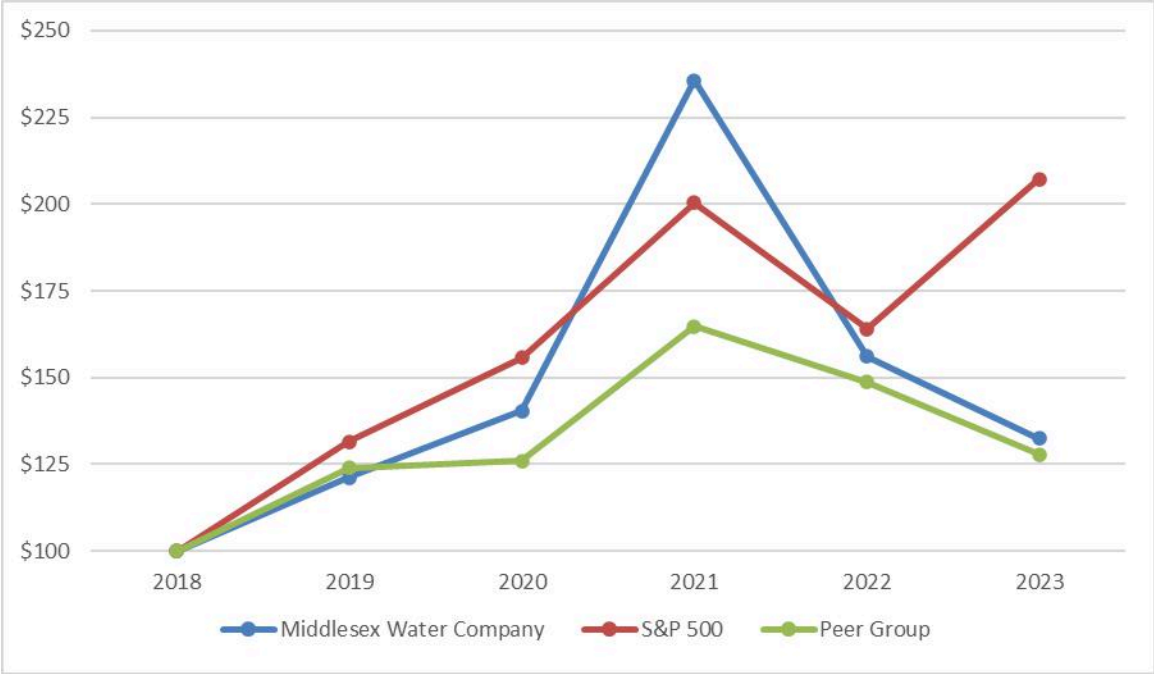
The Company maintains a long-term incentive compensation plan for certain management employees where awards are made in the form of restricted common stock. Shares issued in connection with this plan are subject to forfeiture by the employee in the event of termination of employment for any reason within five years of the award, other than as a result of retirement at normal retirement age, death, disability or change in control. The maximum number of shares authorized for award under this plan is 0.3 million shares, of which approximately 75% remain available for future issuance.

The Company maintains a stock plan for its independent members of the Board of Directors as a component of their compensation. In 2023, shares of the Company's common stock valued at $0.4 million were granted and issued to the Independent Directors. The maximum number of shares authorized for grant under this plan is 0.1 million. Approximately 42% of the authorized shares remain available for future issuance.

Set forth below is a graph comparing the yearly change in the cumulative total return (which includes reinvestment of dividends) of a $100 investment for the Company's common stock, a peer group of investor-owned water utilities, and the S&P 500 Stock Index for the period of five years commencing December 31, 2018. The S&P 500 Stock Index measures the stock performance of 500 large companies listed on stock exchanges in the United States.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN

Among Middlesex Water Company, the S&P 500 Stock Index and a Peer Group*



* Peer group includes American States Water Company, Artesian Resources Corp., California Water Service Group, Global Water Resources Inc, SJW Corp., York Water Company and Middlesex.

	2018	2019	2020	2021	2022	2023
Middlesex Water Company	100.00	121.14	140.27	235.68	156.10	132.41
S&P 500 Stock Index	100.00	131.49	155.68	200.37	164.08	207.21
Peer Group	100.00	123.86	126.00	164.71	148.74	127.88

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion should be read in conjunction with the Company's consolidated financial statements and related notes.

Operations

Middlesex Water Company (Middlesex or the Company) has operated as a water utility in New Jersey since 1897 and in Delaware through our wholly-owned subsidiary, Tidewater Utilities, Inc. (Tidewater), since 1992. We are in the business of collecting, treating and distributing water for domestic, commercial, municipal, industrial and fire protection purposes. We operate water and wastewater systems under contract for governmental entities and private entities primarily in New Jersey and Delaware and also provide regulated wastewater services in New Jersey. We are regulated by state public utility commissions as to rates charged to customers for water and wastewater services, as to the quality of water and wastewater services we provide and as to certain other matters in the states in which our regulated subsidiaries operate. Only our Utility Service Affiliates, Inc. (USA), Utility Service Affiliates (Perth Amboy), Inc. (USA-PA) and White Marsh Environmental Services, Inc. (White Marsh) subsidiaries are not regulated public utilities as related to rates and services quality. All municipal or commercial entities whose utility operations are managed by these entities however, are subject to environmental regulation at the federal and state levels.

Our principal New Jersey water utility system (the Middlesex System) provides water services to approximately 61,000 retail customers, primarily in central New Jersey. The Middlesex System also provides water sales under contract to municipalities in central New Jersey with a total population of over 0.2 million. Our Fortescue System provides water services in Downe Township, New Jersey. Our other New Jersey subsidiaries, Pinelands Water Company (Pinelands Water) and Pinelands Wastewater Company (Pinelands Wastewater) (collectively, Pinelands), provide water and wastewater services to approximately 2,500 customers in Southampton Township, New Jersey.

Our Delaware subsidiaries, Tidewater and Southern Shores Water Company, LLC (Southern Shores), provide water services to approximately 59,000 retail customers in New Castle, Kent and Sussex Counties, Delaware. Tidewater's subsidiary, White Marsh, services approximately 4,300 customers in Kent and Sussex Counties through various operations and maintenance contracts.

USA-PA operates the water and wastewater systems for the City of Perth Amboy, New Jersey (Perth Amboy) under a 10-year operations and maintenance contract expiring in 2028. In addition to performing day-to day operations, USA-PA is also responsible for emergency response and management of capital projects funded by Perth Amboy.

USA operates the Borough of Avalon, New Jersey's (Avalon) water utility, sewer utility and storm water system under a 10-year operations and maintenance contract expiring in 2032. USA also operates the Borough of Highland Park, New Jersey's (Highland Park) water and wastewater systems under a 10-year operations and maintenance contract expiring in 2030. In addition to performing day-to-day service operations, USA is responsible for emergency response and management of capital projects funded by Avalon and Highland Park. Under a marketing agreement with HomeServe USA Corp. (HomeServe) expiring in 2031, USA offers residential customers in New Jersey and Delaware water and wastewater related services and home maintenance programs. HomeServe is a leading national provider of such home maintenance service programs. USA receives a service fee for the billing, cash collection and other administrative matters associated with HomeServe's service contracts. USA also provides unregulated water and wastewater services under contract with several New Jersey municipalities.

Middlesex President and Chief Executive Officer Retirement Announcement and Replacement

In May 2023, President and Chief Executive Officer, Dennis W. Doll announced a plan to retire upon turning age 65. On January 23, 2024, the Company named Nadine Leslie as its new President and Chief Executive Officer effective March 1, 2024. Ms. Leslie will also be appointed to the Board of Directors effective March 1, 2024. Mr. Doll

will remain Chairman of the Company's Board of Directors through the expiration of his current term as a Director as of the May 21, 2024 Annual Meeting of Shareholders.

Regulatory Notice of Non-Compliance

In September 2021, the New Jersey Department of Environmental Protection (NJDEP) issued a Notice of Non-Compliance (Notice) to Middlesex based on self-reporting by Middlesex that the level of Perfluorooctanoic Acid (PFOA) in water treated at its Park Avenue Wellfield Treatment Plant (Park Avenue Plant) in South Plainfield, New Jersey exceeded a standard promulgated in a NJDEP regulation that became effective in 2021. Middlesex was required by the regulation to notify its affected customers and complied within the required Notice period in November 2021.

The Notice further required the Company to take any action necessary to comply with the new standard by September 7, 2022. Consequently, in November 2021, the Company implemented an interim solution to meet the Notice requirements, which included putting the Park Avenue Wellfield Treatment Plant in off-line status and obtaining alternate sources of supply. In June 2022, the Company accelerated the in-service date for a portion of the enhanced treatment project based on engineering analysis that allowed a restart of the Park Avenue Wellfield Treatment Plant to ensure continued compliance with all state and federal drinking water standards.

In September 2022, the Company entered into an Administrative Consent Order (ACO) with the NJDEP, which required the Company to take whatever actions necessary to achieve and maintain compliance with applicable regulations. As prescribed in the ACO, the Company was to issue periodic public notifications until the ACO was closed.

In June 2023, the Company completed the permanent construction of the entire Park Avenue Plant treatment upgrades and placed the upgrades into operation in full compliance with the NJDEP PFOA standards. In October 2023, the Company received confirmation from the NJDEP that it has complied with all requirements of the ACO and consequently, the ACO has been closed.

The Company had previously initiated a lawsuit against 3M Company (3M), in connection with the Company's claim that 3M introduced perfluoroalkyl substances (commonly known as "PFAS"), which include PFOA, into the Company's water supply at its Park Avenue Plant.

On August 29, 2023, Middlesex and 3M executed a settlement agreement (the Settlement Agreement) to resolve the lawsuit. The Settlement Agreement provides that:

- 3M will pay $93.2 million in two installments, one payment of $23.3 million received in December 2023 and one payment of $69.9 million in July 2024. Middlesex is obligated to pay 30% of the proceeds received plus reimbursable out-of-pocket legal expenses to its lawyers as legal fees, or $29.5 million in total;

- Proceeds received from the Settlement Agreement are being used to mitigate the impact of the increase in Middlesex's customer rates approved by the NJBPU and to be implemented March 1, 2024 (for further discussion of Middlesex's base rate increase, see *Rates, Middlesex* below);

- Middlesex, by nature of its status as a U.S. water purveyor impacted by PFAS, was automatically included in a Multi-District Litigation Settlement before the United States District Court for the District of South Carolina in which 3M and other companies (Non-3M Companies) are participants. Middlesex agreed as part of the Settlement Agreement to remain a member of the plaintiff class in order to be eligible to obtain future additional compensation from 3M and the Non-3M Companies for any future remediation which may be required of its water treatment facilities; and

- Middlesex and 3M agreed to enter into a joint mediation, which occurred in November 2023, to resolve two PFOA-related class action lawsuits against Middlesex seeking restitution for medical, water replacement and other claimed related costs. Both Middlesex and 3M are defendants in these lawsuits. These lawsuits remain in the legal process and their ultimate resolution is not known at this time.

Capital Construction Program

The Company's multi-year capital construction program encompasses numerous projects designed to upgrade and replace utility infrastructure as well as enhance the integrity and reliability of assets to better serve the current and future generations of water and wastewater customers. The Company plans to invest approximately $75 million in 2024 in connection with this plan for projects that include, but are not limited to:

- Replacement of approximately 17,200 linear feet of cast iron 6" water main in the Port Reading and Carteret sections of Woodbridge, New Jersey;
- Replacement of control room and electrical distribution equipment at our The Carl J. Olsen Surface Water Treatment Plant (CJO Plant);
- Supply and storage improvements and installation of emergency generators at several of our Tidewater facilities;
- Construction of residual removal equipment and chemical feed improvements, pumps and a surge mitigation tank as well as other improvements and upgrades at our Park Avenue Plant;
- Upgrades and improvements to our Enterprise Resource Planning System; and
- Various water main replacements and improvements.

Strategy for Growth

Our strategy for profitable growth is focused on the following key areas:

- Invest in projects, products and services that complement our core water and wastewater competencies;
- Timely and adequate recovery of infrastructure investments and other costs to maintain service quality;
- Prudent acquisitions of investor and municipally-owned water and wastewater utilities; and
- Operation of municipal and industrial water and wastewater systems on a contract basis which meet our risk profile.

Rates

Middlesex - In February 2024, Middlesex's petition to the NJBPU, filed in May 2023, seeking permission to increase its base water rates was concluded, based on a negotiated settlement that is expected to increase annual operating revenues by $15.4 million effective March 1, 2024. The approved tariff rates were designed to recover increased operating costs as well as a return on invested capital of $563.1 million, based on an authorized return on common equity of 9.6%. Middlesex has made capital infrastructure investments to ensure prudent upgrade and replacement of its utility assets to support continued regulatory compliance, resilience and overall quality of service. Net proceeds from the 3M Settlement Agreement were used to recover costs for the construction of the Park Avenue Plant PFAS treatment upgrades, including depreciation and carrying costs. The rate case settlement will result in the reclassification of $48.3 million from Regulatory Liabilities to Contributions in Aid of Construction in the March 31, 2024 balance sheet. The Company will also record in the first quarter of 2024 the recovery of $0.7 million and $2.4 million of prior year depreciation and carrying costs, respectively, as well as the recovery of $1.4 million of prior year costs which were associated with the interim solution to comply with the Notice, all of which were approved in the rate case settlement. For further information on the 3M Settlement Agreement, see *Regulatory Notice of Non-Compliance* above**.**

In January 2024, the NJBPU approved Middlesex's petition for the proposed cost recovery of its Lead Service Line Replacement (LSLR) Plan and cost recovery of project costs associated with replacing Middlesex customer-owned lead service lines. Replacement of Middlesex and Middlesex customer-owned lead service lines is required by the New Jersey LSLR Law. Under this legislation, the costs associated with replacing customer-owned lead service lines are recoverable through future customer surcharges. Cost recovery for replacing Company-owned lead service lines are recoverable through traditional base rate case filings. The current estimates for replacement of Middlesex and Middlesex customer-owned lead service lines are approximately $46 million to $77 million over a nine-year period.

In October 2023, the NJBPU approved Middlesex's petition for a Distribution System Improvement Charge (DSIC) Foundation Filing, which is a prerequisite to implementing a DSIC rate that allows water utilities to recover

investments in, and generate a return on, qualifying capital improvements to their water distribution system made between base rate proceedings. Middlesex is authorized to recover DSIC revenues up to five percent (5%) of total revenues established in Middlesex's 2021 base rate proceeding, or approximately $5.5 million. Semi-annually, beginning in April 2024, the Company must file for a change in its DSIC rate seeking recovery for DSIC-eligible investments made during the period. DSIC rates remain in effect until Middlesex's next base rate case increase subsequent to the March 1, 2024 increase. Under the terms of the Foundational filing, the Company is required to file a base rate petition before November 2026.

In September 2022, the NJBPU approved Middlesex's Emergency Relief Motion to reset its Purchased Water Adjustment Clause (PWAC) tariff rate to recover additional costs of $2.7 million for the purchase of treated water from a non-affiliated water utility. A PWAC is a rate mechanism that allows for recovery of increased purchased water costs between base rate case filings. The increase, effective October 1, 2022, was on an interim basis and subject to refund with interest, pending final resolution of this matter, which the NJBPU provided in August 2023. In connection with the full recovery of the $2.7 million of additional costs, Middlesex reset its PWAC rate to zero in October 2023.

In December 2021, Middlesex's petition to the NJBPU seeking permission to increase its base water rates was concluded, based on a negotiated settlement, resulting in an expected increase in annual operating revenues of $27.7 million. The approved tariff rates were designed to recover increased operating costs, as well as a return on invested capital of $513.5 million, based on an authorized return on common equity of 9.6%. The increase was implemented in two phases with $20.7 million of the increase effective January 1, 2022 and the remaining $7.0 million effective January 1, 2023. As part of the negotiated settlement, the PWAC was reset to zero.

Tidewater - In December 2023, the DEPSC approved Tidewater's application to implement a new DSIC. Effective January 1, 2024, Tidewater implemented a DSIC rate of 3.71%, which is expected to generate revenue of approximately $1.3 million annually. A Delaware DISC is subject to a semi-annual reset with an overall maximum rate of 7.5%.

In October 2023, the DEPSC issued an Order that made a temporary base rate reduction permanent. The initial DEPSC order required Tidewater to reduce its base rates charged to general metered and private fire customers by 6.0%, effective for service rendered on and after September 1, 2022. The rate reduction was ordered as a result of Tidewater earning in excess of its authorized return, and resulted in reduced annual revenues of approximately $2.1 million in 2023.

In March 2021, Tidewater was notified by the DEPSC that it had determined Tidewater's earned rate of return exceeded the rate of return authorized by the DEPSC. Consequently, Tidewater reset its DSIC rate to zero effective April 1, 2021 and refunded approximately $1.0 million to customers primarily in the form of an account credit for DSIC revenue previously billed between April 1, 2020 and March 31, 2021.

Pinelands - In April 2023, Pinelands Water and Pinelands Wastewater concluded their base rate case matters when the NJBPU approved a combined $1.0 million increase in annual base rates, effective April 15, 2023. The requests were necessitated by capital infrastructure investments the companies have made as well as increased operations and maintenance costs.

Southern Shores - Effective January 1, 2020, the DEPSC approved the renewal of a multi-year agreement for water service to a 2,200 unit condominium community we serve in Sussex County, Delaware. Under the agreement, current rates were to remain in effect until December 31, 2024, unless there are unanticipated capital expenditures or regulatory related changes in operating expenses exceeding certain thresholds during this time period. In 2022, capital expenditures did exceed the established threshold and rates were increased by 5.39% effective January 1, 2023. Beginning in 2025 and thereafter, inflation-based rate increases cannot exceed the lesser of the regional Consumer Price Index or 3%. Inflation based increases are in addition to the threshold rate increases. The agreement expires on December 31, 2029.

Outlook

Our ability to increase operating income and net income is based significantly on four factors: weather, adequate and timely rate relief, effective cost management and customer growth (which are evident in comparison discussions in the *Results of Operations* section below). Weather patterns which can result in lower customer demand for water may occur in 2024. As operating costs are anticipated to increase in 2024 in a variety of categories, we continue to implement plans to further streamline operations and further reduce, and mitigate increases in, operating costs. Changes in customer water usage habits, as well as increases in capital expenditures and operating costs, are significant factors in determining the timing and extent of rate increase requests.

Our investments in system infrastructure continue to grow significantly and our operating costs are anticipated to increase in 2024 and 2025 in a variety of categories. These factors, among others, may require base rate increase requests filings by Tidewater, Pinelands Water and Pinelands Wastewater later in 2024.

Overall, organic residential customer growth continues in our Tidewater system (approximately 4% in 2023). However, current and evolving economic market conditions may challenge that growth.

Builders and developers in Tidewater's service areas are experiencing lower home starts and longer home sales closing cycles due to supply chain issues, which may be further affected by inflationary trends on housing construction materials and mortgage interest rates.

The Company has projected to spend approximately $226 million for the 2024-2026 capital investment program, including approximately $15 million for replacement of a thirty inch main in our Middlesex System, $9 million for LSLR compliance in the Middlesex System, $34 million on the RENEW Program, which is our ongoing initiative to replace water mains in the Middlesex System, $6 million for evaluation of PFAS treatment at our CJO Plant and $7 million for control room and electrical distribution equipment at our CJO Plant.

Operating Results by Segment

The Company has two operating segments, Regulated and Non-Regulated. Our Regulated segment contributed approximately 93%, 93% and 91% of total revenues for the years ended December 31, 2023, 2022 and 2021, respectively, and approximately 92%, 93% and 93% of net income for the years ended December 31, 2023, 2022 and 2021, respectively . The discussion of the Company's results of operations is on a consolidated basis and includes significant factors by subsidiary. The segments in the tables included below are comprised of the following companies: Regulated- Middlesex, Tidewater, Pinelands and Southern Shores; Non-Regulated- USA, USA-PA, and White Marsh.

Results of Operations for 2023 as Compared to 2022

	(In Millions) Years Ended December 31,					
	2023			2022		
	Regulated	Non-Regulated	Total	Regulated	Non-Regulated	Total
Revenues	$ 154.0	$ 12.3	$ 166.3	$ 150.6	$ 11.8	$ 162.4
Operations and maintenance expenses	74.8	8.4	83.2	70.8	8.3	79.1
Depreciation expense	24.9	0.3	25.2	22.8	0.2	23.0
Other taxes	18.5	0.2	18.7	18.0	0.2	18.2
Gain on Sale of Subsidiary	—	—	—	5.2	—	5.2
Operating income	35.8	3.4	39.2	44.2	3.1	47.3
Other income (expense), net	6.3	0.2	6.5	7.4	0.3	7.7
Interest expense	13.1	—	13.1	9.4	—	9.4
Income taxes	(0.1)	1.1	1.0	2.0	1.2	3.2
Net income	$ 29.1	$ 2.5	$ 31.6	$ 40.2	$ 2.2	$ 42.4

Operating Revenues

Operating revenues for the year ended December 31, 2023 increased $3.8 million from the same period in 2022 due to the following factors:

- Middlesex System revenues increased by $4.2 million due to the implementation of the final phase of the 2021 base rate case increase on January 1, 2023 and the PWAC rate increase offset by lower weather-driven demand across all customer classes (for further discussion of Middlesex's 2021 base and PWAC rate increases, see *Rates, Middlesex* above);
- Tidewater System revenues decreased by $0.9 million due to a DEPSC ordered rate reduction in September 2022, lower customer connection fees and lower weather-driven customer demand partially offset by an increase in customers (for further information on the Tidewater rate reduction, see *Rates, Tidewater* above*)*;
- Pinelands System revenues increased $0.2 million due to the implementation of a base rate increase effective April 15, 2023 (for further discussion of Pinelands 2023 base rate increase, see *Rates, Pinelands* above) ; and
- Non-regulated revenues increased $0.3 million, primarily due to higher supplemental contract services.

Operation and Maintenance Expense

Operation and maintenance expenses for the year ended December 31, 2023 increased $4.0 million from the same period in 2022 due to the following factors:

- Variable production costs increased $2.9 million primarily due to weather-driven changes in water quality and higher chemical prices;
- Outside service costs rose by $0.9 million primarily due to production instrumentation calibration activities;
- Labor cost increased $0.7 million due to wage increases;
- Bad debt expense increased $0.4 million due to higher anticipated customer receivable write-offs;
- Non-regulated expenses increased $0.2 million due to additional billable supplemental service expenses;
- Lower weather-related main break activity in our Middlesex System during the winter months resulted in $0.8 million of decreased non-labor costs; and
- All other operation and maintenance expense categories decreased $0.3 million.

Depreciation

Depreciation expense for the year ended December 31, 2023 increased $2.2 million from the same period in 2022 due to a higher level of utility plant in service.

Other Taxes

Other taxes for the year ended December 31, 2023 increased $0.5 million from the same period in 2022 primarily due to higher revenue related taxes on increased revenues in our Middlesex system.

Gain on Sale of Subsidiary

Middlesex recognized a $5.2 million gain on the sale of its regulated Delaware wastewater subsidiary in January 2022.

Other Income, net

Other Income, net for the year ended December 31, 2023 decreased $1.2 million from the same period in 2022 primarily due to lower actuarially-determined retirement benefit plans non-service benefit.

Interest Charges

Interest charges for the year ended December 31, 2023 increased $3.8 million from the same period in 2022 due to higher average debt outstanding and higher average interest rates in 2023 as compared to 2022.

Income Taxes

Income taxes for the year ended December 31, 2023 decreased by $2.2 million from the same period in 2022, primarily due to greater income tax benefits associated with increased repair expenditures on tangible property in the Middlesex System and lower pretax income due to gain on the sale of a subsidiary in 2022.

Net Income and Earnings Per Share

Net income for the year ended December 31, 2023 decreased $10.9 million as compared with the same period in 2022. Basic earnings per share were $1.77 and $2.40 for the years ended December 31, 2023 and 2022, respectively. Diluted earnings per share were $1.76 and $2.39 for the years ended December 31, 2023 and 2022, respectively.

Results of Operations for 2022 as Compared to 2021

(In Millions)

	Years Ended December 31,					
	2022			2021		
	Regulated	Non-Regulated	Total	Regulated	Non-Regulated	Total
Revenues	$ 150.6	$ 11.8	$ 162.4	$ 130.8	$ 12.3	$ 143.1
Operations and maintenance expenses	70.8	8.3	79.1	65.4	8.3	73.7
Depreciation expense	22.8	0.2	23.0	20.9	0.2	21.1
Other taxes	18.0	0.2	18.2	14.9	0.2	15.1
Gain on Sale of Subsidiary	5.2	—	5.2	—	—	—
Operating income	44.2	3.1	47.3	29.6	3.6	33.2
Other income (expense), net	7.4	0.3	7.7	5.6	0.3	5.9
Interest expense	9.4	—	9.4	8.1	—	8.1
Income taxes	2.0	1.2	3.2	(6.7)	1.2	(5.5)
Net income	$ 40.2	$ 2.2	$ 42.4	$ 33.8	$ 2.7	$ 36.5

Operating Revenues

Operating revenues for the year ended December 31, 2022 increased $19.3 million from the same period in 2021 due to the following factors:

- Middlesex System revenues increased by $21.6 million due to the approved 2022 base rate and PWAC rate increases and higher weather driven demand across all customer classes (for further discussion of Middlesex's 2021 base rate and PWAC rate increases see *Rates, Middlesex* above);
- Tidewater System revenues increased $0.9 million due to additional customers and a one-time customer credit issued in 2021 partially offset by a DEPSC ordered 2022 rate reduction (for further information on the one-time credit and rate reduction, see *Rates, Tidewater* above*)*;
- The sale of our regulated Delaware wastewater subsidiary in January 2022 reduced revenues by $2.7 million;
- Non-regulated revenues decreased $0.4 million, primarily due to lower supplemental contract services; and
- All other revenue categories decreased $0.1 million.

Operation and Maintenance Expense

Operation and maintenance expenses for the year ended December 31, 2022 increased $5.4 million from the same period in 2021 due to the following factors:

- Labor cost increased $1.5 million due to wage increases;
- Variable production costs increased $1.2 million primarily due to increased production, weather-driven changes in water quality and higher chemical prices;
- Costs for employee benefits increased $1.0 million due to market fluctuations in the cash surrender value of life insurance policies and higher health insurance premiums;
- Higher weather-related main break activity in our Middlesex system during the winter months resulted in $0.6 million of additional non-labor costs;
- Equipment repairs and maintenance costs increased by $0.5 million;
- Transportation expenses increased $0.3 million due to higher fuel prices;
- Costs associated with the NJDEP PFOA customer notification process resulted in $0.2 million of additional expense (for further information on this matter, see *Regulatory Notice of Non-Compliance* above*)*; and
- All other operation and maintenance expense categories increased $0.1 million.

Depreciation

Depreciation expense for the year ended December 31, 2022 increased $1.9 million from the same period in 2021 due to a higher level of utility plant in service.

Other Taxes

Other taxes for the year ended December 31, 2022 increased $3.0 million from the same period in 2021 primarily due to higher revenue related taxes on increased revenues in our Middlesex system.

Gain on Sale of Subsidiary

Middlesex recognized a $5.2 million gain on the sale of its regulated Delaware wastewater subsidiary in January 2022.

Other Income, net

Other Income, net for the year ended December 31, 2022 increased $1.8 million from the same period in 2021 primarily due to higher actuarially-determined retirement benefit plans non-service benefit partially offset by lower AFUDC resulting from a reduced level of capital projects under construction.

Interest Charges

Interest charges for the year ended December 31, 2022 increased $1.3 million from the same period in 2021 due to higher average debt outstanding and higher average interest rates in 2022 as compared to 2021 .

Income Taxes

Income taxes for the year ended December 31, 2022 increased by $8.7 million from the same period in 2021, primarily due to income taxes on the gain on the sale of a subsidiary and the expiration of income tax benefits associated with the adoption of Internal Revenue Service tangible property regulations as Middlesex was required by the NJBPU to account for the benefit of adopting these regulations over 48 months beginning in 2018. Partially offsetting these increases were greater income tax benefits associated with increased repair expenditures on tangible property in the Middlesex system.

Net Income and Earnings Per Share

Net income for the year ended December 31, 2022 increased $5.9 million as compared with the same period in 2021. Basic earnings per share were $2.40 and $2.08 for the years ended December 31, 2022 and 2021, respectively. Diluted earnings per share were $2.39 and $2.07 for the years ended December 31, 2022 and 2021, respectively (for further discussion of Middlesex's 2022 rate increase, see *Rates, Middlesex* above).

Liquidity and Capital Resources

Cash Flows from Operating Activities

Cash flows from operating activities are largely influenced by four factors: weather, adequate and timely rate increases, effective cost management and customer growth. The effect of those factors on net income is discussed in the Results of Operations section above.

For the year ended December 31, 2023, cash flows from operating activities decreased $8.6 million to $52.8 million. The decrease in cash flows from operating activities primarily resulted from lower net income and higher interest payments.

Increases in certain operating costs impact our liquidity and capital resources. We continually monitor the need for timely rate filing to minimize the lag between the time we experience increased operating costs and capital expenditures and the time we receive appropriate rate relief. There can be no assurances however that our regulated subsidiaries' respective utility commissions will approve base water and/or wastewater rate increase requests in whole or in part or when the decisions will be rendered.

Cash Flows from Investing Activities

For the year ended December 31, 2023, cash flows used in investing activities increased $2.0 million to $90.2 million, which was attributable to cash received from the sale of Middlesex's regulated wastewater subsidiary in January 2022 partially offset by lower utility plant expenditures.

For further discussion on the Company's future capital expenditures and expected funding sources, see "*Capital Expenditures and Commitments*" below.

Cash Flows from Financing Activities

For the year ended December 31, 2023, cash flows provided by financing activities increased $8.8 million to $36.0 million. The increase in cash flows provided by financing activities is due to an increase in net borrowings and higher proceeds from the issuance of common stock under the Investment Plan partially offset by increased common stock dividend payments.

For further discussion on the Company's short-term and long-term debt, see "*Sources of Liquidity*" below.

Capital Expenditures and Commitments

To fund our capital program, we use internally generated funds, short-term and long-term debt borrowings, proceeds from sales of common stock under the Investment Plan and, when market conditions are favorable, proceeds from sales to the public of our common stock.

The table below summarizes our estimated capital expenditures for the years 2024-2026.

	(Millions)			
	2024	2025	2026	2024-2026
Distribution/Network System	$ 43	$ 55	$ 50	$ 148
Production System	23	18	11	52
Information Technology (IT) Systems	3	2	3	8
Other	6	6	6	18
Total Estimated Capital Expenditures	$ 75	$ 81	$ 70	$ 226

Our estimated capital expenditures for the items listed above are primarily comprised of the following:

- Distribution/Network System - Includes projects associated with replacement, installation and relocation of water mains and service lines and wastewater collection systems, construction of water storage tanks, installation and replacement of hydrants, meters and meter pits and the RENEW Program. RENEW is our ongoing initiative to replace water mains in the Middlesex System. In connection with RENEW, we expect to spend approximately $11 million in each of 2024 and 2025, and $12 million in 2026.
- Production System - Includes projects associated with our treatment plants, including approximately $2.0 million of expenditures for PFAS treatment upgrades and $6.8 million for replacement of existing motor control center and electrical distribution equipment in our Middlesex system, and $3.6 million of various treatment projects in our Tidewater system in 2024.
- Information Technology (IT) Systems - Includes further upgrade of our enterprise resource planning system and hardware and software purchases for other IT systems.
- Other - Includes purchase of transportation equipment, tools, furniture, laboratory equipment, security systems and other general infrastructure needs including improvements to field and inventory management facilities in Iselin, New Jersey.

The actual amount and timing of capital expenditures is dependent on the need for replacement of existing infrastructure, customer growth, residential new home construction and sales, project scheduling and continued refinement of project scope and costs.

To pay for our capital program in 2024, we estimate we will utilize some or all of the following:

- Internally generated funds;
- Short-term borrowings, as needed, through $140 million of available lines of credit with several financial institutions. As of December 31, 2023, $42.8 million was outstanding under these lines of credit (see discussion under "*Sources of Liquidity-Short-term Debt*" below);
- Proceeds from the Delaware State Revolving Fund (SRF) Program. SRF programs provide low cost financing for projects meeting certain water quality and system improvement benchmarks (see discussion under "*Sources of Liquidity-Long-term Debt*" below);
- Proceeds from other long-term borrowings (see discussion under "*Sources of Liquidity-Long-term Debt*" below); and
- Proceeds from common stock sales through the Middlesex Water Company Investment Plan (the Investment Plan) (see discussion under "*Sources of Liquidity-Common Stock*" below).

Sources of Liquidity

Short-term Debt - In January 2022, the Company increased available lines of credit from $110 million to $140 million. The outstanding borrowings under the credit lines at December 31, 2023 were $42.8 million, at a weighted average interest rate of 6.50%.

The weighted average daily amounts of borrowings outstanding under the credit lines and the weighted average interest rates on those amounts were $35.7 million and $28.9 million at 6.13% and 3.34 % for the years ended December 31, 2023 and 2022, respectively.

Long-term Debt - Subject to regulatory approval, the Company periodically issues long-term debt to fund investments in utility plant. To the extent possible and fiscally prudent, the Company finances qualifying capital projects under SRF loan programs in New Jersey and Delaware. These government programs provide financing at interest rates typically below rates available in the broader financial markets. A portion of the borrowings under the New Jersey SRF is interest-free.

Under the New Jersey SRF program, borrowers first enter into a construction loan agreement with the New Jersey Infrastructure Bank (NJIB) and submit requisitions for cost reimbursements over the life of the construction period. When construction on the qualifying project is substantially complete, NJIB will coordinate the conversion of the construction loan into a long-term securitized loan with a portion of the principal balance having a stated interest rate of zero percent (0%) and a portion of the principal balance at a market interest rate at the time of closing using the credit rating of the State of New Jersey. As a result of revised project funding priority ranking for the NJIB SRF Program, the Company has no current projects in the NJIB SRF program. However, it is seeking to have Middlesex's LSLR Project added to the qualified list in order to borrow under the NJIB SRF program.

Under the Delaware SRF program, borrowers typically 1) enter into a long-term note agreement for a term not to exceed twenty years, 2) submit requisitions for cost reimbursements during the construction period for up to two years after the agreement is executed and 3) as the proceeds are received from the requisitions, Tidewater records a corresponding debt obligation amount.

In April 2023, Middlesex received approval from the NJBPU to borrow up to $300.0 million from the New Jersey SRF Program, the New Jersey Economic Development Authority, private placement and other financial institutions as needed through December 31, 2025. The Company may issue debt securities in a series of one or more transaction offerings to help fund Middlesex's multi-year capital construction program.

In March 2023, Middlesex closed on a $40.0 million, 5.24% private placement of First Mortgage Bonds (FMBs) with a 2043 maturity date designated as Series 2023A. Proceeds were used to reduce the Company's outstanding balances under its bank lines of credit.

In May 2022, Middlesex repaid its two outstanding NJIB construction loans by issuing FMBs to the NJIB under two loan agreements. The total amount of FMBs issued is $52.2 million and designated as Series 2022A ($16.2 million) and Series 2022B ($36.0 million). The interest rate on the Series 2022A bond is zero and the interest rate on the Series 2022B bond ranges between 2.7% and 3.0%. The final maturity date for both FMBs is August 1, 2056, with scheduled debt service payments over the life of these loans.

In November 2021, Middlesex closed on a $19.5 million, 2.79% private placement of FMBs with a 2041 maturity date designated as Series 2021A. Proceeds were used to reduce the Company's outstanding balances under its lines of credit.

In June 2021, Middlesex received approval from the NJBPU to redeem up to $45.5 million of outstanding FMBs, specifically Series RR ($22.5 million) and Series SS ($23.0 million), and issue replacement FMBs at an overall lower cost of debt. In November 2021, Middlesex closed on a $45.5 million, 2.90% private placement of FMBs, designated as Series 2021B with a 2051 maturity date to effectuate the redemptions.

In May 2023, Tidewater closed on a $20.0 million loan from CoBank, ACB (CoBank) with an interest rate of 5.71% and a 2033 maturity date and fully drew all funds by June 30, 2023. Proceeds from the loan were used to pay off Tidewater's outstanding balances under its bank lines of credit and for other general corporate purposes.

In April 2023, Tidewater closed on three DEPSC-approved Delaware SRF loans totaling $10.2 million, all at interest rates of 2.0% with maturity dates in 2043 and 2044. These loans are for the construction, relocation, improvement, and/or interconnection of transmission mains. Tidewater has drawn a total of $6.1 million through December 31, 2023 and expects that the requisitions will continue through mid-2025.

In December 2021, Tidewater closed on a DEPSC-approved $5.0 million Delaware SRF loan at an interest rate of 2.0%. The loan was for construction of a one million gallon elevated storage tank. Through December 31, 2023, Tidewater has drawn a total of $4.8 million and expects that the requisitions will continue through the first quarter of 2024. The final maturity date on the loan is 2044.

In September 2021, Tidewater completed its $20 million secured borrowing with CoBank, at an interest rate of 3.94% and a 2046 maturity date. Proceeds from the loan were used to pay off its outstanding balances under its bank lines of credit.

In July 2023, Pinelands Water and Pinelands Wastewater closed on $3.9 million and $3.6 million CoBank amortizing mortgage type loans, respectively, with an interest rate of 6.17% and a final maturity date of 2043 for each loan. Proceeds were used to pay off outstanding intercompany loans with Middlesex and for ongoing capital projects.

Substantially all of the utility plant of the Company is subject to the lien of its mortgage, which includes debt service and capital ratio covenants. The Company is in compliance with all of its mortgage covenants

Common Stock - The Company issues shares of its common stock in connection with the Investment Plan, a direct share purchase and dividend reinvestment plan for the Company's common stock. The Company raised approximately $12.1 million through the issuance of shares under the Investment Plan during 2023. In May 2023, Middlesex received approval from the NJBPU to increase the number of authorized shares under the Investment Plan by 0.7 million shares. Currently, 0.7 million shares remain registered with the United States Securities and Exchange Commission and available for issuance to participants under the Investment Plan. On March 1, 2023, the Company began offering shares of its common stock for purchase at a 3% discount to participants in the Investment Plan. The discount offering ended December 1, 2023. The discount applied to all common stock purchases made under the Investment Plan during that time period, whether by optional cash payment or by dividend reinvestment.

In order to fully fund the ongoing capital investment program and maintain a balanced capital structure required for a regulated water utility, Middlesex may offer for sale additional shares of its common stock. The amount, the timing and the sales method of the common stock is dependent on the timing of the construction expenditures, the level of additional debt financing and financial market conditions. Common stock offerings will occur as needed to maintain a balanced capital structure as we continue on a parallel path with future debt offerings.

In April 2023, Middlesex received approval from the NJBPU to issue and sell up to 1.0 million shares of its common stock, without par value, through December 31, 2025. Sales of additional shares of common stock are part of the Company's comprehensive financing plan to fund its multi-year utility plant infrastructure investment program. As described above in "Long-term Debt", the NJBPU also approved the debt funding component of the financing plan.

Contractual Obligations

In the course of normal business activities, the Company enters into a variety of contractual obligations and commercial commitments. Some result in direct obligations on the Company's balance sheet while others are commitments, some firm and some based on uncertainties, which are disclosed in the Company's consolidated financial statements.

The table below presents our known contractual obligations for the periods specified as of December 31, 2023.

	Payment Due by Period (Millions of Dollars)				
	Total	Less than 1 Year	2-3 Years	4-5 Years	More than 5 Years
Long-term Debt	$ 365	$ 8	$ 15	$ 14	$ 328
Note Payable	43	43	—	—	—
Interest on Long-Term Debt	260	12	24	23	201
Purchased Water Contracts	97	7	11	7	72
Commercial Office Leases	6	1	2	2	1
TOTAL	$ 771	$ 71	$ 52	$ 46	$ 602

The table above does not reflect any anticipated cash payments for retirement benefit plan obligations. The effect on the timing and amount of these payments resulting from potential changes in actuarial assumptions and returns on plan assets cannot be estimated. In 2023, the Company contributed $1.3 million to its retirement benefit plans and expects to contribute approximately $1.8 million in 2024.

We do not currently have, nor have we ever had, any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements, or for other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts.

Critical Accounting Policies and Estimates

The application of accounting policies and standards often requires the use of estimates, assumptions and judgments. The Company regularly evaluates these estimates, assumptions and judgments, including those related to the calculation of pension and other retirement benefits, unbilled revenues, and the recoverability of certain assets, including regulatory assets. The Company bases its estimates, assumptions and judgments on historical experience and current operating environment. Changes in any of the variables that are used for the Company's estimates, assumptions and judgments may lead to significantly different financial statement results.

Our critical accounting policies and estimates are set forth below.

Regulatory Accounting

We maintain our books and records in accordance with accounting principles generally accepted in the United States of America. Middlesex and certain of its subsidiaries are subject to regulation in the states in which they operate. Those companies are required to maintain their accounts in accordance with regulatory authorities' rules and guidelines, which may differ from other authoritative accounting pronouncements. In those instances, the Company follows the guidance in the Financial Accounting Standards Board Accounting Standards Codification Topic 980 *Regulated Operations* (Regulatory Accounting).

In accordance with Regulatory Accounting, costs and obligations are deferred if it is probable that these items will be recognized for rate-making purposes in future rates. Accordingly, we have recorded costs and obligations, which will be amortized over various future periods. Any change in the assessment of the probability of rate-making treatment would require us to change the accounting treatment of the deferred item. We have no reason to believe any of the deferred items that are recorded will be treated differently by the regulators in the future.

Revenues

Revenues from our regulated customers, which include amounts billed quarterly to residential customers and monthly to industrial, commercial, fire-protection and wholesale customers, also include unbilled amounts based upon estimated usage from the date of the last meter reading to the end of the accounting period. While actual usage for customers may differ from the estimate, we believe the overall total estimate of consumption and revenue for the fiscal period will not differ materially from actual consumption.

Retirement Benefit Plans

We maintain a noncontributory defined benefit pension plan (Pension Plan) which covers all currently active employees hired prior to April 1, 2007. In addition, the Company maintains an unfunded supplemental plan for certain executive officers.

The Company has a retirement benefit plan other than pensions (Other Benefits Plan) for substantially all of its retired employees. Employees hired after March 31, 2007 are not eligible to participate in the Other Benefits Plan. Coverage includes healthcare and life insurance.

The costs for providing retirement benefits are dependent upon numerous factors, including actual plan experience and assumptions of future experience. Future retirement benefit plan obligations and expense will depend on future investment performance, changes in future discount rates and various other demographic factors related to the population participating in the Company's retirement benefit plans, all of which can change significantly in future years.

The primary assumptions used for determining future retirement benefit plans' obligations and costs, which are reviewed and revised as needed each year, are as follows:

- Discount Rate - calculated based on market rates for long-term, high-quality corporate bonds specific to the expected duration of our Pension Plan and Other Benefits Plan's liabilities;
- Compensation Increase - based on management projected future employee compensation increases;
- Long-Term Rate of Return - determined based on expected returns from our asset allocation for our Pension Plan and Other Benefits Plan assets;
- Mortality - The Company utilizes the Society of Actuaries' mortality table (Pri-2012) (Mortality Improvement Scale MP-2021); and
- Healthcare Cost Trend Rate - based on management projected future healthcare costs.

The discount rate, compensation increase rate and long-term rate of return used to determine future obligations of our retirement benefit plans as of December 31, 2023 are as follows:

	Pension Plan	Other Benefits Plan
Discount Rate	4.79%	4.79%
Compensation Increase	3.00%	3.00%
Long-term Rate of Return	7.00%	7.00%

For the 2023 valuation, costs and obligations for our Other Benefits Plan assumed an 7.5% annual rate of increase in the per capita cost of covered healthcare benefits in 2024 with the annual rate of increase declining 0.5% per year for 2025-2030, resulting in an annual rate of increase in the per capita cost of covered healthcare benefits of 4.5% by year 2030.

The following is a sensitivity analysis for certain actuarial assumptions used in determining projected benefit obligations (PBO) and expenses for our retirement benefit plans:

Pension Plan

Actuarial Assumptions	Estimated Increase/ (Decrease) on PBO (000s)	Estimated Increase/ (Decrease) on Expense (000s)
Discount Rate 1% Increase	$ (9,903)	$ (604)
Discount Rate 1% Decrease	12,086	992

Other Benefits Plan

Actuarial Assumptions	Estimated Increase/ (Decrease) on PBO (000s)	Estimated Increase/ (Decrease) on Expense (000s)
Discount Rate 1% Increase	$ (3,440)	$ (552)
Discount Rate 1% Decrease	4,286	180
Healthcare Cost Trend Rate 1% Increase	3,264	499
Healthcare Cost Trend Rate 1% Decrease	(2,676)	(696)

Recent Accounting Standards

See Note 1(r) of the Notes to Consolidated Financial Statements for a discussion of recent accounting pronouncements.

ITEM 7A. QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK.

We are exposed to market risk associated with changes in interest rates and commodity prices. The Company is subject to the risk of fluctuating interest rates in the normal course of business. Our policy is to manage interest rates through the use of fixed rate long-term debt and, to a lesser extent, variable rate short-term debt. The Company's interest rate risk related to existing fixed rate, long-term debt is not material due to the term of the majority of our First Mortgage Bonds, which have final maturity dates ranging from 2024 to 2059. Over the next twelve months, approximately $7.8 million of the current portion of existing long-term debt instruments will mature. The Company manages its interest rate risk related to existing variable-rate short-term debt by limiting our variable rate exposure. Applying a hypothetical change in the rate of interest charged by 10% on those fixed- and variable-rate borrowings would not have a material effect on our earnings.

Our risks associated with commodity price increases for chemicals, electricity and other commodities are reduced through contractual arrangements and the ability to recover price increases through rates. Non-performance by these commodity suppliers could have a material adverse impact on our results of operations, financial position and cash flows.

We are exposed to credit risk for both our Regulated and Non-Regulated business segments. Our Regulated operations serve residential, commercial, industrial and municipal customers while our Non-Regulated operations engage in business activities with developers, government entities and other customers. Our primary credit risk is exposure to customer default on contractual obligations and the associated loss that may be incurred due to the non-payment of customer accounts receivable balances. Our credit risk is managed through established credit and collection policies which are in compliance with applicable regulatory requirements and involve monitoring of customer exposure and the use of credit risk mitigation measures such as letters of credit or prepayment arrangements. Our credit portfolio is diversified with no significant customer or industry concentrations. In addition, our Regulated businesses are generally able to recover all prudently incurred costs including uncollectible customer accounts receivable expenses and collection costs through rates.

The Company's retirement benefit plan assets are exposed to the market price variations of debt and equity securities. Changes to the Company's retirement benefit plan assets' value can impact the Company's retirement benefit plan expense, funded status and future minimum funding requirements. Risk is mitigated through our ability to recover retirement benefit plan costs through customer rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Middlesex Water Company:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets and consolidated statements of capital stock and long-term debt of Middlesex Water Company (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of income, common stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, because of the effect of the material weaknesses described below on the achievement of the objectives of the control criteria, the Company has not maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. The following material weaknesses have been identified and included in the accompanying Management's Report on Internal Control Over Financial Reporting appearing under Item 9A:

There were ineffective information technology general controls (ITGCs) in the areas of user access and change management over certain information technology (IT) systems that support the Company's financial reporting processes. As a result, automated and manual process controls dependent on those ITGCs were also not effective.

There were ineffective controls related to income tax accounting for a non-routine transaction.

We considered the material weaknesses in determining the nature, timing, and extent of audit tests applied in our audit of the 2023 consolidated financial statements, and our opinion regarding the effectiveness of the Company's internal control over financial reporting does not affect our opinion on those consolidated financial statements.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an

understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Income Tax Accounting for Non-Routine Transaction

Critical Audit Matter Description

As described in Notes 1 and 2 to the consolidated financial statements, the Company executed a non-routine litigation settlement agreement in 2023. Management estimated and recorded the income tax effects of this non-routine transaction.

We identified management’s assessment, accounting and financial statement presentation and disclosure of income taxes for this non-routine transaction as a critical audit matter. Auditing management’s assessment, accounting, presentation and disclosure required a high degree of judgment and subjectivity and the use of individuals with specialized knowledge.

How We Addressed the Matter in Our Audit

The primary procedures we performed to address this critical audit matter included:

- Testing the effectiveness of controls relating to income taxes, including controls over the determination of the accounting and presentation for the non-routine transaction.
- Testing management’s process for determining the accounting for income taxes. Due to the non-routine nature of the transaction, we evaluated the appropriateness of the facts and circumstances relating to the transaction and the applicable tax regulations and financial reporting requirements.
- Utilizing internal tax specialists to assist in evaluating the appropriateness of the income tax accounting impact from the significant non-routine transaction and in assessing the presentation and disclosure in the consolidated financial statements.
- Evaluating whether the amounts and assumptions used in the calculation were reasonable.

/s/ Baker Tilly US, LLP

We have served as the Company's auditor since 2006.

Philadelphia, Pennsylvania
February 29, 2024

MIDDLESEX WATER COMPANY
CONSOLIDATED STATEMENTS OF INCOME
(In thousands except per share amounts)

	Years Ended December 31,		
	2023	**2022**	**2021**
Operating Revenues	**$ 166,274**	$ 162,434	$ 143,141
Operating Expenses:			
Operations and Maintenance	**83,113**	79,096	73,671
Depreciation	**25,194**	23,029	21,109
Other Taxes	**18,744**	18,208	15,150
Total Operating Expenses	**127,051**	120,333	109,930
Gain on Sale of Subsidiary	**—**	5,232	—
Operating Income	**39,223**	47,333	33,211
Other Income (Expense):			
Allowance for Funds Used During Construction	**2,433**	2,314	2,653
Other Income (Expense), net	**4,052**	5,389	3,305
Total Other Income, net	**6,485**	7,703	5,958
Interest Charges	**13,143**	9,367	8,114
Income before Income Taxes	**32,565**	45,669	31,055
Income Taxes	**1,041**	3,240	(5,488)
Net Income	**31,524**	42,429	36,543
Preferred Stock Dividend Requirements	**120**	120	120
Earnings Applicable to Common Stock	**$ 31,404**	$ 42,309	$ 36,423
Earnings per share of Common Stock:			
Basic	**$ 1.77**	$ 2.40	$ 2.08
Diluted	**$ 1.76**	$ 2.39	$ 2.07
Average Number of Common Shares Outstanding :			
Basic	**17,732**	17,597	17,492
Diluted	**17,847**	17,712	17,607

See Notes to Consolidated Financial Statements.

MIDDLESEX WATER COMPANY
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)

		December 31, 2023	December 31, 2022
ASSETS			
UTILITY PLANT:	Water Production	**$ 303,791**	$ 249,153
	Transmission and Distribution	**809,862**	735,138
	General	**100,593**	97,581
	Construction Work in Progress	**19,636**	53,570
	TOTAL	**1,233,882**	1,135,442
	Less Accumulated Depreciation	**235,540**	214,891
	UTILITY PLANT - NET	**998,342**	920,551
CURRENT ASSETS:	Cash and Cash Equivalents	**2,390**	3,828
	Accounts Receivable, net of allowance for uncollectible accounts of $2,137 and $2,326, respectively	**18,172**	16,018
	Litigation Settlement Receivable	**69,872**	—
	Unbilled Revenues	**9,297**	8,659
	Materials and Supplies (at average cost)	**6,972**	6,177
	Prepayments	**1,833**	2,624
	TOTAL CURRENT ASSETS	**108,536**	37,306
OTHER ASSETS:	Operating Lease Right of Use Asset	**3,185**	3,826
	Preliminary Survey and Investigation Charges	**1,932**	2,806
	Regulatory Assets	**90,694**	90,046
	Non-utility Assets - Net	**11,522**	11,207
	Employee Benefit Plans	**21,779**	8,689
	Other	**62**	19
	TOTAL OTHER ASSETS	**129,174**	116,593
	TOTAL ASSETS	**$ 1,236,052**	$ 1,074,450
CAPITALIZATION AND LIABILITIES			
CAPITALIZATION:	Common Stock, No Par Value	**$ 246,764**	$ 233,054
	Retained Earnings	**176,227**	167,274
	TOTAL COMMON EQUITY	**422,991**	400,328
	Preferred Stock	**2,084**	2,084
	Long-term Debt	**358,153**	290,280
	TOTAL CAPITALIZATION	**783,228**	692,692
CURRENT LIABILITIES:	Current Portion of Long-term Debt	**7,740**	17,462
	Notes Payable	**42,750**	55,500
	Accounts Payable	**27,618**	24,847
	Litigation Settlement Payable	**6,237**	—
	Accrued Taxes	**10,535**	12,162
	Accrued Interest	**3,138**	2,535
	Unearned Revenues and Advanced Service Fees	**1,390**	1,365
	Other	**4,421**	3,988
	TOTAL CURRENT LIABILITIES	**103,829**	117,859
COMMITMENTS AND CONTINGENT LIABILITIES (Note 4)			
OTHER LIABILITIES:	Customer Advances for Construction	**21,313**	21,382
	Lease Obligations	**3,063**	3,706
	Accumulated Deferred Income Taxes	**88,736**	77,783
	Regulatory Liabilities	**113,021**	46,734
	Other	**592**	919
	TOTAL OTHER LIABILITIES	**226,725**	150,524

CONTRIBUTIONS IN AID OF CONSTRUCTION	**122,270**	113,375
TOTAL CAPITALIZATION AND LIABILITIES	**$ 1,236,052**	$ 1,074,450

See Notes to Consolidated Financial Statements.

MIDDLESEX WATER COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2023	**2022**	**2021**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net Income	**$ 31,524**	$ 42,429	$ 36,543
Adjustments to Reconcile Net Income to			
Net Cash Provided by Operating Activities:			
Depreciation and Amortization	**29,442**	27,475	26,799
Provision for Deferred Income Taxes	**(5,599)**	(5,334)	(10,989)
Equity Portion of Allowance for Funds Used During Construction (AFUDC)	**(1,458)**	(1,387)	(1,505)
Cash Surrender Value of Life Insurance	**(300)**	401	(136)
Stock Compensation Expense	**2,214**	1,630	1,338
Gain on Sale of Subsidiary	**—**	(5,232)	—
Changes in Assets and Liabilities:			
Accounts Receivable	**(2,154)**	(707)	(742)
Unbilled Revenues	**(638)**	(1,386)	(208)
Materials & Supplies	**(795)**	(819)	(246)
Prepayments	**791**	256	6
Accounts Payable	**2,771**	3,722	(9,318)
Accrued Taxes	**(1,627)**	3,541	(1,517)
Accrued Interest	**603**	549	(151)
Employee Benefit Plans	**(1,340)**	(4,266)	(2,645)
Unearned Revenue & Advanced Service Fees	**25**	35	75
Other Assets and Liabilities	**(677)**	454	(4,276)
NET CASH PROVIDED BY OPERATING ACTIVITIES	**52,782**	61,361	33,028
CASH FLOWS FROM INVESTING ACTIVITIES:			
Utility Plant Expenditures, Including AFUDC of $975 in 2023, $927 in 2022 and $1,148 in 2021	**(90,179)**	(91,335)	(79,378)
Proceeds from Sale of Subsidiary	**—**	3,122	—
NET CASH USED IN INVESTING ACTIVITIES	**(90,179)**	(88,213)	(79,378)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Redemption of Long-term Debt	**(17,463)**	(7,423)	(52,691)
Proceeds from Issuance of Long-term Debt	**75,812**	2,662	86,595
Net Short-term Bank Borrowings	**(12,750)**	42,500	11,000
Deferred Debt Issuance Expense	**(131)**	(624)	(994)
Common Stock Issuance Expense	**(10)**	(32)	—
Payment of Grantee Withholding Taxes in Exchange for Restricted Stock	**(619)**	—	—
Proceeds from Issuance of Common Stock	**12,115**	10,335	3,837
Payment of Common Dividends	**(22,441)**	(20,810)	(19,373)
Payment of Preferred Dividends	**(120)**	(120)	(120)
Construction Advances and Contributions-Net	**1,566**	659	11,225
NET CASH PROVIDED BY FINANCING ACTIVITIES	**35,959**	27,147	39,479
NET CHANGES IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	**(1,438)**	295	(6,871)
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT BEGINNING OF PERIOD	**3,828**	3,533	10,404
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD	**$ 2,390**	$ 3,828	$ 3,533
SUPPLEMENTAL DISCLOSURE OF NON-CASH ACTIVITY:			
Utility Plant received as Construction Advances and Contributions	**$ 7,259**	$ 6,252	$ 4,750
Long-term Debt Deobligation	**$ —**	$ —	$ 64
Non-Cash Consideration for Sale of Subsidiary	**$ —**	$ 2,100	$ —
Litigation Settlement Receivable	**$ 69,872**	$ —	$ —
Litigation Settlement Payable	**$ 6,237**	$ —	$ —

SUPPLEMENTAL DISCLOSURE OF CASH FLOWS INFORMATION:

Cash Paid During the Year for:			
Interest	**$ 12,762**	$ 9,251	$ 8,546
Interest Capitalized	**$ 975**	$ 927	$ 1,148
Income Taxes	**$ 2,962**	$ 3,230	$ 3,335

See Notes to Consolidated Financial Statements.

MIDDLESEX WATER COMPANY
CONSOLIDATED STATEMENTS OF CAPITAL STOCK AND LONG-TERM DEBT
(In thousands)

	December 31, 2023	December 31, 2022
Common Stock, No Par Value		
Shares Authorized - 40,000		
Shares Outstanding - 2023 - 17,821; 2022 - 17,642	**$ 246,764**	$ 233,054
Retained Earnings	**176,227**	167,274
TOTAL COMMON EQUITY	**$ 422,991**	$ 400,328
Cumulative Preferred Stock, No Par Value:		
Shares Authorized - 120		
Shares Outstanding - 20		
Convertible:		
Shares Outstanding, $7.00 Series - 10	**$ 1,005**	$ 1,005
Nonredeemable:		
Shares Outstanding, $7.00 Series - 1	**79**	79
Shares Outstanding, $4.75 Series - 10	**1,000**	1,000
TOTAL PREFERRED STOCK	**$ 2,084**	$ 2,084
Long-term Debt:		
First Mortgage Bonds, 0.00%-5.50%, due 2024-2059	**$ 278,374**	$ 252,269
Amortizing Secured Notes, 3.94%-7.05%, due 2028-2046	**69,724**	44,918
State Revolving Trust Notes, 2.00%-4.03%, due 2025-2044	**16,638**	9,200
SUBTOTAL LONG-TERM DEBT	**364,736**	306,387
Add: Premium on Issuance of Long-term Debt	**6,529**	6,873
Less: Unamortized Debt Expense	**(5,372)**	(5,518)
Less: Current Portion of Long-term Debt	**(7,740)**	(17,462)
TOTAL LONG-TERM DEBT	**$ 358,153**	$ 290,280

See Notes to Consolidated Financial Statements.

MIDDLESEX WATER COMPANY
CONSOLIDATED STATEMENTS OF COMMON STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock Shares	Common Stock Amount	Retained Earnings	Total
Balance at January 1, 2021	17,473	$ 217,451	$ 128,757	$ 346,208
Net Income	—	$ —	$ 36,543	$ 36,543
Dividend Reinvestment & Common Stock Purchase Plan	40	3,837	—	3,837
Restricted Stock Award - Net - Employees	6	350	—	350
Stock Award - Board Of Directors	3	281	—	281
Cash Dividends on Common Stock ($1.108 per share)	—	—	(19,373)	(19,373)
Cash Dividends on Preferred Stock	—	—	(120)	(120)
Balance at December 31, 2021	17,522	$ 221,919	$ 145,807	$ 367,726
Net Income	—	$ —	$ 42,429	$ 42,429
Dividend Reinvestment & Common Stock Purchase Plan	114	10,335	—	10,335
Restricted Stock Award - Net - Employees	3	520	—	520
Stock Award - Board Of Directors	3	280	—	280
Cash Dividends on Common Stock ($1.1825 per share)	—	—	(20,810)	(20,810)
Cash Dividends on Preferred Stock	—	—	(120)	(120)
Common Stock Issuance Expenses	—	—	(32)	(32)
Balance at December 31, 2022	17,642	$ 233,054	$ 167,274	$ 400,328
Net Income	—	$ —	$ 31,524	$ 31,524
Dividend Reinvestment & Common Stock Purchase Plan	167	12,115	—	12,115
Restricted Stock Award - Net - Employees	7	1,235	—	1,235
Stock Award - Board Of Directors	5	360	—	360
Cash Dividends on Common Stock ($1.2625 per share)	—	—	(22,441)	(22,441)
Cash Dividends on Preferred Stock	—	—	(120)	(120)
Common Stock Issuance Expenses	—	—	(10)	(10)
Balance at December 31, 2023	**17,821**	**$ 246,764**	**$ 176,227**	**$ 422,991**

See Notes to Consolidated Financial Statements.

MIDDLESEX WATER COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 – Organization, Summary of Significant Accounting Policies and Recent Developments

(a) Organization - Middlesex Water Company (Middlesex or the Company) is the parent company and sole shareholder of Tidewater Utilities, Inc. (Tidewater), Pinelands Water Company (Pinelands Water) and Pinelands Wastewater Company (Pinelands Wastewater) (collectively, Pinelands), Utility Service Affiliates, Inc. (USA), Utility Service Affiliates (Perth Amboy) Inc. (USA-PA) and Twin Lakes Utilities, Inc. (Twin Lakes). Southern Shores Water Company, LLC (Southern Shores) and White Marsh Environmental Systems, Inc. (White Marsh) are wholly-owned subsidiaries of Tidewater.

Middlesex has operated as a water utility in New Jersey since 1897 and in Delaware, through our wholly-owned subsidiary, Tidewater, since 1992. We are in the business of collecting, treating, distributing and selling water for domestic, commercial, municipal, industrial and fire protection purposes. We also operate New Jersey municipal water, wastewater and storm water systems under contract and provide unregulated water and wastewater services in New Jersey and Delaware through our subsidiaries. Our rates charged to customers for water and wastewater services, the quality of services we provide and certain other matters are regulated in New Jersey and Delaware by the New Jersey Board of Public Utilities (NJBPU) and the Delaware Public Service Commission (DEPSC), respectively. Our USA, USA-PA and White Marsh subsidiaries are not regulated utilities.

(b) Principles of Consolidation – The financial statements for Middlesex and its wholly-owned subsidiaries (the Company) are reported on a consolidated basis. All significant intercompany accounts and transactions have been eliminated. Other financial investments in which the Company holds a 50% or less voting interest and cannot exercise control over the operation and policies of the investments are accounted for under the equity method of accounting. Under the equity method of accounting, the Company records its investment interests in Non-Utility Assets and its percentage share of the earnings or losses of the investees in Other Income (Expense).

(c) System of Accounts – The Company's regulated utilities maintain their accounts in accordance with the Uniform System of Accounts prescribed by the NJBPU and DEPSC.

(d) Regulatory Accounting - We maintain our books and records in accordance with accounting principles generally accepted in the United States of America. Middlesex and certain of its subsidiaries, which account for 93% of Operating Revenues and 99% of Total Assets, are subject to regulation in the state in which they operate. Those companies are required to maintain their accounts in accordance with regulatory authorities' rules and guidelines, which may differ from other authoritative accounting pronouncements. In those instances, the Company follows the guidance provided in Accounting Standards Codification (ASC) 980, *Regulated Operations*.

In accordance with ASC 980, *Regulated Operations*, costs and obligations are deferred if it is probable that these items will be recognized for rate-making purposes in future rates. Accordingly, we have recorded costs and obligations, which will be amortized over various future periods. Any change in the assessment of the probability of rate-making treatment will require us to change the accounting treatment of the deferred item. We have no reason to believe any of the deferred items that are recorded will be treated differently by the regulators in the future. For additional information, see Note 2 – *Rate and Regulatory Matters*.

(e) Retirement Benefit Plans - We maintain a noncontributory defined benefit pension plan (Pension Plan), which covers all active employees who were hired prior to April 1, 2007, as well as a defined contribution plan in which all employees are eligible to participate. In addition, the Company maintains an unfunded supplemental plan for certain of its executive officers. The Company has a retirement benefit plan other than pensions (Other Benefits Plan) for substantially all of its retired employees. Employees hired after March 31, 2007 are not eligible to participate in this plan. Coverage includes healthcare and life insurance.

The Company's costs for providing retirement benefits are dependent upon numerous factors, including actual plan experience and assumptions of future experience. Retirement benefit plan obligations and expense are determined

based on investment performance, discount rates and various other demographic factors related to the population participating in the Company's retirement benefit plans, all of which can change significantly in future years. For more information on the Company's Retirement Benefit Plans, see Note 7 – *Employee Benefit Plans*.

(f) Utility Plant – Utility Plant is stated at original cost as defined for regulatory purposes. Property accounts are charged with the cost of betterments and major replacements of property. Cost includes direct material, labor and indirect charges for pension benefits and payroll taxes. The cost of labor, materials, supervision and other expenses incurred in making repairs and minor replacements and in maintaining the properties is charged to the appropriate expense accounts. At December 31, 2023, there was no event or change in circumstance that would indicate that the carrying amount of any long-lived asset was not recoverable.

(g) Depreciation – Depreciation is computed by each regulated member of the Company utilizing a rate approved by the applicable regulatory authority. The accumulated provision for depreciation is charged with the cost of property retired, less salvage. The following table sets forth the range of depreciation rates for the major utility plant categories used to calculate depreciation for the years ended December 31, 2023, 2022, and 2021. These rates have been approved by the NJBPU or DEPSC:

Source of Supply	1.15% - 3.44%	Transmission and Distribution (T&D):	
Pumping	2.00% - 5.39%	T&D – Mains	1.10% - 3.13%
Water Treatment	1.65% - 7.09%	T&D – Services	2.12% - 3.16%
General Plant	2.08% - 17.84%	T&D – Other	1.61% - 4.63%
Wastewater Collection	1.42% - 1.81%		

Non-regulated fixed assets consist primarily of office buildings, furniture and fixtures, and transportation equipment. These assets are recorded at original cost and depreciation is calculated based on the estimated useful lives, ranging from 3 to 42 years.

(h) Preliminary Survey and Investigation (PS&I) Costs – In the design of water and wastewater systems that the Company ultimately intends to construct, own and operate, certain expenditures are incurred to advance those project activities. These PS&I costs are recorded as deferred charges on the balance sheet as these costs are expected to be recovered through future rates charged to customers as the underlying project assets are placed into service as utility plant. If it is subsequently determined that costs for a project recorded as PS&I are not recoverable through rates charged to our customers, the applicable PS&I costs are recorded as Other Expense on the Statement of Income at that time.

(i) Customers' Advances for Construction (CAC) – Utility plant and/or cash advances are provided to the Company by customers, real estate developers and builders in order to extend utility service to their properties. These transactions are recorded as CAC. Contractual Refunds of CACs in the form of cash are made by the Company and are based on either additional operating revenues generated from new customers or, as new customers are connected to the respective system. After all refunds are made and/or contract terms have expired, any remaining balance is transferred to Contributions in Aid of Construction.

Contributions in Aid of Construction (CIAC) – CIAC include direct non-refundable contributions of utility plant and/or cash and the portion of CAC that becomes non-refundable.

In accordance with regulatory requirements, CAC and CIAC are not depreciated. In addition, these amounts reduce the investment base for purposes of setting rates.

(j) Allowance for Funds Used During Construction (AFUDC) - Middlesex and its regulated subsidiaries capitalize AFUDC, which represents the cost of financing projects during construction. AFUDC is added to the construction costs of individual projects exceeding specific cost and construction period thresholds established for each company and then depreciated with the utility plant direct costs over the underlying assets' estimated useful life. AFUDC is calculated using each company's weighted cost of debt and equity as approved in their most recent

respective regulatory rate order. The AFUDC rates for the years ended December 31, 2022, 2021 and 2020 for Middlesex and Tidewater are as follows:

	2023	2022	2021
Middlesex	6.35%	6.35%	6.50%
Tidewater	7.92%	7.92%	7.92%

(k) Accounts Receivable – We record bad debt expense based on a variety of factors such as our customers' payment history, current economic conditions and trending reasonable and supportable forecasts on expected collectability of accounts receivable. The allowance for doubtful accounts was $2.1 million and $2.3 million as of December 31, 2023 and 2022, respectively. For the years ended December 31, 2023, 2022 and 2021, bad debt expense was $1.0 million, $0.5 million and $0.9 million, respectively. For the years ended December 31, 2023, 2022 and 2021, write-offs were $1.2 million, $0.7 million and $0.4 million, respectively.

(l) Revenues - The Company's revenues are primarily generated from regulated tariff-based sales of water and wastewater services and non-regulated operation and maintenance contracts for services on water and wastewater systems owned by others. Revenue from contracts with customers is recognized when control of a promised good or service is transferred to customers at an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods and services.

The Company's regulated revenue results from tariff-based sales from the provision of water and wastewater services to residential, industrial, commercial, fire-protection and wholesale customers. Residential customers are billed quarterly while most industrial, commercial, fire-protection and wholesale customers are billed monthly. Payments by customers are due between 15 to 30 days after the invoice date. Revenue is recognized as the water and wastewater services are delivered to customers as well as from accrual of unbilled revenues estimated from the last meter reading date to the end of the accounting period utilizing factors such as historical customer data, regional weather indicators and general economic conditions in the relevant service territories. Unearned Revenues and Advance Service Fees include fixed service charge billings in advance to Tidewater customers recognized as service is provided to the customer.

Non-regulated service contract revenues consist of base service fees as well as fees for additional billable services provided to customers. Fees are billed monthly and are due within 30 days after the invoice date. The Company considers the amounts billed to represent the value of these services provided to customers. These contracts expire at various times through 2032 and contain remaining performance obligations for which the Company expects to recognize revenue in the future. These contracts also contain customary termination provisions.

Substantially all of the amounts included in operating revenues and accounts receivable are from contracts with customers. The Company records its allowance for doubtful accounts based on historical write-offs combined with an evaluation of current economic conditions within its service territories.

The Company's contracts do not contain any significant financing components.

The Company's operating revenues are comprised of the following:

	(In Thousands) Years Ended December 31,		
	2023	2022	2021
Regulated Tariff Sales			
Residential	$ 86,581	$ 84,950	$ 77,699
Commercial	23,945	22,689	16,715
Industrial	11,586	11,152	8,990
Fire Protection	12,582	12,726	12,608
Wholesale	19,117	18,769	14,590
Non-Regulated Contract Operations	12,320	12,006	12,391
Total Revenue from Contracts with Customers	$ 166,131	$ 162,292	$ 142,993
Other Regulated Revenues	806	831	929
Other Non-Regulated Revenues	453	440	427
Inter-segment Elimination	(1,116)	(1,129)	(1,208)
Total Revenue	**$ 166,274**	**$ 162,434**	**$ 143,141**

(m) Unamortized Debt Expense and Premiums on Long-Term Debt - Unamortized Debt Expense and Premiums on Long-Term Debt, included on the consolidated balance sheet in long-term debt, are amortized over the lives of the related debt issues.

(n) Income Taxes - Middlesex files a consolidated federal income tax return for the Company and income taxes are allocated based on the separate return method. Certain income and expense items are accounted for in different time periods for financial reporting than for income tax reporting purposes. Deferred income taxes are provided on differences between the tax basis of assets and liabilities and the amounts at which they are carried in the consolidated financial statements. Investment tax credits have been deferred and are amortized over the estimated useful life of the related property. In the event that there are interest and penalties associated with income tax adjustments from income tax authority examinations, these amounts will be reported under interest expense and other expense, respectively. For more information on income taxes, see Note 3 – *Income Taxes*.

(o) Cash and Cash Equivalents - For purposes of reporting cash flows, the Company considers all highly liquid investments with original maturity dates of three months or less to be cash equivalents. Cash and cash equivalents represent bank balances and money market funds with investments maturing in less than 90 days.

(p) Restricted Cash – Restricted cash includes cash proceeds from loan transactions entered into through government financing programs and are held in trusts for specific capital expenditures or debt service.

(q) Use of Estimates - Conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts in the financial statements. Actual results could differ from those estimates.

(r) Recent Accounting Pronouncements - There are no new adopted or proposed accounting guidance that the Company is aware of that could have a material impact on the Company's consolidated financial statements.

(s) Regulatory Notice of Non-Compliance – In September 2021, the New Jersey Department of Environmental Protection (NJDEP) issued a Notice of Non-Compliance (Notice) to Middlesex based on self-reporting by Middlesex that the level of Perfluorooctanoic Acid (PFOA) in water treated at its Park Avenue Wellfield Treatment Plant (Park Avenue Plant) in South Plainfield, New Jersey exceeded a NJDEP standard that became effective in 2021.

Prior to 2021, the Company began design for construction of an enhanced treatment process at the Park Avenue Plant to comply with the new standard prior to the regulation being enacted. Since completion was not expected until mid-2023, the Company implemented an interim solution to meet the Notice requirements.

In June 2022, a portion of the enhanced treatment process was completed, placed into service and is effectively treating the ground water in compliance with all state and federal drinking water standards.

In September 2022, the Company entered into an Administrative Consent Order (ACO) with the NJDEP with respect to the Notice, which voided any further notice regarding the fact that the permanent treatment solution was not in service by September 7, 2022 as required by the Notice. As prescribed in the ACO, the Company was to issue periodic public notifications until the ACO was closed.

In June 2023, the Company completed the permanent construction of the entire Park Avenue Plant treatment upgrades and placed the upgrades into operation in full compliance with the NJDEP PFOA standards. In October 2023, the Company received confirmation from the NJDEP that it has complied with all requirements of the ACO and consequently, the ACO has been closed.

The Company had previously initiated a lawsuit against 3M Company (3M), in connection with the Company's claim that 3M introduced perfluoroalkyl substances (commonly known as "PFAS"), which include PFOA, into the Company's water supply at its Park Avenue Plant.

On August 29, 2023, Middlesex and 3M executed a settlement agreement (the Settlement Agreement) to resolve the lawsuit. The Settlement Agreement provides that:

- 3M will pay $93.2 million in two installments, one payment of $23.3 million received in December 2023 and one payment of $69.9 million in July 2024. Middlesex is obligated to pay 30% of the proceeds received plus reimbursable out-of-pocket legal expenses to its lawyers as legal fees, or $29.5 million in total;

- Proceeds received from the Settlement Agreement are being used to mitigate the impact of the increase in Middlesex's customer rates approved by the NJBPU, which is to be implemented March 1, 2024 (for further discussion of Middlesex's base rate increase, see Note 2, *Rate Matters, Middlesex* below);

- Middlesex, by nature of its status as a U.S. water purveyor impacted by PFAS, was automatically included in a Multi-District Litigation Settlement before the United States District Court for the District of South Carolina in which 3M and other companies (Non-3M Companies) are participants. Middlesex agreed as part of the Settlement Agreement to remain a member of the plaintiff class in order to be eligible to obtain future additional compensation from 3M and the Non-3M Companies for any future remediation which may be required of its water treatment facilities; and

- Middlesex and 3M agreed to enter into a joint mediation which occurred November 2023, to resolve two PFOA-related class action lawsuits against Middlesex seeking restitution for medical, water replacement and other claimed related costs. Both Middlesex and 3M are defendants in these lawsuits. These lawsuits remain in the legal process and their ultimate resolution is not known at this time.

Note 2 - Rate and Regulatory Matters

Rate Matters

Middlesex – In February 2024, Middlesex's petition to the NJBPU, filed in May 2023, seeking permission to increase its base water rates was concluded, based on a negotiated settlement that is expected to increase annual operating revenues by $15.4 million effective March 1, 2024. The approved tariff rates were designed to recover increased operating costs as well as a return on invested capital of $563.1 million, based on an authorized return on common equity of 9.6%. Middlesex has made capital infrastructure investments to ensure prudent upgrade and replacement of its utility assets to support continued regulatory compliance, resilience and overall quality of service. Net proceeds from the 3M Settlement Agreement were used to recover costs for the construction of the Park Avenue Plant PFAS treatment upgrades, including depreciation and carrying costs.

The rate case settlement will result in the reclassification of $48.3 million from Regulatory Liabilities to CIAC in the March 31, 2024 balance sheet. The Company will also record in the first quarter of 2024 the recovery of $0.7 million and $2.4 million of prior year depreciation and carrying costs, respectively, as well as the recovery of $1.4 million of prior year costs which were associated with the interim solution to comply with the Notice, all of which were approved in the rate case settlement. For further information on the 3M Settlement Agreement, see *Note 1(s) - Regulatory Notice of Non-Compliance* above.

In January 2024, the NJBPU approved Middlesex's petition for the proposed cost recovery of its Lead Service Line Replacement (LSLR) Plan and cost recovery of project costs associated with replacing Middlesex customer-owned lead service lines. Replacement of Middlesex and Middlesex customer-owned lead service lines is required by the New Jersey LSLR Law. Under this legislation, the costs associated with replacing customer-owned lead service lines are recoverable through future customer surcharges. Cost recovery for replacing Company-owned lead service lines are recoverable through traditional base rate case filings. The current estimates for replacement of Middlesex and Middlesex customer-owned lead service lines are approximately $46 million to $77 million over a nine-year period.

In October 2023, the NJBPU approved Middlesex's petition for a Distribution System Improvement Charge (DSIC) Foundation Filing, which is a prerequisite to implementing a DSIC rate that allows water utilities to recover investments in, and generate a return on, qualifying capital improvements to their water distribution system made between base rate proceedings. Middlesex is authorized to recover DSIC revenues up to five percent (5%) of total revenues established in Middlesex's 2021 base rate proceeding, or approximately $5.5 million. Semi-annually, beginning in April 2024, the Company must file for a change in its DSIC rate seeking recovery for DSIC-eligible investments made during the period. DSIC rates remain in effect until Middlesex's next base rate case increase subsequent to the March 1, 2024 increase. Under the terms of the Foundational Filing, the Company is required to file a base rate petition before October 2026.

In September 2022, the NJBPU approved Middlesex's Emergency Relief Motion to reset its Purchased Water Adjustment Clause (PWAC) tariff rate to recover additional costs of $2.7 million for the purchase of treated water from a non-affiliated water utility. A PWAC is a rate mechanism that allows for recovery of increased purchased water costs between base rate case filings. The increase, effective October 1, 2022, was on an interim basis and subject to refund with interest, pending final resolution of this matter, which the NJBPU provided in August 2023. In connection with the full recovery of the $2.7 million of additional costs, Middlesex reset its PWAC rate to zero in October 2023.

In December 2021, Middlesex's petition to the NJBPU seeking permission to increase its base water rates was concluded, based on a negotiated settlement, resulting in an expected increase in annual operating revenues of $27.7 million. The approved tariff rates were designed to recover increased operating costs, as well as a return on invested capital of $513.5 million, based on an authorized return on common equity of 9.6%. The increase was implemented in two phases with $20.7 million of the increase effective January 1, 2022 and the remaining $7.0 million effective January 1, 2023. As part of the negotiated settlement, the PWAC was reset to zero.

Tidewater – In December 2023, the DEPSC approved Tidewater's application to implement a new DSIC. Effective January 1, 2024, Tidewater implemented a DSIC rate of 3.71%, which is expected to generate revenue of approximately $1.3 million annually. A Delaware DISC is subject to a semi-annual reset with an overall maximum rate of 7.5%.

In October 2023, the DEPSC issued an Order that made a temporary base rate reduction permanent. The initial DEPSC order required Tidewater to reduce its base rates charged to general metered and private fire customers by 6.0%, effective for service rendered on and after September 1, 2022. The rate reduction was ordered as a result of Tidewater earning in excess of its authorized return, and resulted in reduced annual revenues of approximately $2.1 million in 2023.

In March 2021, Tidewater was notified by the DEPSC that it had determined Tidewater's earned rate of return exceeded the rate of return authorized by the DEPSC. Consequently, Tidewater reset its DSIC rate to zero effective April 1, 2021 and refunded approximately $1.0 million to customers primarily in the form of an account credit for DSIC revenue previously billed between April 1, 2020 and March 31, 2021.

Pinelands – In April 2023, Pinelands Water and Pinelands Wastewater concluded their base rate case matters when the NJBPU approved a combined $1.0 million increase in annual base rates, effective April 15, 2023. The requests were necessitated by capital infrastructure investments the companies have made as well as increased operations and maintenance costs.

Southern Shores - Effective January 1, 2020, the DEPSC approved the renewal of a multi-year agreement for water service to a 2,200 unit condominium community we serve in Sussex County, Delaware. Under the agreement, current rates were to remain in effect until December 31, 2024, unless there are unanticipated capital expenditures or regulatory related changes in operating expenses exceeding certain thresholds during this time period. In 2022, capital expenditures did exceed the established threshold and rates were increased by 5.39%, effective January 1, 2023. Beginning in 2025 and thereafter, inflation-based rate increases cannot exceed the lesser of the regional Consumer Price Index or, 3%. Inflation based increases are in addition to the threshold rate increases. This agreement expires on December 31, 2029.

Twin Lakes Utilities, Inc. (Twin Lakes) - Twin Lakes provides water services to approximately 115 residential customers in Shohola, Pennsylvania. Pursuant to the Pennsylvania Public Utility Code, Twin Lakes filed a petition requesting the Pennsylvania Public Utilities Commission (PAPUC) to order the acquisition of Twin Lakes by a capable public utility. The PAPUC assigned an Administrative Law Judge (ALJ) to adjudicate the matter and submit a recommended decision (Recommended Decision) to the PAPUC. As part of this legal proceeding the PAPUC also issued an Order in January 2021 appointing a large Pennsylvania based investor-owned water utility as the receiver (the Receiver Utility) of the Twin Lakes system until the petition is fully adjudicated by the PAPUC. In November 2021, the PAPUC issued an Order affirming the ALJ's Recommended Decision, ordering the Receiver Utility to acquire the Twin Lakes water system and for Middlesex, the parent company of Twin Lakes, to submit $1.7 million into an escrow account within 30 days. Twin Lakes immediately filed a Petition For Review (PFR) with the Commonwealth Court of Pennsylvania (the Commonwealth Court) seeking reversal and vacation of the escrow requirement on the grounds that it violates the Pennsylvania Public Utility Code as well as the United States Constitution. In addition, Twin Lakes filed an emergency petition for stay of the PAPUC Order pending the Commonwealth Court's review of the merits arguments contained in Twin Lakes' PFR. In December 2021, the Commonwealth Court granted Twin Lakes' emergency petition, pending its review. In August 2022, the Commonwealth Court issued an opinion upholding PAPUC's November 2021 Order in its entirety. In September 2022, Twin Lakes filed a Petition For Allowance of Appeal (Appeal Petition) to the Supreme Court of Pennsylvania seeking reversal of the Commonwealth Court's decision to uphold the escrow requirement on the grounds that the Commonwealth Court erred in failing to address Twin Lakes' claims that because the $1.7 million escrow requirement placed on Middlesex violated Middlesex's constitutional rights, Middlesex's refusal to submit this escrow payment would jeopardize the relief Twin Lakes was otherwise entitled to in the appointment of the Receiver Utility. In March 2023, the Supreme Court of Pennsylvania issued a decision denying Twin Lakes' Appeal Petition without addressing this claim on the merits. As a result of the Pennsylvania Courts' failure to address Twin Lakes' claim, Middlesex subsequently filed a Complaint with the United States District Court for the Middle District of Pennsylvania to address the issue of whether the PAPUC's Order violated Middlesex's rights under the United States Constitution. On January 18, 2024, the District Court issued an Order dismissing Middlesex's Complaint without addressing the issue of whether the PAPUC's Order violated Middlesex's rights under the United States Constitution. On January 31, 2024, Middlesex filed a Notice of Appeal of the District Court's decision with the United States Court of Appeals for the Third Circuit. We are currently awaiting the Court's decision.

The financial results, total assets and financial obligations of Twin Lakes are not material to Middlesex.

Regulatory Matters

We have recorded certain costs as regulatory assets because we expect full recovery of, or are currently recovering, these costs in the rates we charge customers. These deferred costs have been excluded from rate base and, therefore, we are not earning a return on the unamortized balances. These items are detailed as follows:

	(Thousands of Dollars) December 31,		Remaining
Regulatory Assets	**2023**	**2022**	**Recovery Periods**
Retirement Benefits	$ —	$ 9,214	Various
Income Taxes	84,419	74,422	Various
Rate Cases, Tank Painting, and Other	6,275	6,410	2-10 years
Total	$ 90,694	$ 90,046	

Retirement benefits include pension and other retirement benefits that have been recorded on the Consolidated Balance Sheet in accordance with the guidance provided in ASC 715*, Compensation – Retirement Benefits.* These amounts represent obligations in excess of current funding (regulatory asset) or less than current funding (regulatory liability, which was $1.5 million as of December 31, 2023), which the Company believes will be fully recovered or refunded in rates set by the regulatory authorities.

The recovery period for income taxes is dependent upon when the temporary differences between the tax and book treatment of various items reverse.

The net proceeds available to Middlesex from the 3M Settlement Agreement, after excluding legal fees, $63.6 million, were recorded as a regulatory liability, as of December 31, 2023. For further information on the 3M Settlement Agreement, see *Rates, Note 1(s) - Regulatory Notice of Non-Compliance* and *Rate Matters, Middlesex* above.

The 2017 Tax Act reduced the statutory corporate federal income tax rate from 35% to 21%. The tariff rates charged to customers effective prior to 2018 in the Company's regulated companies include recovery of income taxes at the statutory rate in effect at the time those rates were approved by the respective state public utility commissions. As of December 31, 2023 and 2022, the Company has recorded regulatory liabilities of $28.2 million and $29.0 million, respectively for excess income taxes collected through rates due to the lower income tax rate under the 2017 Tax Act. These regulatory liabilities are overwhelmingly related to utility plant depreciation deduction timing differences, which are subject to Internal Revenue Service (IRS) normalization rules. The IRS rules limit how quickly the excess taxes attributable to accelerated taxes can be returned to customers. The current base rates for Middlesex and Pinelands customers became effective after 2017 and reflect the impact of the 2017 Tax Act on their revenue requirements.

The Company uses composite depreciation rates for its regulated utility assets, which is currently an acceptable method under generally accepted accounting principles and is widely used in the utility industry. Historically, under the composite depreciation method, the anticipated costs of removing assets upon retirement are provided for over the life of those assets as a component of depreciation expense. The Company recovers certain asset retirement costs through rates charged to customers as an approved component of depreciation expense. As of December 31, 2023 and 2022, the Company has approximately $19.7 million and $17.7 million, respectively, of expected costs of removal recovered currently in rates in excess of actual costs incurred as regulatory liabilities.

Note 3 – Income Taxes

Income tax expense (benefit) differs from the amount computed by applying the statutory rate on book income subject to tax for the following reasons:

	(Thousands of Dollars) Years Ended December 31,		
	2023	2022	2021
Income Tax at Statutory Rate	$ 6,839	$ 9,590	$ 6,521
Tax Effect of:			
Utility Plant Related	(1,495)	(1,106)	(1,290)
Tangible Property Repairs	(5,475)	(6,767)	(12,281)
State Income Taxes – Net	1,117	1,296	1,499
Other	55	227	63
Total Income Tax Expense (Benefit)	$ 1,041	$ 3,240	$ (5,488)

Income tax expense (benefit) is comprised of the following:

	(Thousands of Dollars) Years Ended December 31,		
	2023	2022	2021
Current:			
Federal	$ 2,952	$ 425	$ (8,247)
State	1,066	1,381	1,467
Deferred:			
Federal	(3,261)	1,242	933
State	348	260	431
Investment Tax Credits	(64)	(68)	(72)
Total Income Tax Expense (Benefit)	$ 1,041	$ 3,240	$ (5,488)

As part of Middlesex's March 2018 base water rate settlement with the NJBPU, Middlesex received approval for regulatory accounting treatment of income tax benefits associated with the adoption of tangible property regulations issued by the IRS (fully amortized as of March 31, 2022) as well as prospective recognition of the income tax benefits for the immediate deduction of repair costs on tangible property. This results in significant reductions in the Company's effective income tax rate, current income tax expense (benefit) and deferred income tax expense (benefit).

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial purposes and the amounts used for income tax purposes. The components of the net deferred tax liability are as follows:

	(Thousands of Dollars) December 31,	
	2023	2022
Utility Plant Related	$ 84,330	$ 72,996
Customer Advances	(3,546)	(3,568)
Employee Benefits	7,100	7,380
Investment Tax Credits	240	304
Other	612	671
Total Accumulated Deferred Income Taxes	$ 88,736	$ 77,783

Note 4 - Commitments and Contingent Liabilities

Water Supply – Middlesex's agreement with the New Jersey Water Supply Authority (NJWSA) for the purchase of untreated water expires November 30, 2048. NJSWA provides for an average purchase of 27.0 million gallons a day (mgd), with a peak up to 47.0 mgd. Pricing is set annually by the NJWSA through a public rate making process. The agreement has provisions for additional pricing in the event Middlesex overdrafts or exceeds certain monthly and annual thresholds.

Middlesex also has an agreement with a non-affiliated NJBPU-regulated water utility for the purchase of treated water. This agreement, which expires February 27, 2026, provides for the minimum purchase of 3.0 mgd of treated water with provisions for additional purchases if needed.

Tidewater contracts with the City of Dover, Delaware to purchase treated water of up to 60.0 million gallons annually.

Purchased water costs are shown below:

	(Millions of Dollars) Years Ended December 31,		
	2023	2022	2021
Untreated	$ 3.2	$ 3.2	$ 3.3
Treated	5.3	3.9	3.6
Total Costs	$ 8.5	$ 7.1	$ 6.9

Leases - The Company determines if an arrangement is a lease at the inception of the lease. Generally, a lease agreement exists if the Company determines that the arrangement gives the Company control over the use of an identified asset and obtains substantially all of the benefits from the identified asset.

The Company has entered into an operating lease of office space for administrative purposes, expiring in 2030. The Company has not entered into any finance leases. The exercise of a lease renewal option for the Company's administrative offices is solely at the discretion of the Company.

The right-of-use (ROU) asset recorded represents the Company's right to use an underlying asset for the lease term and lease liability represents the Company's obligation to make lease payments arising from the lease. Lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company's operating lease does not provide an implicit discount rate and as such the Company used an estimated incremental borrowing rate (4.03%) based on the information available at commencement date in determining the present value of lease payments.

Given the impacts of accounting for regulated operations, and the resulting recognition of expense at the amounts recovered in customer rates, expenditures for operating leases are consistent with lease expense and was $0.8 million for each of the years ended December 31, 2023, 2022 and 2021.

Information related to operating lease ROU assets is as follows:

	(In Millions) December 31,	
	2023	2022
ROU Asset at Lease Inception	$ 7.3	$ 7.3
Accumulated Amortization	(4.1)	(3.5)
Current ROU Asset	$ 3.2	$ 3.8

The Company's future minimum operating lease commitments as of December 31, 2023 are as follows:

	(In Millions) December 31, 2023
2024	0.8
2025	0.8
2026	0.9
2027	0.9
2028	0.9
Thereafter	0.9
Total Lease Payments	$ 5.2
Imputed Interest	(1.5)
Present Value of Lease Payments	3.7
Less Current Portion*	(0.6)
Non-Current Lease Liability	$ 3.1

*Included in Other Current Liabilities

Construction –The Company has projected to spend approximately $75 million in 2024, $81 million in 2025 and $70 million in 2026 on its construction program. As of December 31, 2023, the Company has entered into several contractual construction agreements that in total obligate it to expend an estimated $6.7 million in the future. The actual amount and timing of capital expenditures is dependent on the need for replacement of existing infrastructure, customer growth, residential new home construction and sales, project scheduling, supply chain issues and continued refinement of project scope and costs. There is no assurance that projected customer growth and residential new home construction and sales will occur.

Contingencies – Based on our operations in the heavily-regulated water and wastewater industries, the Company is routinely involved in disputes, claims, lawsuits and other regulatory and legal matters, including responsibility for fines and penalties relative to regulatory compliance. At this time, Management does not believe the final resolution of any such matters, whether asserted or unasserted, will have a material adverse effect on the Company's financial position, results of operations or cash flows. In addition, the Company maintains business insurance coverage that may mitigate the effect of any current or future loss contingencies.

PFOA Matter - In November 2021, the Company was served with two PFOA-related class action lawsuits seeking restitution for medical, water replacement and other related costs and economic damages. Middlesex and 3M agreed to enter into a joint mediation on these lawsuits (for further discussion of this matter, see *Note 1(s) Regulatory Notice of Non-Compliance*).

Change in Control Agreements – The Company has Change in Control Agreements with its executive officers that provide compensation and benefits in the event of termination of employment in connection with a change in control of the Company.

Note 5 – Short-term Borrowings

Information regarding the Company's short-term borrowings for the years ended December 31, 2023 and 2022 is summarized below:

	(In Millions) 2023	2022
Average Amount Outstanding	$ 35.7	$ 28.9
Weighted Average Interest Rate	6.13%	3.34%
Notes Payable at Year-End	$ 42.8	$ 55.5
Weighted Average Interest Rate at Year-End	6.50%	5.17%

The Company maintains bank lines of credit aggregating $140.0 million.

	(In Millions) As of December 31, 2023				
	Outstanding	Available	Maximum	Credit Type	Line of Credit Renewal Date
Bank of America	$ —	$ 60.0	$ 60.0	Uncommitted	January 24, 2025
PNC Bank	39.8	28.2	68.0	Committed	January 31, 2026
CoBank, ACB (CoBank)	3.0	9.0	12.0	Committed	May 20, 2026
	$ 42.8	$ 97.2	$ 140.0		

The maturity dates for the Notes Payable as of December 31, 2023 are extendable at the discretion of the Company.

The interest rates are set for borrowings under the Bank of America and PNC Bank lines of credit using the Secured Overnight Financing Rate (SOFR) and then adding a specific financial institution credit spread. The interest rate for borrowings under the CoBank line of credit are set weekly using CoBank's internal cost of funds index that is similar to the SOFR and adding a credit spread. There is no requirement for a compensating balance under any of the established lines of credit.

Note 6 - Capitalization

All the transactions discussed below related to the issuance of securities were approved by either the NJBPU or DEPSC, except where otherwise noted.

Common Stock

The Company issues shares of its common stock in connection with its Middlesex Water Company Investment Plan (the Investment Plan), a direct share purchase and dividend reinvestment plan for the Company's common stock. The Company raised approximately $12.1 million under the Investment Plan during 2023. On March 1, 2023, the Company began offering shares of its common stock for purchase at a 3% discount to participants in the Investment Plan. The discount offering ended December 1, 2023. The discount applied to all common stock purchases made under the Investment Plan during that time period, whether by optional cash payment or by dividend reinvestment. Since the inception of the Investment Plan and its predecessor plan, the Company has periodically replenished the level of authorized shares in the plans. In May 2023, Middlesex received approval from the NJBPU to increase the number of authorized shares under the Investment Plan by 0.7 million shares. Currently, 0.7 million shares remain

registered with the United States Securities and Exchange Commission and available for issuance to participants under the Investment Plan.

In April 2023, Middlesex received approval from the NJBPU to issue and sell up to 1.0 million shares of its common stock, without par value, through December 31, 2025. Sales of additional shares of common stock are part of the Company's comprehensive financing plan to fund its multi-year utility plant infrastructure investment program. As described below in "Long-term Debt", the NJBPU also approved the debt funding component of the financing plan.

The Company issues common shares under a restricted stock plan for certain management employees, which is described in Note 7 – *Employee Benefit Plans*.

The Company maintains a stock plan for its independent Directors as a component of outside members of the Board of Directors compensation. For the years ended December 31, 2023, 2022 and 2021, 4,608, 2,664 and 3,444 shares, respectively, of Middlesex common stock were granted and issued to the Company's independent Directors under the plan. The maximum number of shares authorized for grant under the plan is 100,000, of which 41,853 shares remain available for future awards.

In the event dividends on the preferred stock are in arrears, no dividends may be declared or paid on the common stock of the Company.

Preferred Stock

At December 31, 2023 and 2022, there were 120,000 shares of preferred stock authorized and less than 21,000 shares of preferred stock outstanding. There were no preferred stock dividends in arrears.

The Company may not pay any dividends on its common stock unless full cumulative dividends to the preceding dividend date for all outstanding shares of preferred stock have been paid or set aside for payment. If four or more quarterly dividends are in arrears, the preferred shareholders, as a class, are entitled to elect two members to the Board of Directors in addition to Directors elected by holders of the common stock. In addition, if Middlesex were to liquidate, holders of preferred stock would be paid back the stated value of their preferred shares before any distributions could be made to common stockholders.

The conversion feature of the no par $7.00 Series Cumulative and Convertible Preferred Stock allows the security holders to exchange one convertible preferred share for twelve shares of the Company's common stock. In addition, the Company may redeem up to 10% of the outstanding convertible stock in any calendar year at a price equal to the fair value of twelve shares of the Company's common stock for each share of convertible stock redeemed.

Long-term Debt

Subject to regulatory approval, the Company periodically issues long-term debt to fund its investments in utility plant. To the extent possible and fiscally prudent, the Company finances qualifying capital projects under State Revolving Fund (SRF) loan programs in New Jersey and Delaware. These government programs provide financing at interest rates typically below rates available in the broader financial markets. A portion of the borrowings under the New Jersey SRF is interest-free.

Under the New Jersey SRF program, borrowers first enter into a construction loan agreement with the New Jersey Infrastructure Bank (NJIB) at a below market interest rate. When construction on the qualifying project is substantially complete, NJIB will coordinate the conversion of the construction loan into a long-term securitized loan with a portion of the principal balance having a stated interest rate of zero percent (0%) and a portion of the principal balance at a market interest rate at the time of closing using the credit rating of the State of New Jersey. As a result of revised project funding priority ranking for the NJIB SRF Program, the Company has no current projects in the NJIB SRF program. However, it is seeking to have Middlesex's LSLR Project added to the qualified list in order to borrow under the NJIB SRF program.

Under the Delaware SRF program, borrowers 1) enter into a long-term note agreement for a term not to exceed twenty years, 2) submit requisitions for cost reimbursements during the construction period for up to two years after the agreement is executed and 3) as the proceeds are received from the requisitions, borrowers record a corresponding debt obligation amount.

In April 2023, Middlesex received approval from the NJBPU to borrow up to $300.0 million from the New Jersey SRF Program, the New Jersey Economic Development Authority, private placement and other financial institutions as needed through December 31, 2025. The Company may issue debt securities in a series of one or more transaction offerings to help fund Middlesex's multi-year capital construction program.

In March 2023, Middlesex closed on a $40.0 million, 5.24% private placement of First Mortgage Bonds (FMBs) with a 2043 maturity date designated as Series 2023A. Proceeds were used to reduce the Company's outstanding balances under its bank lines of credit.

In May 2022, Middlesex repaid its two outstanding NJIB construction loans by issuing FMBs to the NJIB under two loan agreements. The total amount of FMBs issued is $52.2 million and designated as Series 2022A ($16.2 million) and Series 2022B ($36.0 million). The interest rate on the Series 2022A bond is zero and the interest rate on the Series 2022B bond ranges between 2.7% and 3.0%. The final maturity date for both FMBs is August 1, 2056, with scheduled debt service payments over the life of these loans.

In November 2021, Middlesex closed on a $19.5 million, 2.79% private placement of FMBs with a 2041 maturity date designated as Series 2021A. Proceeds were used to reduce the Company's outstanding balances under its lines of credit.

In June 2021, Middlesex received approval from the NJBPU to redeem up to $45.5 million of outstanding FMBs, specifically Series RR ($22.5 million) and Series SS ($23.0 million), and issue replacement FMBs at an overall lower cost of debt. In November 2021, Middlesex closed on a $45.5 million, 2.90% private placement of FMBs, designated as Series 2021B with a 2051 maturity date to effectuate the redemptions.

In May 2023, Tidewater closed on a $20.0 million loan from CoBank, ACB (CoBank) with an interest rate of 5.71% and a 2033 maturity date and fully drew all funds by June 30, 2023. Proceeds from the loan were used to pay off Tidewater's outstanding balances under its bank lines of credit and for other general corporate purposes.

In April 2023, Tidewater closed on three DEPSC-approved Delaware SRF loans totaling $10.2 million, all at interest rates of 2.0% with maturity dates in 2043 and 2044. These loans are for the construction, relocation, improvement, and/or interconnection of transmission mains. Tidewater has drawn a total of $6.1 million through December 31, 2023 and expects that the requisitions will continue through mid-2025.

In December 2021, Tidewater closed on a DEPSC-approved $5.0 million Delaware SRF loan at an interest rate of 2.0%. The loan was for construction of a one million gallon elevated storage tank. Through December 31, 2023, Tidewater has drawn a total of $4.8 million and expects that the requisitions will continue through the first quarter of 2024. The final maturity date on the loan is 2044.

In September 2021, Tidewater completed its $20 million secured borrowing with CoBank, at an interest rate of 3.94% and a 2046 maturity date. Proceeds from the loan were used to pay off its outstanding balances under its lines of credit.

In July 2023, Pinelands Water and Pinelands Wastewater closed on $3.9 million and $3.6 million CoBank amortizing mortgage type loans, respectively, with an interest rate of 6.17% and a final maturity date of 2043 for each loan. Proceeds were used to pay off outstanding intercompany loans with Middlesex and for ongoing capital projects.

The aggregate annual principal repayment obligations as of December 31, 2023 for all long-term debt over the next five years and thereafter are shown below:

Year	(Millions of Dollars) Annual Maturities
2024	$ 7.7
2025	$ 7.6
2026	$ 7.4
2027	$ 7.2
2028	$ 6.9
Thereafter	$ 327.9

The weighted average interest rate on all long-term debt at December 31, 2023 and 2022 was 3.65% and 2.98%, respectively.

Substantially all of the utility plant of the Company is subject to the lien of its mortgage, which includes debt service and capital ratio covenants. The Company is in compliance with all of its mortgage covenants and restrictions.

Earnings Per Share

The following table presents the calculation of basic and diluted earnings per share (EPS) for the years ended December 31, 2023, 2022 and 2021. Basic EPS is computed on the basis of the weighted average number of shares outstanding. Diluted EPS assumes the conversion of the Convertible Preferred Stock $7.00 Series.

	(In Thousands, Except Per Share Amounts)					
	2023		2022		2021	
Basic:	Income	Shares	Income	Shares	Income	Shares
Net Income	$ 31,524	17,732	$ 42,429	17,597	$ 36,543	17,492
Preferred Dividend	(120)		(120)		(120)	
Earnings Applicable to Common Stock	$ 31,404	17,732	$ 42,309	17,597	$ 36,423	17,492
Basic EPS	$ 1.77		$ 2.40		$ 2.08	
Diluted:						
Earnings Applicable to Common Stock	$ 31,404	17,732	$ 42,309	17,597	$ 36,423	17,492
Convertible Preferred $7.00 Series Dividend	67	115	67	115	67	115
Adjusted Earnings Applicable to Common Stock	$ 31,471	17,847	$ 42,376	17,712	$ 36,490	17,607
Diluted EPS	$ 1.76		$ 2.39		$ 2.07	

Fair Value of Financial Instruments

The following methods and assumptions were used by the Company in estimating its fair value disclosure for financial instruments for which it is practicable to estimate that value. The carrying amounts reflected in the consolidated balance sheets for cash and cash equivalents, accounts receivable, accounts payable and notes payable approximate their respective fair values due to the short-term maturities of these instruments. The fair value of FMBs and SRF Bonds (collectively, the Bonds) issued by Middlesex is based on quoted market prices for similar issues. Under the fair value hierarchy, the fair value of cash and cash equivalents is classified as a Level 1

measurement and the fair value of notes payable and the Bonds in the table below are classified as Level 2 measurements. The carrying amount and fair value of the Bonds were as follows:

	(Thousands of Dollars) At December 31,			
	2023		2022	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
FMBs	$ 133,374	$ 131,745	$ 147,269	$ 138,756

It was not practicable to estimate the fair value on our outstanding long-term debt for which there is no quoted market price and there is not an active trading market. For details, including carrying value, interest rate and due date on these series of long-term debt, please refer to those series of long-term debt titled "Amortizing Secured Notes" and "State Revolving Trust Notes" on the Consolidated Statements of Capital Stock and Long-Term Debt. The carrying amount of these instruments was $231.3 million and $159.1 million at December 31, 2023 and 2022, respectively. Customer advances for construction have carrying amounts of $21.3 million and $21.4 million at December 31, 2023 and 2022, respectively. Their relative fair values cannot be accurately estimated since future refund payments depend on several variables, including new customer connections, customer consumption levels and future rate increases.

Note 7 - Employee Benefit Plans

Pension Benefits

The Company's Pension Plan covers all active employees hired prior to April 1, 2007. Employees hired after March 31, 2007 are not eligible to participate in this plan, but can participate in a defined contribution profit sharing plan that provides an annual contribution at the discretion of the Company, based upon a percentage of the participants' annual paid compensation. In order to be eligible for contribution, the eligible employee must be employed by the Company on December 31st of the year to which the contribution relates. The Company maintains an unfunded supplemental plan for a limited number of its executive officers. The Accumulated Benefit Obligation for the Company's Pension Plan at December 31, 2023 and 2022 was $83.7 million and $79.4 million, respectively.

Other Benefits

The Company's Other Benefits Plan covers substantially all of its current retired employees. Employees hired after March 31, 2007 are not eligible to participate in this plan. Coverage includes healthcare and life insurance.

Regulatory Treatment of Over/Underfunded Retirement Obligations

Because the Company is subject to rate regulation in the states in which it operates, it is required to maintain its accounts in accordance with the regulatory authority's rules and guidelines, which may differ from other authoritative accounting pronouncements. In those instances, the Company follows the guidance of ASC 980, *Regulated Operations*. Based on prior regulatory practice, and in accordance with the guidance in ASC 980, *Regulated Operations*, the Company records underfunded Pension Plan and Other Benefits Plan obligation costs, which otherwise would be recognized in Other Comprehensive Income under ASC 715, *Compensation – Retirement Benefits*, as a Regulatory Asset, and expects to recover those costs in rates charged to customers.

The Company uses a December 31 measurement date for all of its employee benefit plans. The tables below set forth information relating to the Company's Pension Plan and Other Benefits Plan for 2023 and 2022.

	(Thousands of Dollars)			
	Pension Plan		Other Benefits Plan	
	Years Ended December 31,			
	2023	2022	2023	2022
Change in Projected Benefit Obligation:				
Beginning Balance	$ 87,788	$ 113,710	$ 32,909	$ 49,396
Service Cost	1,551	2,362	391	799
Interest Cost	4,270	3,042	1,608	1,325
Actuarial (Gain) Loss	1,966	(27,850)	(5,968)	(17,761)
Benefits Paid	(3,722)	(3,476)	(940)	(850)
Ending Balance	$ 91,853	$ 87,788	$ 28,000	$ 32,909

	(Thousands of Dollars)			
	Pension Plan		Other Benefits Plan	
	Years Ended December 31,			
	2023	2022	2023	2022
Change in Fair Value of Plan Assets:				
Beginning Balance	$ 84,828	$ 100,750	$ 44,029	$ 50,668
Actual Return on Plan Assets	10,840	(14,346)	4,323	(6,639)
Employer Contributions	400	1,900	940	850
Benefits Paid	(3,722)	(3,476)	(940)	(850)
Ending Balance	$ 92,346	$ 84,828	$ 48,352	$ 44,029
Funded Status	$ 494	$ (2,960)	$ 20,352	$ 11,120

	(Thousands of Dollars)			
	Pension Plan		Other Benefits Plan	
	As of December 31,			
	2023	2022	2023	2022
Amounts Recognized in the Consolidated Balance Sheets consist of:				
Current Liability	$ 933	$ 529	$ —	$ —
Noncurrent Liability (Asset)	(1,427)	2,431	(20,352)	(11,120)
Net Liability (Asset) Recognized	$ (494)	$ 2,960	$ (20,352)	$ (11,120)

	(Thousands of Dollars)					
	Pension Plan			Other Benefits Plan		
	Years Ended December 31,					
	2023	2022	2021	2023	2022	2021
Components of Net Periodic Benefit Cost						
Service Cost	$ 1,551	$ 2,362	$ 2,696	$ 391	$ 799	$ 917
Interest Cost	4,270	3,042	2,706	1,608	1,325	1,236
Expected Return on Plan Assets	(5,865)	(7,041)	(6,225)	(3,082)	(3,547)	(3,142)
Amortization of Net Actuarial Loss (Gain)	658	1,674	2,868	(191)	—	527
Net Periodic Benefit Cost*	$ 614	$ 37	$ 2,045	$ (1,274)	$ (1,423)	$ (462)

*Service cost is included in Operations and Maintenance expense on the consolidated statements of income; all other amounts are included in Other Income (Expense), net.

Amounts that are expected to be amortized from Regulatory Assets into Net Periodic Benefit Cost in 2024 are as follows:

	(Thousands of Dollars)	
	Pension Plan	Other Benefits Plan
Actuarial Loss (Gain)	$ 153	$ (1,098)

The discount rate and compensation increase rate for determining our postretirement benefit plans' benefit obligations and costs as of and for the years ended December 31, 2023, 2022 and 2021, respectively, are as follows:

	Pension Plan			Other Benefits Plan		
	2023	2022	2021	2023	2022	2021
Weighted Average Assumptions:						
Expected Return on Plan Assets	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Discount Rate for:						
Benefit Obligation	4.79%	4.98%	2.72%	4.79%	4.98%	2.72%
Benefit Cost	4.98%	2.72%	2.37%	4.98%	2.72%	2.37%
Compensation Increase for:						
Benefit Obligation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Benefit Cost	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

The compensation increase assumption for the Other Benefits Plan is attributable to life insurance provided to qualifying employees upon their retirement. The insurance coverage will be determined based on the employee's base compensation as of their retirement date.

The Company utilizes the Society of Actuaries' mortality table (Pri-2012) (Mortality Improvement Scale MP2021).

For the 2023 valuation, costs and obligations for our Other Benefits Plan assumed a 7.5% annual rate of increase in the per capita cost of covered healthcare benefits in 2023 with the annual rate of increase declining 0.5% per year for 2024-2029, resulting in an annual rate of increase in the per capita cost of covered healthcare benefits of 4.5% by year 2030.

A one-percentage point change in assumed healthcare cost trend rates would have the following effects on the Other Benefits Plan:

	(Thousands of Dollars) 1 Percentage Point	
	Increase	Decrease
Effect on Current Year Service and Interest Costs	$ 308	$ (246)
Effect on Projected Benefit Obligation	$ 3,264	$ (2,676)

The following benefit payments, which reflect expected future service, are expected to be paid:

	(Thousands of Dollars)	
Year	Pension Plan	Other Benefits Plan
2024	$ 5,078	$ 1,181
2025	5,457	1,310
2026	5,444	1,377
2027	5,522	1,417
2028	5,638	1,445
2029-2033	29,349	8,104
Totals	$ 56,488	$ 14,834

Benefit Plans Assets

The allocation of plan assets at December 31, 2023 and 2022 by asset category is as follows:

	Pension Plan			Other Benefits Plan		
Asset Category	2023	2022	Target	2023	2022	Target
Equity Securities	58.1%	53.6%	55%	60.9%	55.2%	43%
Debt Securities	39.6%	40.9%	38%	36.1%	24.7%	50%
Cash	0.7%	3.9%	2%	3.0%	20.1%	2%
Real Estate/Commodities	1.6%	1.6%	5%	0.0%	0.0%	5%
Total	100.0%	100.0%		100.0%	100.0%	

Two outside investment firms each manage a portion of the Pension Plan asset portfolio. One of those investment firms also manages the Other Benefits Plan asset portfolio. Quarterly meetings are held between the Company's Pension Committee of the Board of Directors and the investment managers to review their performance and asset allocation. If the actual asset allocation is outside the targeted range, the Pension Committee reviews current market conditions and advice provided by the investment managers to determine the appropriateness of rebalancing the portfolio.

The objective of the Company is to maximize the long-term return on retirement plan assets, relative to a reasonable level of risk, maintain a diversified investment portfolio and maintain compliance with the Employee Retirement Income Security Act of 1974. The expected long-term rate of return is based on the various asset categories in which plan assets are invested and the current expectations and historical performance for these categories.

Fair Value Measurements

Accounting guidance provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described as follows:

- Level 1 – Inputs to the valuation methodology are unadjusted quoted market prices for identical assets or liabilities in accessible active markets.
- Level 2 – Inputs to the valuation methodology that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. If the asset or liability has a specified contractual term, the Level 2 input must be observable for substantially the full term of the asset or liability.
- Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Certain investments in cash and cash equivalents, equity securities, and commodities are valued based on quoted market prices in active markets and are classified as Level 1 investments. Certain investments in cash and cash equivalents, equity securities and fixed income securities are valued using prices received from pricing vendors that utilize observable inputs and are therefore classified as Level 2 investments.

The following tables present Middlesex's Pension Plan assets measured and recorded at fair value within the fair value hierarchy:

	(Thousands of Dollars) As of December 31, 2023			
	Level 1	**Level 2**	**Level 3**	**Total**
Mutual Funds	$ 71,236	$ —	$ —	$ 71,236
Money Market Funds	663	—	—	663
Common Equity Securities	12,544	—	—	12,544
Corporate Bonds	5,091	—	—	5,091
Agency/US Debt	1,854	—	—	1,854
Sovereign/Non-US Debt	958	—	—	958
Total Investments	$ 92,346	$ —	$ —	$ 92,346

	(Thousands of Dollars) As of December 31, 2022			
	Level 1	**Level 2**	**Level 3**	**Total**
Mutual Funds	$ 71,559	$ —	$ —	$ 71,559
Money Market Funds	3,271	—	—	3,271
Common Equity Securities	9,998	—	—	9,998
Total Investments	$ 84,828	$ —	$ —	$ 84,828

The following tables present Middlesex's Other Benefits Plan assets measured and recorded at fair value within the fair value hierarchy:

	(Thousands of Dollars) As of December 31, 2023			
	Level 1	Level 2	Level 3	Total
Mutual Funds	$ 29,437	$ —	$ —	$ 29,437
Money Market Funds	1,429	—	—	1,429
Agency/US/State/Municipal Debt	—	17,486	—	17,486
Total Investments	$ 30,866	$ 17,486	$ —	$ 48,352

	(Thousands of Dollars) As of December 31, 2022			
	Level 1	Level 2	Level 3	Total
Mutual Funds	$ 23,660	$ —	$ —	$ 23,660
Money Market Funds	8,623	—	—	8,623
Agency/US/State/Municipal Debt	—	10,592	—	10,592
Other	1,154	—	—	1,154
Total Investments	$ 33,437	$ 10,592	$ —	$ 44,029

Benefit Plans Contributions

For the Pension Plan, Middlesex made total cash contributions of $0.4 million in 2023 and expects to make cash contributions of approximately $0.9 million in 2024.

For the Other Benefits Plan, Middlesex made cash contributions of $0.9 million in 2023 and expects to make approximately $0.9 million of cash contributions in 2024.

401(k) Plan

The Company maintains a 401(k) defined contribution plan, which covers substantially all employees with more than 1,000 hours of service. Under the terms of the Plan, the Company matches 100% of a participant's contributions, which do not exceed 1% of a participant's compensation, plus 50% of a participant's contributions exceeding 1%, but not more than 6%. The Company's matching contribution was $0.8 million, $0.7 million and $0.7 million for the years ended December 31, 2023, 2022 and 2021, respectively.

Employees hired after March 31, 2007 are not eligible to participate in the Pension Plan and are generally eligible to participate in a discretionary profit sharing plan administered through the 401(k) plan. In December each year, the Board of Directors may approve that a stated percentage of eligible compensation be contributed to the account of the employee participant in the first quarter of the following year. For those employees still actively employed on December 31, 2023 or retired during the current year, the Company will fund a discretionary contribution of $0.9 million before April 1, 2024, which represents 5.0% of eligible 2023 compensation. For the years ended December 31, 2022 and 2021, the Company made qualifying discretionary contributions totaling $0.9 million and $0.8 million, respectively.

Stock-Based Compensation

The Company maintains a long-term incentive compensation plan for certain management employees where awards are made in the form of restricted common stock. Shares of restricted stock issued under the plan are subject to forfeiture by the employee in the event of termination of employment for any reason within five years of the award

other than as a result of retirement at normal retirement age, death, disability or change in control. The maximum number of shares authorized for award under the plan is 300,000 shares, of which approximately 75% remain available for issuance.

The Company recognizes compensation expense at fair value for the plan awards in accordance with ASC 718, *Compensation – Stock Compensation*. Compensation expense is determined by the market value of the stock on the date of the award and is being amortized over the expected vesting period.

The following table presents awarded but not yet vested share information for the plan:

	Shares (thousands)	Unearned Compensation (thousands)	Weighted Average Granted Price
Balance, January 1, 2021	86	$ 1,837	
Granted	15	1,151	$ 79.02
Vested	(18)	—	
Amortization of Compensation expense	—	(1,057)	
Balance, December 31, 2021	83	1,931	
Granted	11	1,151	$ 105.17
Vested	(17)		
Amortization of Compensation expense	—	(1,350)	
Balance, December 31, 2022	77	1,732	
Granted	15	1,165	$ 77.63
Vested	(18)	—	
Amortization of Compensation expense	—	(1,854)	
Balance, December 31, 2023	**74**	**$ 1,043**	

Note 8 – Business Segment Data

The Company has identified two reportable segments. One is the regulated business of collecting, treating and distributing water on a retail and wholesale basis to residential, commercial, industrial and fire protection customers in parts of New Jersey and Delaware. This segment also includes regulated wastewater systems in New Jersey and Delaware. The Company is subject to regulations as to its rates, services and other matters by the states of New Jersey and Delaware with respect to utility service within these states. The other segment is primarily comprised of non-regulated contract services for the operation and maintenance of municipal and private water and wastewater systems in New Jersey and Delaware.

Inter-segment transactions relating to operational costs are treated as pass-through expenses. Finance charges on inter-segment loan activities are based on interest rates that are below what would normally be charged by a third party lender.

Operation by Segments	(Thousands of Dollars) Years Ended December 31, 2023	2022	2021
Revenues:			
Regulated	$ 154,617	$ 151,117	$ 131,531
Non – Regulated	12,773	12,446	12,818
Inter-segment Elimination	(1,116)	(1,129)	(1,208)
Consolidated Revenues	$ 166,274	$ 162,434	$ 143,141
Operating Income:			
Regulated	$ 35,820	$ 44,257	$ 29,577
Non – Regulated	3,403	3,076	3,634
Consolidated Operating Income	$ 39,223	$ 47,333	$ 33,211
Depreciation:			
Regulated	$ 24,931	$ 22,783	$ 20,897
Non – Regulated	263	246	212
Consolidated Depreciation	$ 25,194	$ 23,029	$ 21,109
Other Income, Net:			
Regulated	$ 6,637	$ 7,898	$ 6,112
Non – Regulated	214	279	279
Inter-segment Elimination	(366)	(474)	(433)
Consolidated Other Income, Net	$ 6,485	$ 7,703	$ 5,958
Interest Expense:			
Regulated	$ 13,508	$ 9,833	$ 8,529
Non – Regulated	—	7	17
Inter-segment Elimination	(365)	(473)	(432)
Consolidated Interest Expense	$ 13,143	$ 9,367	$ 8,114
Income Taxes:			
Regulated	$ (146)	$ 2,084	$ (6,723)
Non – Regulated	1,187	1,156	1,235
Consolidated Income Taxes	$ 1,041	$ 3,240	$ (5,488)
Net Income:			
Regulated	$ 29,094	$ 40,229	$ 33,849
Non – Regulated	2,430	2,200	2,694
Consolidated Net Income	$ 31,524	$ 42,429	$ 36,543
Capital Expenditures:			
Regulated	$ 90,047	$ 91,054	$ 79,195
Non – Regulated	132	281	183
Total Capital Expenditures	$ 90,179	$ 91,335	$ 79,378

	(Thousands of Dollars) As of December 31, 2023	As of December 31, 2022
Assets:		
Regulated	1,235,549	$ 1,079,180
Non – Regulated	8,068	6,999
Inter-segment Elimination	(7,565)	(11,729)
Consolidated Assets	$ 1,236,052	$ 1,074,450

Note 9 - Quarterly Data - Unaudited

Financial information for each quarter of 2023 and 2022 is as follows:

	(Thousands of Dollars, Except per Share Data)				
2023	**1st**	**2nd**	**3rd**	**4th**	**Total**
Operating Revenues	$ 38,156	$ 42,801	$ 46,715	$ 38,602	$ 166,274
Operating Income	7,490	10,669	12,822	8,242	39,223
Net Income	5,868	9,901	9,990	5,765	31,524
Basic Earnings per Share	$ 0.33	$ 0.56	$ 0.56	$ 0.32	$ 1.77
Diluted Earnings per Share	$ 0.33	$ 0.55	$ 0.56	$ 0.32	$ 1.76
Common Dividend Per Share	$ 0.3125	$ 0.3125	$ 0.3125	$ 0.3250	$ 1.2625
High/Low Common Stock Price	$72.64/$90.56	$66.51/$84.38	$65.37/$84.35	$61.34/$73.47	

2022	**1st**	**2nd**	**3rd**	**4th**	**Total**
Operating Revenues	$ 36,196	$ 39,683	$ 47,732	$ 38,823	$ 162,434
Gain on Sale of Subsidiary	5,232	—	—	—	5,232
Operating Income	12,523	10,088	16,575	8,147	47,333
Net Income	12,100	8,868	14,291	7,170	42,429
Basic Earnings per Share	$ 0.69	$ 0.50	$ 0.81	$ 0.40	$ 2.40
Diluted Earnings per Share	$ 0.68	$ 0.50	$ 0.81	$ 0.40	$ 2.39
Common Dividend Per Share	$ 0.2900	$ 0.2900	$ 0.2900	$ 0.3125	$ 1.1825
High/Low Common Stock Price	$94.56/$121.10	$75.77/$108.27	$77.08/$96.19	$74.20/$95.82	

The information above, in the opinion of the Company, includes all adjustments consisting only of normal recurring accruals necessary for a fair presentation of such amounts. The business of the Company is subject to seasonal fluctuation with the peak period usually occurring during the summer months. The quarterly earnings per share amounts above may differ slightly from previous filings due to the effects of rounding.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES

(1) Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed in Company reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in Company reports filed under the Exchange Act is accumulated and communicated to management, including the Company's Chief Executive Officer and Chief Financial Officer as appropriate, to allow timely decisions regarding disclosure.

As required by Rule 13a-15 under the Exchange Act, an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures was conducted by the Company's Chief Executive Officer along with the Company's Chief Financial Officer for the year ended December 31, 2023. Based upon that evaluation, the Company's Chief Executive Officer and the Company's Chief Financial Officer concluded that:

a) The following changes in internal control over financial reporting occurred during the year ended December 31, 2023 that has materially affected, or are reasonably likely to materially affect, internal control over financial reporting:

   In December 2023, management implemented various auditing and monitoring solutions that provide greater transparency into changes made within our information technology (IT) systems. These control solutions are supported by a timely review process that focuses on the proper authorization and approval of IT system changes.

b) Our disclosure controls and procedures were not effective as of December 31, 2023 due to the material weaknesses described below. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis.

   As the IT material weakness was recently determined to exist, the remediation actions described in paragraph (1) a) above were completed in December 2023. However, the implemented controls did not operate over a sufficient time period to adequately test and validate the remediation and reassess other information technology general controls (ITGCs), which may require further remediation actions.

   In addition, there were ineffective internal controls related to income tax accounting for a non-routine transaction.

   Management has determined that such material weaknesses exist as of December 31, 2023.

(2) **Management's Report on Internal Control Over Financial Reporting**

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Exchange Act Rule 13A-15(f) and 15d-15(f). Middlesex's internal control system was designed to provide reasonable assurance to the Company's management and Board of Directors of adequate preparation and fair presentation of the published financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to the adequacy of financial statement preparation and presentation. Middlesex's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2023. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework* (2013 framework).

Subsequent to the issuance of the Company's consolidated financial statements for the year ended December 31, 2022 which were included in Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, originally filed with the United States Securities and Exchange Commission on February 24, 2023, the Company's independent registered public accounting firm, Baker Tilly US, LLP (Baker Tilly), conducted a routine internal quality review of its integrated audit of the Company's 2022 consolidated financial statements and internal

control over financial reporting as of December 31, 2022. As a result of this review, Baker Tilly re-examined the Company's ITGCs in the areas of user access and change management over certain IT systems that support the Company's financial reporting processes. Certain of those controls were found to be deficient because of a lack of sufficient IT control processes designed to prevent or detect unauthorized changes in applications and data in selected IT environments. It has therefore been concluded that automated and manual process controls dependent on ITGCs were not effective. These ineffective controls create a possibility that material misstatements in financial reporting processes and financial statement accounts in our consolidated financial statements will not be prevented or detected on a timely basis. As the material weakness was recently determined to exist, certain remediation actions were completed in December 2023. Various auditing and monitoring solutions have been implemented that provide greater transparency into changes made within our IT systems. These control solutions are supported by a timely review process that focuses on the proper authorization and approval of IT system changes. Due to the timing of the implementation of the solutions, the controls implemented did not operate over a sufficient time period to adequately test and validate the remediation and reassess other ITGCs, which may require further remediation actions.

In addition, there were ineffective internal controls related to income tax accounting for a non-routine transaction.

Management has determined that such material weaknesses exist as of December 31, 2023.

Notwithstanding the identified material weakness referred to above, management, including our principal executive officer and principal financial officer, believe that the financial statements contained in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2023 fairly present, in all material respects, the financial condition, results of operations and cash flows of the Company for all periods presented in accordance with accounting principles generally accepted in the United States of America.

While the Audit Committee of our Board of Directors and Company management will closely monitor the remediation efforts, until the remediation efforts discussed in this section are complete, tested and determined effective, we will not be able to conclude that the material weakness has been remediated.

Middlesex's independent registered public accounting firm (PCAOB ID 23) has audited the effectiveness of our internal control over financial reporting as of December 31, 2023 as stated in their report dated as of February 29, 2024, which is included herein.

/s/ Dennis W. Doll	/s/ A. Bruce O'Connor
Dennis W. Doll	A. Bruce O'Connor
President and	Senior Vice President, Treasurer and
Chief Executive Officer	Chief Financial Officer

Iselin, New Jersey
February 29, 2024

ITEM 9B. OTHER INFORMATION.

(a) None.

(b) Insider Trading Arrangements and Policies - During the three months ended December 31, 2023, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K."

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Information with respect to Directors of Middlesex Water Company is included in Middlesex Water Company's Proxy Statement for the 2024 Annual Meeting of Stockholders and is incorporated herein by reference.

Information regarding the Executive Officers of Middlesex Water Company is included under Item 1. in Part I of this Annual Report.

ITEM 11. EXECUTIVE COMPENSATION.

This Information for Middlesex Water Company is included in Middlesex Water Company's Proxy Statement for the 2023 Annual Meeting of Stockholders and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

This information for Middlesex Water Company is included in Middlesex Water Company's Proxy Statement for the 2024 Annual Meeting of Stockholders and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

This information for Middlesex Water Company is included in Middlesex Water Company's Proxy Statement for the 2024 Annual Meeting of Stockholders and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

This information for Middlesex Water Company is included in Middlesex Water Company's Proxy Statement for the 2024 Annual Meeting of Stockholders and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

1. The following Financial Statements and Supplementary Data are included in Part II- Item 8. of this Annual Report:

Consolidated Balance Sheets at December 31, 2023 and 2022.

Consolidated Statements of Income for each of the three years in the period ended December 31, 2023.

Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2023.

Consolidated Statements of Capital Stock and Long-term Debt as of December 31, 2023 and 2022.

Consolidated Statements of Common Stockholders' Equity for each of the three years in the period ended December 31, 2023.

Notes to Consolidated Financial Statements.

2. Financial Statement Schedules

All Schedules are omitted because of the absence of the conditions under which they are required or because the required information is shown in the financial statements or notes thereto.

3. Exhibits

See Exhibit listing immediately following the signature page.

ITEM 16. FORM 10-K SUMMARY.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MIDDLESEX WATER COMPANY

By: /s/ Dennis W. Doll
Dennis W. Doll
President and Chief Executive Officer
Date: February 29, 2024

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 29, 2024.

By: /s/ A. Bruce O'Connor
A. Bruce O'Connor
Senior Vice President, Treasurer and Chief Financial Officer
(Principal Financial Officer)

By: /s/ Robert J. Capko
Robert J. Capko
Corporate Controller
(Principal Accounting Officer)

By: /s/ Dennis W. Doll
Dennis W. Doll
Chairman of the Board, President, Chief Executive Officer and Director
(Principal Executive Officer)

By: /s/ Joshua Bershad, M.D.
Joshua Bershad, M.D.
Director

By: /s/ James F. Cosgrove Jr.
James F. Cosgrove Jr.
Director

By: /s/ Kim C. Hanemann
Kim C. Hanemann
Director

By: /s/ Steven M. Klein
Steven M. Klein
Director

By: /s/ Amy B. Mansue
Amy B. Mansue
Director

By: /s/ Vaughn L. McKoy
Vaughn L. McKoy
Director

By: /s/ Ann L. Noble
Ann L. Noble
Director

By: /s/ Walter G. Reinhard

Walter G. Reinhard
Director

EXHIBIT INDEX

Exhibits designated with an asterisk (*) are filed herewith. The exhibits not so designated have heretofore been filed with the Commission and are incorporated herein by reference to the documents indicated in the previous filing columns following the description of such exhibits. Exhibits designated with a dagger (t) are management contracts or compensatory plans.

Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
3.1	The Restated Certificate of Incorporation, filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the Year ended December 31, 1998.		
3.2	Certificate of Amendment to the Restated Certificate of Incorporation, filed with the State of New Jersey on June 20, 1997, filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 1997.		
3.3	Certificate of Amendment to the Restated Certificate of Incorporation, filed with the State of New Jersey on May 27, 1998, filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 1998.		
3.4	Certificate of Amendment to the Restated Certificate of Incorporation, filed with the State of New Jersey on June 10, 1998, filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 1998.		
3.5	Certificate of Correction of Middlesex Water Company filed with the State of New Jersey on April 30, 1999, filed as Exhibit 3.3 to the Company's Annual Report on Form 10-K/A-2 for the year ended December 31, 2003.		
3.6	Certificate of Amendment to the Restated Certificate of Incorporation of Middlesex Water Company, filed with the State of New Jersey on February 17, 2000, filed as Exhibit 3.4 to the Company's Annual Report on Form 10-K/A-2 for the year ended December 31, 2003.		
3.7	Certificate of Amendment to the Restated Certificate of Incorporation of Middlesex Water Company, filed with the State of New Jersey on June 5, 2002, filed as Exhibit 3.5 to the Company's Annual Report on Form 10-K/A-2 for the year ended December 31, 2003.		
3.8	Certificate of Amendment to the Restated Certificate of Incorporation, filed with the State of New Jersey on June 19, 2007, filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed April 30, 2010.		
3.9	Certificate of Amendment to the Restated Certificate of Incorporation, filed with the State of New Jersey on September 4, 2019, filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed September 6, 2019.		
3.10	Certificate of Amendment to the Restated Certificate of Incorporation, filed with the State of New Jersey on September 19, 2019, filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed September 23, 2019.		

EXHIBIT INDEX

Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
3.11	By-laws of the Company, as amended, filed as Exhibit 4.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.		
3.12	Amendments to the by-laws of the Company, included as Exhibit 3(ii) to the Company's Current Report on Form 8-K dated November 22, 2017.		
4.1	Form of Common Stock Certificate.	2-55058	2(a)
10.1	Water Service Agreement, dated February 28, 2006, between the Company and Elizabethtown Water Company, filed as Exhibit 10 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2006.		
10.2	Mortgage, dated April 1, 1927, between the Company and Union County Trust Company, as Trustee, as supplemented by Supplemental Indentures, dated as of October 1, 1939 and April 1, 1949.	2-15795	4(a)-4(f)
10.3	Supplemental Indenture, dated as of July 1, 1964 and June 15, 1991, between the Company and Union County Trust Company, as Trustee.	33-54922	10.4-10.9
10.4	Agreement for a Supply of Water, dated as of July 27, 2011, between the Company and the Old Bridge Municipal Utilities Authority, filed as Exhibit No. 10.4 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011.		
10.5	Water Supply Agreement, dated as of July 14, 1987, between the Company and the Marlboro Township Municipal Utilities Authority, as amended.	33-31476	10.13
*10.6	Water Purchase Contract, dated as of October 24, 2023, between the Company and the New Jersey Water Supply Authority.		
10.7	Treatment and Pumping Agreement, dated October 1, 2014, between the Company and the Township of East Brunswick, filed as Exhibit No. 10.7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2016.		
10.8	Water Supply Agreement, dated June 4, 1990, between the Company and Edison Township.	33-54922	10.24
10.9	Agreement for a Supply of Water, dated January 1, 2006, between the Company and the Borough of Highland Park, filed as Exhibit No. 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2006.		
10.9(a)	Amendment to Agreement for a Supply of Water, dated as of December 1, 2015, between the Company and the Borough of Highland Park, filed as Exhibit No. 10.9(a) of the Company's Annual Report on Form 10-K for the year ended December 31, 2015.		

EXHIBIT INDEX

Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
(t)10.10	Middlesex Water Company Supplemental Executive Retirement Plan, filed as Exhibit 10.13 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1999.		
(t)10.11(a)	Middlesex Water Company 2018 Restricted Stock Plan, filed as Appendix A to the Company's Definitive Proxy Statement, dated and filed April 12, 2018.		
(t)10.11(b)	Registration Statement, Form S-8, under the Securities Act of 1933, filed December 18, 2008, relating to the Middlesex Water Company Outside Director Stock Compensation Stock Plan.	333-156269	
(t)10.12	Employment Agreement, dated as of March 1, 2024, between the Company and Nadine Duchemin-Leslie, filed as Exhibit 99.2 of the Company's Current Report on Form 8-K dated January 23, 2024.		
(t)10.12(a)	Change in Control Termination Agreement, dated as of March 1, 2024, between the Company and Nadine Duchemin-Leslie, filed as Exhibit 99.3 of the Company's Current Report on Form 8-K dated January 23, 2024.		
(t)10.12(b)	Change in Control Termination Agreement, dated as of January 1, 2009, between the Company and A. Bruce O'Connor, filed as Exhibit 10.13(b) of the Company's Annual Report on Form 10-K for the year ended December 31, 2008.		
(t)10.12(c)	Change in Control Termination Agreement, dated as of March 1, 2012, between the Company and Lorrie B. Ginegaw, filed as Exhibit 10.13(e) of the Company's Annual Report on Form 10-K for the year ended December 31, 2011.		
(t)10.12(d)	Change in Control Termination Agreement, dated as of January 1, 2009, between the Company and Bernadette M. Sohler, filed as Exhibit 10.13(h) of the Company's Annual Report on Form 10-K for the year ended December 31, 2008.		
(t)10.12(e)	Change in Control Termination Agreement, dated as of March 17, 2014, between the Company and Jay L. Kooper, filed as Exhibit 10.12(g) of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014.		
(t)10.12(f)	Change in Control Termination Agreement, dated as of July 1, 2019, between the Company and G. Christian Andreasen, filed as Exhibit 10.12(f) of the Company's Annual Report on Form 10-K for the year ended December 31, 2019.		
(t)10.12(g)	Change in Control Termination Agreement, dated as of July 1, 2019, between the Company and Robert K. Fullagar, filed as Exhibit 10.12(g) of the Company's Annual Report on Form 10-K for the year ended December 31, 2019.		

EXHIBIT INDEX

Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
(t)10.12(h)	Change in Control Termination Agreement, dated as of July 1, 2019, between the Company and Georgia M. Simpson, filed as Exhibit 10.12(h) of the Company's Annual Report on Form 10-K for the year ended December 31, 2019.		
(t)10.12(i)	Change in Control Termination Agreement, dated as of April 28, 2023 between the Company and Robert J. Capko, filed as Exhibit 10.12(i) of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023.		
10.13	Transmission Agreement, dated October 16, 1992, between the Company and the Township of East Brunswick.	33-54922	10.23
10.13(a)	Amendment, dated November 28, 2016, to Transmission Agreement between the Company and the Township of East Brunswick, filed as Exhibit No. 10.13(a) of the Company's Annual Report on Form 10-K for the year ended December 31, 2016.		
10.14	Contract, dated August 20, 2018, between the City of Perth Amboy and Utility Service Affiliates (Perth Amboy), Inc., filed as Exhibit 10.16 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018.		
10.15	Thirtieth Supplemental Indenture, dated October 15, 2004, between the Company and Wachovia Bank, National Association; Loan Agreement, dated November 1, 2004, between the State of New Jersey and the Company (Series EE), filed as Exhibit No. 10.26 of the Company's Annual Report on Form 10-K for the year ended December 31, 2004.		
10.16	Thirty-First Supplemental Indenture, dated October 15, 2004, between the Company and Wachovia Bank, National Association; Loan Agreement, dated November 1, 2004, between the New Jersey Environmental Infrastructure Trust and the Company (Series FF), filed as Exhibit No. 10.27 of the Company's Annual Report on Form 10-K for the year ended December 31, 2004.		
10.17(a)	Promissory Note and Supplement, dated October 15, 2014, between Tidewater Utilities, Inc. and CoBank, ACB; Amendment to Combination Water Utility Real Estate Mortgage and Security Agreement, effective October 15, 2014, between Tidewater Utilities, Inc. and CoBank, ACB, filed as Exhibit 10.23 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
10.17(b)	Promissory Note and Supplement, dated March 29, 2021, between Tidewater Utilities, Inc. and CoBank, ACB; Amendment to Combination Water Utility Real Estate Mortgage and Security Agreement, effective March 29, 2021, between Tidewater Utilities, Inc. and CoBank, ACB, filed as Exhibit 10.19(b) of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021.		
10.17(c)	Promissory Note and Supplement, dated May 11, 2023, between Tidewater Utilities, Inc. and CoBank, ACB; Amendments to Combination Water Utility Real Estate Mortgage and Security Agreement, effective May 11, 2023, between Tidewater Utilities, Inc. and CoBank, ACB, filed as Exhibit 10.17(c) of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023.		
10.17(d)	Sixth Amendment to Promissory Note and Supplement, dated as of May 11, 2023, between Tidewater Utilities, Inc. and CoBank, ACB, filed as Exhibit 10.17(d) of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023.		
10.18	Agreement for a Supply of Water, dated April 1, 2006, between the Company and the City of Rahway, filed as Exhibit No. 10.2 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2006.		
10.19	Loan Agreement, dated November 1, 2006, between the State of New Jersey and the Company (Series GG), filed as Exhibit No. 10.30 of the Company's Annual Report on Form 10-K for the year ended December 31, 2006.		
10.20	Loan Agreement, dated November 1, 2006, between the New Jersey Environmental Infrastructure Trust and the Company (Series HH), filed as Exhibit No. 10.31 of the Company's Annual Report on Form 10-K for the year ended December 31, 2006.		
10.21	Loan Agreement, dated November 1, 2007, between New Jersey Environmental Infrastructure Trust and the Company (Series II), filed as Exhibit No. 10.32 of the Company's Annual Report on Form 10-K for the year ended December 31, 2007.		
10.22	Loan Agreement, dated November 1, 2007, between the State of New Jersey and the Company (Series JJ), filed as Exhibit 10.33 of the Company's Annual Report on Form 10-K for the year ended December 31, 2007.		
10.23	Loan Agreement, dated November 1, 2008, between New Jersey Environmental Infrastructure Trust and the Company dated as of (Series KK), filed as Exhibit 10.34 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
10.24	Loan Agreement, dated November 1, 2008, between the State of New Jersey and the Company (Series LL), filed as Exhibit 10.35 of the Company's Annual Report on Form 10-K for the year ended December 31, 2008.		
10.25	Prospectus Supplement, filed August 3, 2022, relating to the Middlesex Water Company Investment Plan.	333-266482	
10.25(a)	Prospectus Supplement, filed July 25, 2023, relating to the Middlesex Water Company Investment Plan.	333-266482	
10.26(a)	Amended and Restated $68,000,000 Revolving Line of Credit Note, dated February 9, 2022, between the Company, Pinelands Wastewater Company, Pinelands Water Company, Tidewater Utilities, Inc., Utility Service Affiliates (Perth Amboy) Inc., Utility Service Affiliates Inc. and While Marsh Environmental Systems, Inc., and PNC Bank, N.A., filed as Exhibit 10.26(a) of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.		
10.26(b)	Waiver and Amendment to Loan Documents, dated February 9, 2022, between the Company, Pinelands Wastewater Company, Pinelands Water Company, Tidewater Utilities, Inc., Utility Service Affiliates (Perth Amboy) Inc., Utility Service Affiliates Inc. and While Marsh Environmental Systems, Inc., and PNC Bank, N.A., filed as Exhibit 10.26(b) of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.		
10.26(c)	Amendment to Loan Documents, dated March 17, 2023, between the Company, Pinelands Wastewater Company, Pinelands Water Company, Tidewater Utilities, Inc., Utility Service Affiliates (Perth Amboy) Inc., Utility Service Affiliates Inc. and While Marsh Environmental Systems, Inc., and PNC Bank, N.A. filed as Exhibit 10.26(c) of the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023.		
10.26(d)	Amendment to Loan Documents, dated April 5, 2023, between the Company, Pinelands Wastewater Company, Pinelands Water Company, Tidewater Utilities, Inc., Utility Service Affiliates (Perth Amboy) Inc., Utility Service Affiliates Inc. and While Marsh Environmental Systems, Inc., and PNC Bank, N.A, filed as Exhibit 10.26(d) of the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
10.26(e)	Amendment to Loan Documents, dated June 15, 2023, between the Company, Pinelands Wastewater Company, Pinelands Water Company, Tidewater Utilities, Inc., Utility Service Affiliates (Perth Amboy) Inc., Utility Service Affiliates Inc. and While Marsh Environmental Systems, Inc., and PNC Bank, N.A, filed as Exhibit 10.26(e) of the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2023.		
*10.26(f)	Amendment to Loan Documents, dated January 29, 2024, between the Company, Pinelands Wastewater Company, Pinelands Water Company, Tidewater Utilities, Inc., Utility Service Affiliates (Perth Amboy) Inc., Utility Service Affiliates Inc. and While Marsh Environmental Systems, Inc., and PNC Bank, N.A.		
10.27(a)	Uncommitted ($30,000,000) Loan Agreement, dated January 28, 2021, between the Company, Tidewater Utilities, Inc., White Marsh Environmental Systems, Inc., Pinelands Water Company, Pinelands Wastewater Company, Utility Service Affiliates, Inc., Utility Service Affiliates (Perth Amboy) Inc., Tidewater Environmental Services, Inc., and Bank of America, N.A. filed as Exhibit 10.30 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020.		
10.27(b)	Amendment No. 1 ($60,000,000) to Uncommitted Loan Agreement, dated January 27, 2022, between the Company, Tidewater Utilities, Inc., White Marsh Environmental Systems, Inc., Pinelands Water Company, Pinelands Wastewater Company, Utility Service Affiliates, Inc., Utility Service Affiliates (Perth Amboy) Inc., and Bank of America, N.A., filed as Exhibit 10.27(b) of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.		
10.27(c)	Amendment No. 2 ($60,000,000) to Uncommitted Loan Agreement, dated January 26, 2023, between the Company, Tidewater Utilities, Inc., White Marsh Environmental Systems, Inc., Pinelands Water Company, Pinelands Wastewater Company, Utility Service Affiliates, Inc., Utility Service Affiliates (Perth Amboy) Inc., and Bank of America, N.A. filed as Exhibit 10.27(c) of the Company's Annual Report on Form 10-K for the year ended December 31, 2022.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
*10.27(d)	Amendment No. 3 ($60,000,000) to Uncommitted Loan Agreement, dated January 25, 2024, between the Company, Tidewater Utilities, Inc., White Marsh Environmental Systems, Inc., Pinelands Water Company, Pinelands Wastewater Company, Utility Service Affiliates, Inc., Utility Service Affiliates (Perth Amboy) Inc., and Bank of America, N.A.		
10.28	Fourth Amendment to Promissory Note and Supplement, dated as of August 19, 2020, between Tidewater Utilities, Inc. and CoBank, ACB, filed as Exhibit 10.34 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020.		
10.29	Loan Agreement, dated December 1, 2010, between the State of New Jersey and the Company (Series MM), filed as Exhibit 10.41 of the Company's Annual Report on Form 10-K for the year ended December 31, 2010.		
10.30	Loan Agreement, dated December 1, 2010, between New Jersey Environmental Infrastructure Trust and the Company (Series NN), filed as Exhibit 10.42 of the Company's Annual Report on Form 10-K for the year ended December 31, 2010.		
10.31	Loan Agreement, dated May 1, 2012, between the State of New Jersey and the Company, (Series OO), filed as Exhibit 10.43 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012.		
10.32	Loan Agreement, dated May 1, 2012, between New Jersey Environmental Infrastructure Trust and the Company (Series PP), filed as Exhibit 10.44 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012.		
10.33	Loan Agreement, dated November 1, 2012, between the New Jersey Economic Development Authority and the Company (Series QQ]), filed as Exhibit 10.41 of the Company's Annual Report on Form 10-K for the year ended December 31, 2012.		
10.34	Loan Agreement, dated May 1, 2013, between the State of New Jersey and the Company (Series TT), filed as Exhibit 10.42 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013.		
10.35	Loan Agreement, dated May 1, 2013, between New Jersey Environmental Infrastructure Trust and the Company (Series UU), filed as Exhibit 10.43 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013.		
10.36	Loan Agreement, dated May 1, 2014, between New Jersey Environmental Infrastructure Trust and the Company (Series VV), filed as Exhibit 10.43 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
10.37	Loan Agreement, dated May 1, 2014, between New Jersey Environmental Infrastructure Trust and the Company (Series WW), filed as Exhibit 10.44 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014.		
10.38	Loan Agreement, dated November 1, 2017, between New Jersey Environmental Infrastructure Trust and the Company (Series XX), filed as Exhibit 10.44 of the Company's Annual Report on Form 10-K for the year ended December 31, 2017.		
10.39	Loan Agreement, dated November 1, 2017, between New Jersey Environmental Infrastructure Trust and the Company (Series YY), filed as Exhibit 10.45 of the Company's Annual Report on Form 10-K for the year ended December 31, 2017.		
10.40	Loan Agreement, dated May 1, 2018, between New Jersey Environmental Infrastructure Trust and the Company (Series 2018A), filed as Exhibit 10.46 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018.		
10.41	Loan Agreement, dated May 1, 2018, between New Jersey Environmental Infrastructure Trust and the Company (Series 2018B), filed as Exhibit 10.47 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018.		
10.42	Loan Agreement, dated August 1, 2019, between New Jersey Economic Development Authority and the Company (Series 2019A and Series 2019B), filed as Exhibit 10.50 to the Company's Current Report on Form 8-K filed September 6, 2019.		
10.43	Bond Purchase Agreement, dated November 16, 2020, between New York Life Insurance Company and Affiliates and the Company (Series 2020A), filed as Exhibit 10.48 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020.		
10.44	Bond Purchase Agreement, dated November 5, 2021, between New York Life Insurance Company and Affiliates and the Company (Series 2021A and Series 2021B), filed as Exhibit 10.46 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.		
10.45	Financing Agreement, dated December 16, 2021, between the Delaware Drinking Water State Revolving Fund, acting by and through the Delaware Department of Health & Social Services, and Tidewater Utilities, Inc, filed as Exhibit 10.46 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.		
10.46	Loan Agreement, dated May 1, 2022, between New Jersey Infrastructure Bank and the Company (Series 2022A), filed as Exhibit 10.40 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2022.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
10.47	Loan Agreement, dated May 1, 2022, between the State of New Jersey, acting by and through the New Jersey Department of Environmental Protection, and the Company (Series 2022B) filed as Exhibit 10.41 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2022.		
10.48	Bond Purchase Agreement, dated March 2, 2023, between New York Life Insurance Company and Affiliates and the Company (Series 2023A) filed as Exhibit 10.48 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023.		
10.49	Financing Agreement, dated April 5, 2023, between the Delaware Drinking Water State Revolving Fund, acting by and through the Delaware Department of Health and Social Services, Division of Public Health and Tidewater Utilities, Inc., filed as Exhibit 10.49 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023.		
10.50	Financing Agreement, dated April 5, 2023, between the Delaware Drinking Water State Revolving Fund, acting by and through the Delaware Department of Health and Social Services, Division of Public Health and Tidewater Utilities, Inc, filed as Exhibit 10.50 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023.		
10.51	Financing Agreement, dated April 5, 2023, between the Delaware Drinking Water State Revolving Fund, acting by and through the Delaware Department of Health and Social Services, Division of Public Health and Tidewater Utilities, Inc, filed as Exhibit 10.51 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023.		
10.52	Multiple Advance Term Promissory Note, dated May 22, 2023, between Pinelands Water Company and CoBank, ACB, filed as Exhibit 10.53 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023.		
10.53	Multiple Advance Term Promissory Note, dated May 22, 2023, between Pinelands Wastewater Company and CoBank, ACB, filed as Exhibit 10.54 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023.		
10.54	Settlement Agreement, dated as of August 28, 2023, between Middlesex Water Company and 3M Company, filed as Exhibit 10.55 of the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023.		
10.55	Consulting Agreement, dated March 1, 2024, between the Company and Dennis W. Doll, filed as Exhibit 99.4 of the Company's Current Report on Form 8-K dated January 23, 2024.		

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Exhibit No.	Document Description	Previous Registration No.	Filing's Exhibit No.
*19	Middlesex Water Company Insider Trading Policy.		
*21	Middlesex Water Company Subsidiaries.		
*23.1	Consent of Independent Registered Public Accounting Firm, Baker Tilly US, LLP.		
*31	Section 302 Certification by Dennis W. Doll pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.		
*31.1	Section 302 Certification by A. Bruce O'Connor pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.		
*32	Section 906 Certification by Dennis W. Doll pursuant to 18 U.S.C.§1350.		
*32.1	Section 906 Certification by A. Bruce O'Connor pursuant to 18 U.S.C.§1350.		
*97	Middlesex Water Company Incentive-Based Award Clawback Policy.		
101.INS	XBRL Instance Document– the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.		
101.SCH	Inline XBRL Taxonomy Extension Schema Document		
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document		

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to
Commission file number: 001-8966

SJW GROUP

(Exact name of registrant as specified in its charter)

Delaware	**77-0066628**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
110 West Taylor Street, San Jose, CA	**95110**
(Address of principal executive offices)	**(Zip Code)**

(408) 279-7800
(Registrant's telephone number, including area code)
Not Applicable
(Former name, former address and former fiscal year, if changed since last report)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	SJW	New York Stock Exchange LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company," in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b) ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of June 30, 2023, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $2,199 million based on the closing sale price as reported on the New York Stock Exchange.

As of February 15, 2024, 32,060,353 shares of the registrant's common stock, par value, $0.001 per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement relating to the registrant's Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K where indicated.

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PART I

Forward-Looking Statements

This report contains forward-looking statements within the meaning of the federal securities laws relating to future events and future results of SJW Group and its subsidiaries that are based on current expectations, estimates, forecasts, and projections about SJW Group and its subsidiaries and the industries in which SJW Group and its subsidiaries operate and the beliefs and assumptions of the management of SJW Group. Some of these forward-looking statements can be identified by the use of forward-looking words such as "believes," "expects," "may," "will," "should," "seeks," "approximately," "intends," "plans," "estimates," "projects," "strategy," or "anticipates," or the negative of those words or other comparable terminology. These forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions that are difficult to predict. Therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. Important factors that could cause or contribute to such differences include, but are not limited to, those discussed in this report under Item 1A, "Risk Factors," and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and elsewhere, and in other reports and documents SJW Group files with the Securities and Exchange Commission (the "SEC"), specifically the most recent Form 10-Q and reports on Form 8-K filed with the SEC, each as it may be amended from time to time.

The accuracy of such statements is subject to a number of risks, uncertainties and assumptions including, but not limited to, the following factors:

- the effect of water, utility, environmental and other governmental policies and regulations, including actions concerning rates, authorized return on equity, authorized capital structures, capital expenditures and other decisions;
- changes in demand for water and other services;
- unanticipated weather conditions and changes in seasonality including those affecting water supply and customer usage;
- the effect of the impacts of climate change;
- unexpected costs, charges or expenses;
- our ability to successfully evaluate investments in new business and growth initiatives;
- contamination of our water supplies and damage or failure of our water equipment and infrastructure;
- the risk of work stoppages, strikes and other labor-related actions;
- catastrophic events such as fires, earthquakes, explosions, floods, ice storms, tornadoes, hurricanes, terrorist acts, physical attacks, cyber-attacks, epidemic or similar occurrences;
- changes in general economic, political, business and financial market conditions;
- the ability to obtain financing on favorable terms, which can be affected by various factors, including credit ratings, changes in interest rates, compliance with regulatory requirements, compliance with the terms and conditions of our outstanding indebtedness, and general market and economic conditions; and
- legislative and general market and economic developments.

Actual results are subject to other risks and uncertainties that relate more broadly to our overall business, including those more fully described in our filings with the SEC, including our most recent reports on Form 10-K, Form 10-Q and Form 8-K. Forward-looking statements are not guarantees of performance, and speak only as of the date made, and SJW Group undertakes no obligation to update or revise any forward-looking statements except as required by law.

Item 1. ***Business***

General Development of Business

SJW Group was initially incorporated as SJW Corp. in the state of California on February 8, 1985. SJW Group is a holding company with four wholly owned subsidiaries:

- San Jose Water Company ("SJWC"), with its headquarters located at 110 West Taylor Street in San Jose, California 95110, was originally incorporated under the laws of the State of California in 1866. As part of a reorganization on February 8, 1985, SJWC became a wholly owned subsidiary of SJW Group. SJWC is a public utility in the business of providing water service in the metropolitan San Jose, California area.
- SJWNE LLC, a Delaware limited liability company, was formed in 2019, and is a wholly owned subsidiary of SJW Group. SJWNE LLC is a special purpose entity established to hold SJW Group's investment in Connecticut Water Service, Inc. Connecticut Water Service, Inc. with its headquarters located in Clinton, Connecticut, was incorporated in 1974 in the State of Connecticut. As part of the merger transaction between SJW Group and Connecticut Water Service, Inc. on October 9, 2019, Connecticut Water Service, Inc. and its subsidiaries ("CTWS") became a wholly owned subsidiary of SJWNE LLC. Connecticut Water Service, Inc. is a holding company with four wholly owned subsidiaries. The Connecticut Water Company ("CWC") and The Maine Water Company ("MWC") are public utilities in the business of providing water service throughout Connecticut and Maine. The remaining two subsidiaries are Chester Realty, Inc., a real estate company in Connecticut, and New England Water Utility Services, Inc. ("NEWUS"), which provides contract water and sewer operations and other water related services.
- In the third quarter of 2023, the corporate reorganization of our water services organization in Texas was completed. SJWTX Holdings, Inc. is the holding company for SJWTX, Inc., doing business as The Texas Water Company ("TWC"), Texas Water Operation Services, LLC ("TWOS") and Texas Water Resources, LLC ("TWR"). TWC is a public utility in the business of providing water service in Bandera, Blanco, Comal, Hays, Kendall, Medina and Travis Counties in the growing region between San Antonio and Austin, Texas. TWC additionally provides wastewater service in Comal and Kendall counties. TWC also holds a 25% equity interest in Acequia Water Supply Corporation ("Acequia"). Acequia has been determined to be a variable interest entity within the scope of Accounting Standards Codification ("ASC") Topic 810, "Consolidation," with TWC as the primary beneficiary. As a result, Acequia has been consolidated with TWC. TWOS was created for non-tariffed service operations and TWR was formed to hold wholesale water supply assets.
- SJW Land Company was incorporated in 1985. SJW Land Company owns undeveloped land in California and Tennessee and operates commercial buildings in Tennessee.

Together, SJWC, CWC, TWC, TWOS, TWR, MWC and NEWUS are referred to as "Water Utility Services."

SJW Land Company and Chester Realty, Inc. are collectively referred to as "Real Estate Services."

Regulation and Rates

Water Utility Services, excluding non-tariffed activities, are subject to rate regulation based on cost recovery and meets the criteria of accounting guidance for rate-regulated operations, which affects the timing of the recognition of certain revenues and expenses. SJW Group's consolidated financial statements reflect the actions of regulators in the rate-making process. The rate-making process is intended to provide revenues sufficient to recover normal operating expenses, provide funds for replacement of water infrastructure and produce a fair and reasonable return on stockholder common equity. SJW Group's regulated operations financing activities are designed to achieve capital structures consistent with regulatory guidelines in the locations where the companies operate. The following summarizes each state's authorized rates and capital structure as of December 31, 2023:

	California	Connecticut	Texas (a)	Maine (b)
Authorized capital structure (debt/equity)	45% / 55%	47% / 53%	42% / 58%	50% / 50%
Authorized return on equity (c)	9.31%	9.00%	10.88%	9.70%
Authorized rate base (in millions)	$1,113.7	$620.1	$43.3	$135.1
Estimated rate base at year-end (in millions) (d)	$1,136.3	$731.3	$106.5	$172.0

(a) Estimated by management.

(b) The authorized capital structure and return on equity shown are those of the largest division of MWC, the Biddeford and Saco division. Effective January 1, 2024, the Biddeford and Saco division's authorized return on equity is 9.5% and its authorized capital structure is 49% debt and 51%

equity. This return on equity and capital structure will be used for any future Water Infrastructure Surcharge ("WISC") calculations for all divisions until the Commission has authorized or approved a different return on equity structure in a different proceeding.

(c) For California, the approved WCCM-adjusted return on equity is 10.01% starting January 1, 2024, less a 20 basis point reduction due to the reimplementation of the Water Conservation Memorandum Account ("WCMA").

(d) An approximation of rate base which includes net utility plant not yet included in rate base pending rate case filings and outcomes. For California, this represents the weighted-average estimated rate base for the twelve months ended December 31, 2023.

California Regulatory Affairs

SJWC's rates, service and other matters affecting its business are subject to regulation by the California Public Utilities Commission ("CPUC").

Generally, there are three types of rate adjustments that affect SJWC's revenue collection: general rate adjustments, cost of capital adjustments, and offset rate adjustments. General rate adjustments are authorized in general rate case decisions, which usually authorize an initial rate adjustment followed by two annual escalation adjustments. General rate applications are normally filed and processed during the last year covered by the most recent general rate case as required by the CPUC in order to avoid any gaps in regulatory decisions on general rate adjustments. Actual revenue received may be higher or lower than the revenue requirement due to a number of factors including actual customer counts, usage or other regulatory factors in force at the time.

Cost of capital adjustments are rate adjustments resulting from the CPUC's usual tri-annual establishment of a reasonable rate of return for SJWC's capital investments.

The purpose of an offset rate adjustment is to compensate utilities for changes in specific pre-authorized offsettable capital investments or expenses, primarily for purchased water, groundwater extraction, purchased power and pensions. Pursuant to Section 792.5 of the California Public Utilities Code, a balancing account must be maintained for each expense item for which such revenue offsets have been authorized. Memorandum accounts track revenue impacts due to catastrophic events, certain unforeseen water quality expenses related to new federal and state water quality standards, energy efficiency, water conservation during periods of mandated water restrictions, water tariffs and other approved activities or as directed by the CPUC. The purpose of balancing and memorandum accounts is to track the under-collection or over-collection associated with such expense changes and activities for future recovery or refund considerations. Carrying balances of the balancing and memo accounts earn a rate of return based on treasury rates.

On May 3, 2021, SJWC filed Application No. 21-05-004 requesting authority to adjust its cost of capital for the period from January 1, 2022 through December 31, 2024. The request sought a revenue increase of $6.4 million or 1.61% in 2022. The application also proposed a rate of return of 8.11%, an increase from 7.64%, a decrease in the average cost of debt rate from 6.20% to 5.48%, and a return on equity of 10.30%, an increase from 8.90%. In addition, the request sought to adjust SJWC's currently authorized capital structure of approximately 47% debt and 53% equity to approximately 45% debt and 55% equity. Intervenors in this proceeding, namely the Public Advocates Office and Water Rate Advocates for Transparency, Equity, and Sustainability, suggested a lower return on equity while the latter has also suggested a higher cost of debt and different capital structure as part of their testimonies. On June 29, 2023, the CPUC approved Decision No. 23-06-025 in this proceeding. The decision authorized a rate of return of 7.28% based on a return on equity of 8.80%, a cost of debt of 5.46%, and a capital structure of approximately 45% debt and 55% equity. The CPUC also authorized continuation of the Water Cost of Capital Mechanism ("WCCM") in the same decision. The WCCM provided for an adjustment to SJWC's return on equity and cost of debt if the average Moody's Aa utility bond index rate between October 1, 2021 and September 30, 2022 varies by more than 100 basis points when compared to the same period from the prior year. The index rate difference between those periods increased 103 basis points, thereby triggering the WCCM. Accordingly, SJWC filed a Tier 2 Advice Letter No. 598 on June 30, 2023, which was subsequently approved with an effective date of July 31, 2023. On July 31, 2023, SJWC filed a Tier 1 Advice Letter No. 599 to implement new rates. The new rates became effective prospectively on the date of the filing and reflected the WCCM-adjusted return on equity of 9.31%, a cost of debt of 5.26%, and an overall rate of return of 7.47%. Advice Letter No. 599 was approved with an effective date of July 31, 2023. Between October 1, 2022 and September 30, 2023, the index rate increased approximately 140 basis points, surpassing the required WCCM trigger. On October 13, 2023, SJWC filed Advice Letter No. 601 to trigger the WCCM for 2024, which was subsequently approved with an effective date of January 1, 2024. The approved WCCM-adjusted return on equity is 10.01% starting January 1, 2024, less a 20 basis point reduction due to the reimplementation of the WCMA.

The CPUC approved the settlement of 2022 General Rate Case on October 6, 2022 and issued Decision No. 22-10-005 ("2022 GRC Decision") on October 11, 2022. SJWC received authority for an increase of revenue requirement by $25.1 million or 6.03% in 2022, $13.0 million or 2.94% in 2023, and $16.1 million or 3.56% in 2024. The application included requests to recover $18.2 million from balancing and memorandum accounts and authorization for a $350 million capital budget. Additionally, it further aligned authorized and actual consumption, particularly for business customers, addressed the water

supply mix variability, and provided greater revenue recovery in the fixed charge. The approved revenue increase for 2022 was effective retrospectively to January 1, 2022.

SJWC filed Advice Letter No. 585 on November 10, 2022, to recover $20.6 million in the Interim Rates Memorandum Account in accordance with the 2022 GRC Decision. Advice Letter No. 585 was approved with an effective date of January 1, 2023.

SJWC filed Advice Letter No. 586 on November 18, 2022, to increase the authorized revenue requirement by $18.4 million or 4% for the escalation year increase in accordance with the 2022 GRC Decision. Advice Letter No. 586 was approved with an effective date of January 1, 2023.

SJWC filed Advice Letter No. 590 on April 6, 2023, to recover a $14.2 million under-collection in its Monterey Water Revenue Adjustment ("MWRAM") Account as of March 31, 2023. SJWC proposed that this amount be recovered via a 12-month volume surcharge. Advice Letter No. 590 was approved with an effective date of May 8, 2023.

SJWC filed Advice Letter No. 591 on April 11, 2023, to discontinue its drought allocation surcharges and move from Stage 3 to Stage 1 of its Schedule 14.1. Advice Letter No. 591 was approved with an effective date of April 11, 2023.

SJWC filed Advice Letter No. 592 on April 20, 2023, to continue its WCMA and Water Conservation Expense Memorandum Account under Santa Clara Valley Water District's ("Valley Water") voluntary call for 15% conservation. On October 2, 2023, Advice Letter No. 592 was approved with an effective date of April 20, 2023.

SJWC filed Advice Letter No. 596 on May 31, 2023, to increase the authorized revenue requirement by $27.6 million to offset the increases to purchased potable water charges, the groundwater extraction fee, and purchased recycled water charges from its water wholesalers effective July 1, 2023. Advice Letter No. 596 was approved with an effective date of July 1, 2023.

SJWC filed Advice Letter No. 603 on November 14, 2023, to establish a Group Insurance Balancing Account to track the difference between the company's authorized versus actual costs for medical, dental, and opt-out insurance expenses. Advice Letter No. 603 was approved with an effective date of January 1, 2024.

SJWC filed Advice Letter No. 605 on November 21, 2023, to increase the authorized revenue requirement by $21.3 million or 4.16% for the attrition year increase in accordance with the 2022 GRC Decision. Advice Letter No. 605 was approved with an effective date of January 1, 2024.

On December 15, 2023, SJWC, along with three other California water utilities, filed a joint request for one-year deferment on the cost of capital filings which would otherwise be due on May 1, 2024. Postponing the filing a year would alleviate administrative processing costs on the utilities as well as the CPUC staff, and provide relief for both CPUC and utility resources already strained by numerous other proceedings. The request is conditioned on leaving the current WCCM in place such that any adjustments will be made to the respective utilities cost of capital during the one-year deferment based on the mechanism. The request was approved on February 2, 2024.

On January 2, 2024, SJWC filed General Rate Case Application No. 24-01-001 with the CPUC to increase rates charged for water service by $55.2 million or 11.11% in 2025, by $22 million or 3.99% in 2026, and by $25.8 million or 4.49% in 2027. The application also includes requests to recover $23.5 million from balancing and memorandum accounts, further alignment between actual and authorized usage, and a shift to greater revenue collection in the service charge. The application will undergo a year-long review process and the new rates, if approved, are expected to be effective January 1, 2025.

Connecticut Regulatory Affairs

CWC's rates, service and other matters affecting its business are subject to regulation by the Public Utilities Regulatory Authority of Connecticut ("PURA").

PURA allows the Connecticut regulated operations to add surcharges to customers' bills in order to recover certain costs associated with approved eligible capital projects through the Water Infrastructure Conservation Adjustment ("WICA") in between full rate cases, as well as approved surcharges or sur-credits for the Water Revenue Adjustment ("WRA").

On January 25, 2023, CWC filed its 2022 WICA reconciliation with PURA. The reconciliation, approved by PURA on March 29, 2023 and effective for 12 months beginning April 1, 2023, replaced the expiring 2021 reconciliation credit of 0.02% with a credit of 0.16%. On January 26, 2023, CWC filed for a WICA increase of $3.3 million in annualized revenues for $27.8 million in completed projects. PURA approved CWC's application on March 22, 2023. The cumulative WICA surcharge as of April 1, 2023 was 6.19%, collecting $6.5 million on an annual basis.

On February 27, 2023, CWC filed its 2022 WRA. The mechanism reconciles 2022 revenues as authorized in the CWC's most recent rate case. The 2022 WRA, as approved by PURA on March 24, 2023 and effective for 12 months beginning on April 1, 2023, imposed a 4.97% sur-credit on customer bills to refund the 2022 revenue over-collection.

On July 27, 2023, CWC filed for a WICA increase of $1.3 million in annualized revenues for $11.5 million in completed

projects. PURA approved the application, and effective October 1, 2023, the cumulative WICA surcharge is 7.38%.

On October 3, 2023, CWC filed an application with PURA to adjust customer rates. If PURA approves the request as proposed, annual revenues of CWC will increase by approximately $21.4 million or 18.1% over current authorized revenues and would be effective on or about July 1, 2024.

On November 14, 2023, CWC submitted an application to PURA for the approval to issue unsecured notes in the amount of $25.0 million. A decision from PURA approving the application was received on January 10, 2024.

Texas Regulatory Affairs

TWC's rates are subject to the economic regulation of the Public Utilities Commission of Texas ("PUCT"). The PUCT may authorize rate increases after the filing of an Application for a Rate/Tariff Change. Rate cases may be filed as they become necessary, provided there is no current rate case outstanding. Furthermore, rate cases may not be filed more frequently than once every 12 months.

TWC has no current general rate case pending. However, it filed its application to establish a System Improvement Charge ("SIC") with the PUCT under Docket No. 54430 on December 30, 2022. This filing will allow TWC to add certain utility plant additions made since 2020 to its rate base, thereby increasing revenue and avoiding the immediate need for a general rate case. The SIC is projected to increase TWC's water revenue by $1.6 million and sewer revenue by $29 thousand within one year of the approval from the PUCT. On October 17, 2023, the PUCT found the application administratively complete. Once the PUCT files the final order approving the SIC, TWC will be required to file a general rate case within four years. TWC will incrementally increase its SIC annually until its next rate case. TWC expects to receive the final order during the first quarter of 2024. Notwithstanding the SIC filing, TWC will continue to file its annual adjustments for the Water Pass-through Charges ("WPC") for Canyon Lake, Deer Creek and Kendall West customers. All water supply cost increases are recoverable when the next annual WPC adjustment for each system is filed.

On April 10, 2023, TWC filed an application with the PUCT to acquire the Elm Ridge water system that serves 21 residential customers. TWC has asked for filed rate doctrine treatment, which allows the acquiring utility's current rates to be applied at the time of acquisition. On December 12, 2023, the Administrative Law Judge filed Order No. 11, which allowed TWC to proceed and the acquisition closed on January 26, 2024. The final order, which transfers the Certificate of Convenience and Necessity ("CCN") and allows filed rate doctrine, is expected to be approved during the second quarter of 2024.

On July 24, 2023, the PUCT approved TWC's application to acquire KT Water Development Ltd. KT Water Development Ltd. provides service to approximately 570 residential water connections. On August 14, 2023, TWC closed on the acquisition. The PUCT's final decision that transfers the CCN to TWC is expected in the first quarter of 2024, which is when we anticipate approval of our request for fair market value and filed rate doctrine treatment.

On January 5, 2024, TWC filed an application with the PUCT to acquire the 3009 Water Company LLC water system that serves approximately 270 residential connections. TWC requested fair market value and filed rate doctrine treatment which allows the acquiring utility's current rates to be applied at the time of acquisition. TWC expects to receive approval to close on the acquisition during the third quarter of 2024.

Maine Regulatory Affairs

MWC's rates, service and other matters affecting its business are subject to regulation by the Maine Public Utilities Commission ("MPUC"). MPUC approves rates on a division-by-division basis in Maine and allows MWC to add surcharges to customers' bills in order to recover certain costs associated with capital projects through the WISC in between general rate cases. Projects eligible for WISC surcharges include all infrastructure replacement or repair projects, excluding meters, that are necessary for the transmission, distribution or treatment of water.

The rates approved in the Biddeford Saco division by the April 5, 2022 stipulated agreement, which authorized a rate increase of $6.3 million, or 72.5% went into effect on July 1, 2022. The Saco River Drinking Water Resource Center began supplying the water distribution system on June 16, 2022. As part of the stipulated agreement, MWC agreed to file a final phase of the rate case by April 1, 2023. Step 3 of the planned multi-year rate filings for the Saco River Drinking Water Resource Center was filed in accordance with the Commission order on March 31, 2023. The filing requested an increase in revenue requirement of $2.9 million or 19.9% and requested that the increase be implemented over two years with a 12% increase effective July 1, 2023 followed by a 9% increase effective July 1, 2024 with a slight decrease in year three to reach the overall 19.9% requested. On August 25, 2023, the Commission issued an order granting a temporary rate increase of $1.5 million or 10% while the case and the company's full request are litigated. The company reached a settlement agreement with staff and the Office of the Public Advocate and filed a stipulated settlement agreement with the MPUC on December 22, 2023. The commission approved the stipulation in deliberations on January 5, 2024 with a rate effective date of January 1, 2024. The approved stipulation authorizes an increase in rates of $2.6 million or 17.6%. The Biddeford and Saco division's increase in rates is based on an authorized return on equity of 9.5% along with a capital structure of 49% debt and 51% equity. This return on equity and capital

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structure will be used for any future WISC calculations for all divisions until the Commission has authorized or approved a different return on equity structure in a different proceeding.

On February 28, 2022, MWC filed requests for general rate increases in the Camden-Rockland, Freeport, Millinocket and Oakland Divisions. On February 2, 2023, MWC received final decisions from the MPUC on four general rate cases filed in 2022. The rate increases are retroactively effective for January 1, 2023 and authorize a $0.7 million increase in annual revenues.

On June 30, 2023, MWC filed a Water Infrastructure Surcharge for the Camden-Rockland division. The requested surcharge is 2.34% or $0.2 million. The Commission is expected to issue a decision regarding the surcharge in the first quarter of 2024.

Please also see Item 1A, "Risk Factors," Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and Note 3 of "Notes to Consolidated Financial Statements."

Description of Business

General

The principal business of Water Utility Services consists of the production, purchase, storage, purification, distribution, wholesale and retail sale of water and wastewater services. SJWC provides water services to approximately 232,400 connections that serve approximately one million people over 139 square miles residing in portions of the cities of San Jose and Cupertino and in the cities of Campbell, Monte Sereno, Saratoga and in the Town of Los Gatos, and adjacent unincorporated territories, all in the County of Santa Clara in the State of California. The CTWS companies provide water service to approximately 141,000 service connections that serve a population of approximately 461,000 people in 81 municipalities with a service area of approximately 272 square miles throughout Connecticut and Maine and 3,000 wastewater connections in Southbury, Connecticut. TWC provides water service to approximately 28,000 service connections that serve approximately 83,000 people in a service area comprising more than 271 square miles in the region between San Antonio and Austin, Texas and approximately 950 wastewater connections. Together, the Water Utility Services distribute water to customers in their respective service areas in accordance with accepted water utility methods.

Water Utility Services also provide non-tariffed services under agreements with municipalities and other utilities. These non-tariffed services include water system operations, maintenance agreements and antenna site leases. In addition, in October 1997, SJWC commenced operation of the City of Cupertino municipal water system under a 25-year lease which was due to expire in September of 2022 and was amended on January 8, 2020. The system is adjacent to the SJWC service area and has approximately 4,600 service connections. Under the terms of the lease, SJWC assumed responsibility for all maintenance and operating costs of the system, while receiving all payments for water service. SJWC paid an upfront $6.8 million concession fee and an additional $5.0 million in capital improvements to the City of Cupertino. On February 25, 2022, SJWC received a letter from the City of Cupertino exercising their option to extend the term of the lease an additional two years through October 1, 2024. SJWC paid an additional $1.6 million concession fee. The total concession fees paid for the agreement are being amortized over the contract term including the extension.

CTWS provides contracted services to water utilities, as well as offers Linebacker® protection plans for public drinking water customers in the states of Connecticut and Maine. Linebacker plans cover a limited amount of the cost of repairs to water and wastewater service lines and in-home plumbing. Services provided are dependent on the selected plan.

SJW Land Company owns undeveloped real estate property in California and Tennessee, as well as commercial and warehouse properties in Tennessee. Chester Realty, Inc. owns commercial properties and parcels of land in Connecticut.

Among other things, operating results from the water business fluctuate according to the demand for water, which is often influenced by seasonal conditions, such as impact of drought, summer temperatures or the amount and timing of precipitation in Water Utility Services' service areas. Revenue, production expenses and income are affected by changes in water sales and the sources of water supply. Overhead costs, such as payroll and benefits, depreciation, interest on long-term debt, and property taxes are not significantly impacted by seasonality or water supply mix. Generally, earnings are highest in the higher demand, warm summer months and lowest in the lower demand, cool winter months. Certain regulatory mechanisms in our service areas may mitigate the effects of demand fluctuations and/or variations in water supply costs on our operating results.

Water Supply

California Water Supply

SJWC's water supply consists of groundwater from wells, surface water from watershed run-off and diversion, reclaimed water, and imported water purchased from Valley Water under the terms of a master contract with Valley Water expiring in 2051. During normal rainfall years, purchased water provides approximately 40% to 50% of SJWC's annual production. An additional 40% to 50% of its water supply is pumped from the underground basin which is subject to a groundwater extraction charge paid to Valley Water. Surface supply, which during a normal rainfall year satisfies about 6% to 8% of SJWC's annual

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water supply needs, provides approximately 1% of its water supply in a dry year and approximately 14% in a wet year. In dry years, the decrease in water from surface run-off and diversion and the corresponding increase in purchased and pumped water increases production expenses substantially. The opposite is also true where water production expenses decrease in wet years. In both instances, the impacts of surface water, purchased water, groundwater extraction, and purchased power expenses are now tracked in SJWC's Full Cost Balancing Account authorized in the 2022 GRC Decision.

The pumps and motors at SJWC's groundwater production facilities are propelled by electric power. SJWC has installed standby power generators at 38 of its strategic water production sites and manages a fleet of 22 portable generators deployed throughout the distribution system for power outages at remaining pumping facilities. In addition, the commercial office and operations control centers are outfitted with standby power equipment that allow critical distribution and customer service operations to continue during a power outage. Valley Water has informed SJWC that its filter plants, which deliver purchased water to SJWC, are also equipped with standby generators. In the event of a power outage, SJWC believes it will be able to prevent an interruption of service to customers for a limited period by pumping water using generator power and by using purchased water from Valley Water.

In 2023, the level of water in the Santa Clara Valley groundwater basin, which is managed by Valley Water, experienced an increase in most areas due to seasonal recovery, an increase in managed recharge operations, and a decrease in groundwater pumping by various water retailers in the region. As reported by Valley Water at the end of 2023, the groundwater level in the Santa Clara Plain was 17 feet higher compared to the same time in 2022. The total groundwater storage at the end of 2023 was within Stage 1 (Normal) of the Valley Water's Water Shortage Contingency Plan. On January 1, 2024, Valley Water's 10 reservoirs were 54% of restricted capacity with 10.9 billion gallons of water in storage. As of December 31, 2023, SJWC's Lake Elsman was 55.7% of capacity with 11.2 billion gallons of water, 179.3% of the five-year seasonal average. In addition, the rainfall at SJWC's Lake Elsman was measured at 13 inches for the period from July 1, 2023 through December 31, 2023, which is 70.8% of the five-year average. SJWC's Montevina Water Treatment Plant treated 4 billion gallons of water in 2023, which is 182.5% of the five-year average. SJWC's Saratoga Water Treatment Plant treated 0.1 billion gallons of water in 2023, which is 73.3% of the five-year average. SJWC believes that its various sources of water supply will be sufficient to meet customer demand in 2024.

On April 11, 2023, Valley Water rescinded its water shortage emergency and 15% mandatory conservation target. Valley Water also established a 15% voluntary call for conservation and retained certain watering and water waste rules in recognition of precipitation volatility and reduced local storage. On the same day, SJWC ended its Mandatory Conservation Plan, which included drought allocations and surcharges, and lowered its drought response from Stage 3 to Stage 1.

California faces long-term water supply challenges. SJWC actively works with Valley Water to meet the challenges by continuing to educate customers on responsible water use practices and conducting long-range water supply planning.

Connecticut Water Supply

CWC's water sources vary among the individual systems, but overall, approximately 80% of the total dependable yield comes from surface water supplies and 20% from wells. In addition, CWC has water supply agreements to supplement its water supply with the South Central Connecticut Regional Water Authority and The Metropolitan District that expire 2058 and 2053, respectively.

Texas Water Supply

TWC's water supply consists of groundwater from wells and purchased treated and raw water from the Guadalupe-Blanco River Authority ("GBRA"). TWC has long-term agreements with the GBRA, which expire in 2037, 2040, 2044 and 2050, respectively. The agreements, which are take-or-pay contracts, provide TWC with an aggregate of 7,650 acre-feet of water per year from Canyon Lake at prices that may be adjusted periodically by GBRA. TWC also has raw water supply agreements with the Lower Colorado River Authority ("LCRA") and West Travis Public Utility Agency ("WTPUA") expiring in 2059 and 2046, respectively, to provide for 350 acre-feet of water per year from Lake Austin and the Colorado River, respectively, at prices that may be adjusted periodically by the agencies. Forty active production wells located in a Comal Trinity Groundwater Conservation District, a regulated portion of the Trinity aquifer, are charged a groundwater pump tax based upon usage.

In August 2023, SJWTX Holdings Inc.'s unregulated subsidiary, TWR, acquired eight wells and the water rights of KT Water Resources LLC ("KTR"). These wells have been projected to yield an additional 6,000 acre-feet per year or more.

Maine Water Supply

Water sources at MWC vary among the individual systems, but overall, approximately 90% of the total dependable yield comes from surface water supplies and 10% from wells. MWC has a water supply agreement with the Kennebec Water District expiring in 2040.

MWC relies on legislatively granted water rights in order to serve customers. In some instances, these rights were granted to predecessor water companies specially chartered by the Maine legislature many decades ago, with those entities later having

been merged into MWC. The legislation incorporating these predecessor water companies did not address whether chartered rights may be transferred to another entity without special legislative action. The Maine Business Corporation Act generally provides that property and contract rights of a merged corporation are vested in the surviving corporation without reversion or impairment. In the MPUC proceedings that approved the mergers of these MWC predecessor companies, the survivorship of water rights was not contested.

Please also see further discussion under Item 1A, "Risk Factors" and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Franchises

Franchises granted by local jurisdictions permit Water Utility Services to construct, maintain, and operate water distribution systems within the streets and other public properties of a given jurisdiction.

SJWC holds the necessary franchises to provide water in portions of the cities of San Jose and Cupertino and in the cities of Campbell, Monte Sereno and Saratoga, the Town of Los Gatos and the unincorporated areas of Santa Clara County. None of the franchises have a termination date, other than the franchise for the unincorporated areas of Santa Clara County, which terminates in 2035.

CWC's utility services hold the necessary franchises to provide water in portions of the towns of Ashford, Avon, Beacon Falls, Bethany, Bolton, Brooklyn, Burlington, Canton, Chester, Clinton, Colchester, Columbia, Coventry, Deep River, Durham, East Granby, East Haddam, East Hampton, East Windsor, Ellington, Enfield, Essex, Farmington, Griswold, Guilford, Haddam, Hebron, Killingly, Killingworth, Lebanon, Madison, Manchester, Mansfield, Marlborough, Middlebury, Naugatuck, Old Lyme, Old Saybrook, Oxford, Plainfield, Plymouth, Portland, Prospect, Simsbury, Somers, Southbury, South Windsor, Stafford, Stonington, Suffield, Thomaston, Thompson, Tolland, Vernon, Voluntown, Waterbury, Westbrook, Willington, Windsor Locks and Woodstock. Additionally, the Heritage Village Water division serves the Town of Southbury with wastewater services. None of the franchises of the CWC utility services have a termination date.

MWC holds franchises necessary to provide water services in the towns served which are Biddeford, Saco, Old Orchard Beach, Scarborough (Pine Point), Porter, Parsonsfield, Hiram, Freeport, Camden, Rockland, Rockport, Owls Head, Union, Thomaston, Warren, Bucksport, Skowhegan, Oakland, Hartland, Millinocket and Greenville. None of the franchises with MWC have a termination date.

TWC holds the franchises necessary to provide water and wastewater services to the City of Bulverde and the City of Spring Branch, which terminate in 2029 and 2036, respectively. The unincorporated areas that TWC serves in Comal, Blanco, Bandera, Hays, Kendall, Medina and Travis Counties do not require water service providers to obtain franchises.

Seasonal Factors

Water sales are seasonal in nature and influenced by weather conditions. The timing of precipitation and climatic conditions can cause seasonal water consumption by customers to vary significantly. Demand for water is generally lower during the cooler and rainy winter months. Demand increases in the spring when the temperature rises and rain diminishes.

Competition

The regulated operations of Water Utility Services are public utilities regulated by applicable state public utility commissions and operate within service areas approved by such regulators. Statutory laws provide that no other investor-owned public utility may operate in the service area of another public utility of the same class (e.g., another water utility) without first obtaining from the regulator a certificate of public convenience and necessity or similar authorization. Past experience shows such a certificate will be issued only after demonstrating that service in such area is inadequate.

California law also provides that whenever a public agency constructs facilities to extend utility service to the service area of a privately-owned public utility, like SJWC, such an act constitutes the taking of property and is conditioned upon payment of just compensation to the private utility.

Under the California law, municipalities, water districts and other public agencies have been authorized to engage in the ownership and operation of water systems. Such agencies are empowered to condemn properties operated by privately-owned public utilities upon payment of just compensation and are further authorized to issue bonds (including revenue bonds) for the purpose of acquiring or constructing water systems.

Under Connecticut law, any condemnation of water utility property by a municipality or any unit of state government requires the payment of just compensation for the taking. Further, any condemnation of utility land by a state department, institution or agency (including a municipality) requires the approval of the PURA.

Under Texas law, municipalities, water districts and other public agencies are authorized to engage in the ownership and operation of water systems. Such entities are empowered to acquire property, whether public or private, real or personal, by the

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exercise of the right of eminent domain, which entails payment to the owner of just compensation for the property taken. However, under current case law those entities may not exercise that right of eminent domain to take the entire operation of an investor-owned utility.

Under Maine law, municipalities-individually and collectively, consumer-owned and standard water districts, and other public agencies are authorized to engage in the ownership and operation of water systems. Such entities may acquire the real and personal property of a privately-owned water company, and take over the company's operations, by exercising the power of eminent domain. In such a taking, the acquiring entity must furnish the condemnee just compensation.

To the company's knowledge, no municipality, water district or other public agency has any pending proceeding to condemn any part of its existing water systems. The company is also unaware of any eminent domain proceeding to take any of its property or operations.

Environmental Matters

Water Utility Services produces potable water and generates wastewater and hazardous wastes in accordance with all applicable county, state and federal environmental rules and regulations. Additionally, public utilities are subject to environmental regulation by various other state and local governmental authorities.

Water Utility Services is currently in compliance with all of the United States Environmental Protection Agency's (the "EPA") surface water treatment performance standards, drinking water standards for disinfection by-products and primary maximum contaminant levels. These standards have been adopted and are enforced by the applicable state water, public health and environmental agencies.

Other state and local environmental regulations apply to our Water Utility Services' operations and facilities. These regulations relate primarily to the handling, storage and disposal of hazardous materials and discharges to the environment, including wastewater operations in the States of Connecticut and Texas. In 2016, SJWC began performing hazardous materials site assessments and remediation prior to the construction phase of capital projects. The site assessments are performed to remove any legacy materials and to obtain site closures from the Santa Clara County Department of Environmental Health under its Voluntary Cleanup Program.

Water Utility Services is currently in compliance with all state and local public health and environmental regulations applicable to their operations.

Please also see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Human Capital Resources

In order to continue to achieve SJW Group's mission of delivering life sustaining, high-quality water and exceptional service to families, businesses and communities, we are committed to attract, retain and develop the highest quality talent. We believe our employees are our most important asset. Throughout our organization, our employees embrace the company's values of teamwork and respect, straight talk and transparency, integrity and trust, and service and compassion in everything we do. Employees participate in semi-annual employee engagement and satisfaction surveys providing feedback that enables the company to continually assess and implement initiatives to enhance employee satisfaction and retention. Through our board and its committees, we are empowered to address factors that impact our employee strategy and drive positive change in our company and our communities. Our human capital measures and objectives focus on providing a safe and productive work environment that has clear positive and ethical values; a culture that embraces diversity, respect and equity; jobs that offer fair wages as benchmarked to the markets that we live and work in; competitive wages and benefits; and training and development opportunities that support our employees to establish and succeed in meaningful careers at SJW Group.

Basic Workforce Data

As of December 31, 2023, SJW Group had 808 full-time employees, of whom 387 were SJWC employees, 248 were CWC employees, 91 were TWC employees, and 82 were MWC employees. At SJWC, 240 employees are members of unions. Employees working for CWC, MWC and TWC are not represented by unions.

In the first quarter of 2023, SJWC executed three-year bargaining agreements with the International Union of Operating Engineers ("OE"), representing certain employees in the engineering department, and the Utility Workers of America ("UWUA"), representing the majority of all non-administrative employees at SJWC covering the period from January 1, 2023

through December 31, 2025. The agreements include a 6% wage increase provided in 2023, 3.5% in 2024 and 5.5% in 2025 for the union employees.

Employee Safety

Aiming for a "zero-harm" culture, our vision is to manage health and safety performance to become a leader in the water services industry. Protecting the health and safety of our employees is a top priority. Our employee health and safety programs, focus on four core elements:

- Safety Leadership: demonstrating management commitment and support, empowering local teams to be accountable for safety;
- Participation: involving every employee in all aspects of the safety program, connecting safety initiatives to serving employees, customers, shareholders, our communities and the environment;
- Hazard Identification and Control: inspecting workplaces, identifying hazards, implementing controls, and partnering with the front-line teams responsible for delivering reliable, clean, safe drinking water and service; and,
- Training: training employees on hazards and how to protect themselves. Incident and crisis management of both known and unknown threats to employee health and safety are anticipated and planned for by our safety team.

We have specific targets that set the trajectory of our safety program to ensure continuous improvement, including:

- Implement processes and systems to track, monitor, report and continually improve health and safety performance;
- Communicate the updated Health and Safety Policy to employees to promote compliance, consultation, and participation of workers on health and safety matters; and
- Strive for zero accidents and injuries.

We have implemented several management systems to plan and respond to workplace safety and training as well as incidents such as pandemics, wildfires, earthquakes, cyber threats and extreme weather, among others. The goal is to safeguard our employees' health and safety during local, national, or global incidents. Locally, workplace hazards are identified by onsite inspections and from near-miss investigations. More broadly, the team collaborates to anticipate and plan for external events such as a pandemic or for extreme weather or other external events that could impact our operations. Proactive identification of hazards keeps us one step ahead of our constantly changing workplace conditions.

Engagement and Satisfaction

SJW Group has invested significantly in employee engagement and satisfaction in alignment with its values and five building blocks of Community, Customers, Employees, Environment and Shareholders. Employees across SJW Group identified and adopted four sets of core values to guide their work and interactions: integrity and trust, compassion and service, straight talk and transparency, and respect and teamwork. Our leadership employs a servant leadership model where all leaders are encouraged and expected to provide service to their people ensuring that they continue to grow and thrive in their profession, knowledge, and general well-being. Regular "Straight Talk" meetings, employee town halls and quarterly "Leadership on Tap" gatherings are held to continue to build and support our culture and values. Additionally, the company provides ongoing opportunities for employee recognition from peers and leaders and also administers an employee engagement and satisfaction survey twice per year.

Diversity and Inclusion

SJW Group believes that a workplace supporting diversity and inclusion not only promotes equity, teamwork, productivity and collaboration among employees, but also enables us to provide the best services to our customers, communities, and partners and enhance value for our stockholders. We are committed to fostering and maintaining a culture of diversity and inclusion, and we have been tracking our workforce demographics to identify employee teams, geographies, or seniority levels where hiring of minorities or specific demographic representation needs to be addressed. In 2021, CEO Eric Thornburg signed on to the CEO Action for Diversity & Inclusion™ CEO pledge, which outlines a specific set of actions the signatory CEOs will take to cultivate a trusting environment where all ideas are welcomed, and employees feel comfortable and empowered to have discussions about diversity and inclusion. The Company's Diversity, Equity and Inclusion Council (the "Council") is comprised of employee volunteers from all four subsidiaries representing the communities we serve. Since inception, the Council has implemented several impactful initiatives including ongoing education and communications utilizing numerous platforms, providing unconscious bias training, and creating opportunities for all employees to celebrate and support cultural days of personal significance in their communities.

During the year ended December 31, 2023, our workforce comprised of:

	Percentage of Workforce
Gender:	
Female	29 %
Male	70 %
Undisclosed	1 %
Ethnicity:	
Hispanic or Latino	21 %
Not Hispanic or Latino	79 %
Race:	
White	60 %
Asian	10 %
2 or More Races	4 %
Black or African American	3 %
American Indian or Alaska Native	1 %
Native Hawaiian or Other Pacific Islander	1 %
Other/Not Reported	21 %

We work to ensure training and development opportunities are available so that all employees can establish and succeed in meaningful careers at SJW Group.

Community Involvement

In support of our mission as trusted, passionate and socially responsible professionals, we are dedicated to the people and the environment of the communities where we live, work, and serve. SJW Group provides various opportunities for our employees to participate in outreach programs from free virtual education programs for adults, employee-led courses for elementary school aged children, winter coat donation drives, environmental cleanups, community events, and grant programs supporting schools and fire departments. In addition, each of our subsidiaries supports their communities through charitable donations or sponsorships with a focus on the communities served. SJWC and CWC also have matching donations for certain programs to further promote our employees' involvement in their communities. In California, the SJWC Employees Community Fund is a 501(c)(3) charitable organization that uses funds from employee contributions and company matches to provide grants to non-profit organizations supported by our employees.

Fair Wages and Competitive Benefits

SJW Group's future success is largely dependent upon our ability to attract and retain highly skilled and qualified employees. Our California and Connecticut subsidiaries operate in particularly competitive labor markets; we believe our compensation package and benefit programs allow us to recruit and retain talented and qualified personnel. Our compensation and benefits programs include:

- Fair employee wages as benchmarked to the markets that our employees live and work in that are consistent with employee roles and responsibilities, skill levels, experience, and knowledge;
- Engagement of nationally, recognized outside compensation and benefits consulting firms to independently evaluate the appropriateness and effectiveness of compensation for our executive and other officers and to provide benchmarks for executive compensation as compared to peer companies;
- Short-term incentive compensation for management level staff aligning with company financial and operational goals targeted to our stakeholders: customers, communities, employees, and stockholders;
- Alignment with stockholder value by utilizing equity awards linked to investment performance over time, as well as certain absolute financial results;
- A comprehensive annual employee performance review process pursuant to which we determine and communicate to employees annual merit increases, promotions and other changes to responsibilities and duties; and
- Eligibility for all employees to participate in health insurance, dental, vision, cafeteria plans, life and disability/accident coverage, retirement plans and/or salary deferral plans, an employee stock purchase plan, paid and unpaid leaves, a commuter assistance program, professional education and training, and tuition assistance.

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Executive Officers of the Registrant

The following table summarizes the name, age, offices held and business experience for each of our executive officers, as of February 22, 2024:

Name	Age	Offices and Experience
Willie Brown	56	**SJW Group—Vice President and General Counsel.** Mr. Brown serves as Vice President and General Counsel of SJW Group and SJWC since June 2021. Mr. Brown served as Corporate Secretary of SJW Group and SJWC from January 2020 to October 2023. Mr. Brown served as Assistant General Counsel of SJW Group and SJWC from January 2020 to June 2021. From April 2018 to October 2023, Mr. Brown served as counsel and Corporate Secretary of various subsidiaries of the Corporation. Since joining SJWC in 2008, Mr. Brown has held various legal positions of increasing scope and responsibly. Prior to joining SJWC, Mr. Brown was an associate at two Silicon Valley law firms and is a member of the State Bar of California.
Bruce A. Hauk	53	**SJW Group—Chief Operating Officer.** Mr. Hauk serves as the Chief Operating Officer of SJW Group, SJWC, CTWS, and TWC since January 2023 and was the Chief Corporate Development and Strategy Officer of SJW Group, SJWC, CTWS, and TWC from August 2022 to December 2022. Prior to joining the Company, Mr. Hauk was the President of NextEra Water from May 2021 to August 2022. Prior to joining NextEra, Mr. Hauk served in several roles at American Water Works Company, Inc. from May 2011 to March 2021, lastly serving as President of Regulated Operations and Military Services Group and then as Deputy Chief Operating Officer. Previously, Mr. Hauk served as Deputy Mayor/Chief Administrative Officer for the City of Westfield, Indiana and as Town Manager/Director of Public Works for the City of Westfield, Indiana.
Kristen A. Johnson	57	**SJW Group—Senior Vice President and Chief Administrative Officer.** Ms. Johnson serves as Senior Vice President since November 2022 and Chief Administrative Officer of SJW Group, since April 2020. Ms. Johnson also serves as Senior Vice President of Administration for CTWS and certain of its subsidiaries since November 2019. Ms. Johnson also serves as Senior Vice President and Chief Administrative Officer of TWC, and as Senior Vice President of Administration for CWC and MWC, since April 2023. Previously, Ms. Johnson served as Director of Human Resources, Vice President of Human Resources and Vice President and Corporate Secretary of CTWS and its subsidiaries from 2007, 2008, and 2010, respectively. She served as the Corporate Secretary of The Maine Water Company until July 2020.
Craig J. Patla	56	**CTWS—President.** Mr. Patla serves as President of CTWS and its subsidiaries, except The Maine Water Company, since January 2023. From April 2014 to December 2022, Mr. Patla was Vice President of Service Delivery. From 2011 to 2014, Mr. Patla was Director of Service Delivery. From 2008 to 2011, Mr. Patla was Manager of Service Delivery. From 2004 to 2008, Mr. Patla was Region Manager. Mr. Patla joined CTWS in 1990 as an engineer.
Eric W. Thornburg	63	**SJW Group—President, Chief Executive Officer and Chair of the Board.** Mr. Thornburg serves as President and Chief Executive Officer of SJW Group and SJW Land Company and Chief Executive Officer of SJWC and TWC since November 6, 2017. He has served as the Chair of the Board of Directors of SJW Group, SJWC, SJW Land Company and TWC since April 25, 2018 and Chair of the Board of Directors of SJWNE LLC, CTWS and its subsidiaries since October 9, 2019. Prior to joining SJW Group, Mr. Thornburg served as President and Chief Executive Officer of CTWS since 2006, and Chair of the Board of CTWS since 2007. Mr. Thornburg served as President of Missouri-American Water, a subsidiary of American Water Works Corporation from 2000 to 2004. From July 2004 to January 2006, he served as Central Region Vice President-External Affairs for American Water Works Corporation.
Andrew F. Walters	53	**SJW Group—Chief Financial Officer and Treasurer.** Mr. Walters serves as Chief Financial Officer and Treasurer of SJW Group, SJWC, SJW Land Company, and TWC since January 2022. Mr. Walters also serves as Chief Financial Officer of CTWS and its subsidiaries since April 2023. Mr. Walters served as Chief Corporate Development Officer and Integration Executive of SJW Group from November 2019 until January 2022 and previously served as Chief Administrative Officer of SJWC since January 31, 2014. Mr. Walters is also currently the Vice President of Business Planning of CWC and CTWS as of November 7, 2019. Prior to joining SJWC in 2014, Mr. Walters was a managing director and a senior acquisitions officer in the Infrastructure Investments Group of JP Morgan Asset Management from January 2009 to June 2013. Prior to this, Mr. Walters served in the Investment Banking Division of Citigroup as managing director and head of infrastructure for the Americas and in other roles focused on mergers and acquisitions and capital raising for clients, since 1993.

Principal Accounting Officer of the Registrant

The following table summarizes the name, age, offices held and business experience for our principal accounting officer, as of February 22, 2024:

Name	Age	Offices and Experience
Mohammed G. Zerhouni	48	**SJW Group—Senior Vice President of Finance, Principal Accounting Officer.** Mr. Zerhouni serves as Senior Vice President of Finance, Principal Accounting Officer of SJW Group, SJWC, CTWS and TWC, since January 2023, and CWC and MWC, since January 2024. Prior to joining SJW Group, Mr. Zerhouni was the Chief Financial Officer of Veolia Utility Parent, Inc. ("VUP") from October 2022 to January 2023 which is part of the North American business of Veolia Group, a rate-regulated water and wastewater company. Previously, Mr. Zerhouni was Vice President/Controller and Chief Accounting Officer of VUP from December 2018 to September 2022. Mr. Zerhouni served in various roles of increasing responsibility up to Senior Manager in the audit practice of PricewaterhouseCoopers LLP from December 2004 to December 2018. Mr. Zerhouni is a certified public accountant.

Available Information

SJW Group's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and amendments to these reports, are made available free of charge through SJW Group's website at *http://www.sjwgroup.com*, as soon as reasonably practicable, after SJW Group electronically files such material with, or furnishes such materials to, the SEC. The content of SJW Group's website is not incorporated by reference to or part of this report.

You may obtain electronic copies of our reports filed with the SEC on the SEC website at *http://www.sec.gov*.

Item 1A. ***Risk Factors***

Investors should carefully consider the following risk factors and warnings before making an investment decision. The risks described below are not the only ones facing SJW Group and its subsidiaries. Additional risks that SJW Group and its subsidiaries does not yet know of or that it currently thinks are immaterial may also impair its business operations. If any of the following risks actually occur, SJW Group and its subsidiaries' business, operating results or financial condition could be materially affected. In such case, the trading price of SJW Group's common stock could decline and you may lose part or all of your investment. Investors should also refer to the other information set forth in this Annual Report on Form 10-K, including the consolidated financial statements and the notes thereto.

Risks Relating To Regulatory and Legal Matters

Our business is regulated and may be adversely affected by changes to the regulatory environment.

Our Water Utility Services represent the tariffed operations of our regulated utilities. Our operating revenue is generated primarily from the sale of water at rates authorized by applicable state public utility commissions (the "Regulators"). The Regulators set rates that are intended to provide revenues sufficient to recover normal operating expenses, provide funds for replacement of water infrastructure and produce a fair and reasonable return on stockholder common equity. Please refer to Part I, Item 1, "Regulation and Rates" for a discussion of the most recent regulatory proceedings affecting the rates of our regulated operations. Consequently, our revenue and operating results depend substantially upon the rates the Regulators authorize.

In our applications for rate approvals, we rely upon estimates and forecasts to propose rates for approval by the Regulators. No assurance can be given that our estimates and forecasts will be accurate or that the Regulators will agree with our estimates and forecasts and approve our proposed rates. To the extent our authorized rates may be too low, revenues may be insufficient to cover Water Utility Services' operating expenses, capital requirements and SJW Group's historical dividend rate. In addition, delays in approving rate increases may negatively affect our operating results and operating cash flows.

In addition, policies and regulations promulgated by the Regulators govern the recovery of capital expenditures, the treatment of gains from the sale of real utility property, the offset of production and operating costs, the recovery of the cost of debt, the optimal equity structure, and the financial and operational flexibility to engage in non-tariffed operations. If the regulators implement policies and regulations that will not allow Water Utility Services to accomplish some or all of the items listed above, its future operating results may be adversely affected. Furthermore, from time to time, the commissioners at the Regulators may change. Such changes could lead to changes in policies and regulations and there can be no assurance that the resulting changes in policies and regulation, if any, will not adversely affect our operating results or financial condition.

We have various regulatory mechanisms such as balancing and memorandum accounts and rate adjustment mechanisms for infrastructure replacement, to recover certain costs and expenses. If the Regulators disagree with our calculations of our balancing and memorandum accounts, we may be required to make adjustments that could adversely affect our results of

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operations. Furthermore, there is no guarantee that the Regulators will approve our applications to recover all or a portion of our capital expenditure or infrastructure investment through such rate adjustment mechanisms, and their failure to do so will adversely affect our financial conditions and results of operations.

Recovery of regulatory assets is subject to adjustment by regulatory agencies and could impact the operating results of Water Utility Services.

Generally accepted accounting principles for water utilities include the recognition of regulatory assets and liabilities to reflect the actions of regulators as permitted by FASB ASC Topic 980—"Regulated Operations." These actions may result in the recognition of revenues and expenses in time periods that are different from non-rate-regulated enterprises. In accordance with ASC Topic 980, Water Utility Services record deferred costs on the balance sheet as regulatory assets when it is probable that these costs will be recovered in the ratemaking process. Also, Water Utility Services record regulatory liabilities for amounts expected to be refunded to customers in the ratemaking process and for amounts collected in advance of the related expenditures. Please refer to Note 3 of the "Notes to Consolidated Financial Statements" for a summary of regulatory assets and liabilities. If the assessment of the probability of recovery in the ratemaking process is incorrect and the applicable ratemaking body determines that a deferred cost is not recoverable through future rate increases, the regulatory assets would need to be adjusted, which could have an adverse effect on our results of operations and financial condition.

Water Utility Services is subject to litigation risks concerning water quality and contamination.

In October 2023, CWC, a subsidiary of SJW Group in our Water Utility Services segment, was named as a defendant in a class action lawsuit alleging that the water provided by CWC contained contaminants. CWC intends to vigorously defend itself in this lawsuit. There can be no guarantee that additional lawsuits will not occur in the future. Any environmental or product-related lawsuit, including the class action against CWC, may require us to incur significant legal costs and we may not be able to recover the legal costs from ratepayers or other third parties. Although Water Utility Services has liability insurance coverage for bodily injury and property damage, pollution liability is excluded from this coverage and our excess liability coverage. Pollution liability coverage is in place for the majority of the SJW Group locations and operations but is subject to exclusions and limitations. In addition, any complaints or lawsuits against us based on water quality and contamination may receive negative publicity that can damage our reputation and adversely affect our business and trading price of our common stock.

Water Utility Services is subject to possible litigation or regulatory enforcement action concerning water discharges to Waters of the United States ("WOTUS").

Regulatory actions and fines related to discharges of water to WOTUS against other water utilities have increased in frequency in recent years. If Water Utility Services is subject to a litigation or regulatory enforcement action, it might incur significant costs in fines and restoration efforts, and it is uncertain whether Water Utility Services would be able to recover some or all of such costs from ratepayers or other third parties. In addition, any litigation or regulatory enforcement action against us regarding a water discharge and/or resulting environmental impact may receive negative publicity that can damage our reputation and adversely affect our business and the trading price of our common stock.

Streamflow regulations in Connecticut could potentially impact our ability to serve our customers.

In December 2011, regulations concerning the flow of water in Connecticut's rivers and streams were adopted. As promulgated, the regulations require that certain downstream releases be made from seven of CWC's eighteen active reservoirs no later than ten years following the adoption of stream classifications by the Department of Energy and Environmental Protection ("DEEP"). Currently, downstream releases are made at two locations. The next streamflow releases will be initiated by October 2024 and will affect two additional reservoirs. No groundwater supply wells are affected by the regulations.

DEEP has finalized stream classifications in all areas of Connecticut where CWC maintains and operates sources of supply. The Company remains engaged in the process in order to minimize impact to our available water supply. Although modified from prior versions, the regulations still have the potential to lower our safe yield, raise our capital and operating expenses and adversely affect our revenues and earnings. Although costs associated with the regulations may be recovered in the form of higher rates and Connecticut law allows for a WICA surcharge to recover capital improvement costs necessary to achieve compliance with the regulations, there can be no assurance PURA would approve rate increases to enable us to recover all such costs and surcharges.

New or more stringent environmental regulations could increase Water Utility Services' operating costs and affect its business.

Water Utility Services is subject to water quality and pollution control regulations issued by the EPA and environmental laws and regulations administered by the respective states and local regulatory agencies.

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New or more stringent environmental and water quality regulations could increase Water Utility Services' water quality compliance costs, hamper Water Utility Services' available water supplies, and increase future capital expenditures.

Under the federal Safe Drinking Water Act, Water Utility Services is subject to regulation by the EPA relating to the quality of water it sells and treatment techniques it uses to make the water potable. The EPA promulgates, from time to time, nationally applicable standards, including maximum contaminant levels for drinking water. Additional or more stringent requirements may be adopted by each state. There can be no assurance that Water Utility Services will be able to continue to comply with all water quality requirements.

Water Utility Services has implemented monitoring activities and installed specific water treatment improvements in order to comply with existing maximum contaminant levels and plan for compliance with future drinking water regulations. However, the EPA and the respective state agencies have continuing authority to issue additional regulations under the Safe Drinking Water Act. New or more stringent environmental standards could be imposed that will raise Water Utility Services' operating costs and capital expenditures, including requirements for increased monitoring, additional treatment of underground water supplies, fluoridation of all supplies, more stringent performance standards for treatment plants, additional procedures to further reduce levels of disinfection by-products, and more comprehensive measures to monitor, reduce or eliminate known or newly identified contaminants such as polyfluoroalkyl substances. There are currently limited regulatory mechanisms and procedures available to us for the recovery of such costs and there can be no assurance that such costs will be fully recovered and failure to do so may adversely affect our operating results.

The impact of climate change and climate change laws and regulations have been passed and are being proposed that require compliance with greenhouse gas emissions standards, as well as other climate change initiatives, which could increase Water Utility Services' operating costs and affect our business.

Climate change is receiving ever increasing attention worldwide. Many scientists, legislators, and others attribute global warming to increased levels of greenhouse gases, including carbon dioxide. Climate change laws and regulations enacted and proposed limit greenhouse gases emissions from covered entities and require additional monitoring/reporting. We produce a corporate sustainability report, which provides an overview of our energy usage and greenhouse emissions. At this time, the existing greenhouse gases laws and regulations are not expected to materially harm Water Utility Services' operations or capital expenditures. While regulation on climate change could change, the uncertainty of future climate change regulatory requirements still remains. We cannot predict the potential impact of future laws and regulations on our business, financial condition, or results of operations. Although these future expenditures and costs for regulatory compliance may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that govern our business would approve rate increases to enable us to recover such expenditures and costs.

Climate change may also impact water supply. For example, severity of drought conditions may impact the availability of water to all Water Utility Services and rising sea levels and their effect on contributing tributary's water quality may impact the availability of groundwater to Water Utility Services.

We may be at risk for litigation under the principle of inverse condemnation for activities in the normal course of business that have a damaging effect on private property.

Under the California legal doctrine of inverse condemnation, a public utility taking or damaging private property can be responsible to the property owners for compensation, even when damage occurs through no fault or negligence of the utility company and regardless of whether the damage could be foreseen. Based upon existing California case law, SJWC could be sued under the doctrine of inverse condemnation and held liable if its facilities, operations or property, such as mains, fire hydrants, power lines and other equipment, or wildfires in our Santa Cruz Mountain watershed result in damage to private property.

A court finding of inverse condemnation does not obligate the CPUC to allow SJWC to recover damage awards or pass on costs to ratepayers. Insurance coverage for inverse condemnation may not be available or may not be sufficient. SJWC's liquidity, earnings, and operations may be adversely affected if we are unable to recover the costs of paying claims for damages caused by the operation and maintenance of our property from customers or through insurance.

Our water utility property and systems are subject to condemnation and other proceedings through eminent domain.

State laws in jurisdictions where we operate, including California, Connecticut, Texas and Maine, allow municipalities, water districts and other public agencies to own and operate water systems. If these public agencies are able to establish certain eminent domain elements required under state and federal laws, they may condemn water systems or real property owned by privately owned public utilities in certain circumstances. In general, if a public agency seeks to exercise its eminent domain power to take possession of private property, it must establish that such taking is for a public purpose and must pay just

compensation to owners of such property. In the event of eminent domain or condemnation proceedings against our water utility property or systems, we may incur substantial attorney's fees, consultant and expert fees and other costs in considering a challenge to such proceeding and/or its valuation for just compensation, as well as fees and costs in any subsequent litigation if necessary. If the public agency prevailed and acquired our utility property, we would no longer have access to the condemned property or water system, neither would we be entitled to any portion of revenue generated from the use of such asset going forward. Furthermore, if public agencies succeed in acquiring our assets, there is a risk that we will not receive adequate compensation for the assets taken or be able to recover all charges associated with the condemnation of such assets, which may adversely affect our business operations and financial conditions.

Regulatory agencies may disagree with our valuation and characterization of certain of our assets.

If we determine that assets are no longer used or useful for utility operations, we may remove them from our rate base and subsequently sell those assets with any gain on sales accruing to the stockholders, subject to certain conditions. If the regulators disagree with our characterization, there is a risk that the regulators could determine that a portion or all of the realized appreciation in property value should be awarded to customers rather than our stockholders.

Risks Relating To Business Operations

The adequacy of our water supplies depends upon a variety of factors beyond our control. Interruption in the water supply may adversely affect our reputation and earnings.

We depend on an adequate water supply to meet the present and future needs of our customers. Whether we have an adequate supply varies depending upon a variety of factors, many of which are partially or completely beyond our control, including: the amount of rainfall; the amount of water stored in reservoirs; underground water supply from which well water is pumped; availability from water wholesalers; changes in the amount of water used by our customers; water quality and availability of appropriate treatment technology; legal limitations on water use such as rationing restrictions during a drought; changes in prevailing weather patterns and climate; and population growth.

We purchase our water supply from various governmental agencies and others. Water supply availability may be affected by weather conditions, funding and other political and environmental considerations. In addition, our ability to use surface water is subject to regulations regarding water quality and volume limitations. If new regulations are imposed or existing regulations are changed or given new interpretations, the availability of surface water may be materially reduced. A reduction in surface water could result in the need to procure more costly water from other sources, thereby increasing our water production costs and adversely affecting our operating results if not recovered in rates on a timely basis. From time to time, we enter into water supply agreements with third parties and our business is dependent upon such agreements in order to meet regional demand. The parties from whom we purchase water maintain significant infrastructure and systems to deliver water to us. Maintenance of these facilities is beyond our control. If these facilities are not adequately maintained or if these parties otherwise default on their obligations to supply water to us, we may not have adequate water supplies to meet our customers' needs.

If we are unable to access adequate water supplies, we may be unable to satisfy all customer demand, which could result in rationing. Rationing may have an adverse effect on cash flow from operations. We can make no guarantee that we will always have access to an adequate supply of water that will meet all required quality standards. Water shortages may affect us in a variety of ways. For example, shortages could: adversely affect our supply mix by causing us to rely on more expensive purchased water; adversely affect operating costs; increase the risk of contamination to our systems due to our inability to maintain sufficient pressure; and increase capital expenditures for building pipelines to connect to alternative sources of supply, new wells to replace those that are no longer in service or are otherwise inadequate to meet the needs of our customers and reservoirs and other facilities to conserve or reclaim water. We may or may not be able to recover increased operating and construction costs on a timely basis, or at all, for our regulated systems through the ratemaking process. We can give no assurance, as to whether we may be able to recover certain of these costs from third parties that may be responsible, or potentially responsible, for any groundwater contamination.

We face competition from other utilities and service providers which might hinder our growth opportunities and mitigate our future profitability.

We face competition from other utilities and service providers which might hinder our growth opportunities and mitigate our future profitability. We face risks of competition from other utilities or other entities authorized by federal, state or local agencies to expand rate-regulated or contracted utility services. Once a state utility regulator grants a franchise to a public utility to serve a specific territory, that utility effectively has an exclusive right to service that territory. Although a new franchise offers some protection against competitors, the pursuit of franchises is often competitive, where new franchises may be awarded to utilities based upon competitive negotiation. Competing entities have challenged, and may challenge in the future, our applications for new franchises.

Fluctuations in customer demand for water due to seasonality, restrictions of use, weather, and lifestyle can adversely affect operating results.

Water Utility Services is seasonal, thus quarterly fluctuation in results of operations may be significant. Rainfall and other weather conditions also affect Water Utility Services. Water consumption typically increases during the third quarter of each year when weather tends to be warm and dry. In periods of drought, if customers are encouraged or required to conserve water due to a shortage of water supply or restriction of use, revenue tends to be lower. Similarly, in unusually wet periods, water supply tends to be higher and customer demand tends to be lower, again resulting in lower revenues. Furthermore, certain lifestyle choices made by customers can affect demand for water. For example, a significant portion of residential water use is for outside irrigation of lawns and landscaping. If there is a decreased desire by customers to maintain landscaping for their homes or restrictions are placed on outside irrigation, residential water demand would decrease, which would result in lower revenues.

Conservation efforts and construction codes, which require the use of low-flow plumbing fixtures and appliances, could diminish water consumption and result in reduced revenue. In addition, in time of drought, such as in the drought experienced in California in 2021 to early 2023, mandatory water conservation may become a regulatory requirement that impacts the water usage of our customers. While the impacts of conservation and drought may be mitigated by certain regulatory mechanisms that may apply, such regulatory mechanisms are subject to review and change by the Regulators. Accordingly, there could be no assurance that such regulatory mechanisms will offset the effects of any revenue losses or other adverse impacts to our operating results attributable to these fluctuations in customer demand.

A contamination event or other decline in source water quality could affect the water supply of Water Utility Services and therefore adversely affect our business and operating results.

Water Utility Services is required under drinking water regulations to comply with water quality requirements. Through water quality compliance programs, Water Utility Services monitors for contamination and pollution of its sources of water. In addition, a watershed management program provides a proactive approach to minimize potential contamination activities. There can be no assurance that Water Utility Services will continue to comply fully with all applicable water quality requirements or detect contamination timely or at all. In addition, our facilities and infrastructure, including water towers, reservoirs and wells, may be subject to vandalism, break-ins or attacks, which may cause contamination or damage to our water supply. While we have taken measures to maintain physical security of our facilities, there is no guarantee that such measures will be effective to prevent such events. In the event a contamination is detected, Water Utility Services must either commence treatment to remove the contaminant or procure water from an alternative source. Either of these results may be costly, may increase future capital expenditures and there can be no assurance that the regulators would approve a rate increase to enable us to recover the costs arising from such remedies. In addition, we could be held liable for consequences arising from hazardous substances or contamination in our water supplies or other environmental damages and our reputation may be harmed by the public disclosures or media reports of these events. Our insurance policies may not cover or may not be sufficient to cover the costs of these claims.

Operating under contract water and waste systems subject us to risks.

Water Utility Services operates a number of water and wastewater systems under operation and maintenance contracts. Pursuant to these contracts, such systems are operated according to the standards set forth in the applicable contract, and it is generally the responsibility of the owner of the system to undertake capital improvements over which we may not have control. We may not be able to convince the owner to make needed improvements in order to maintain compliance with applicable regulations. Although violations and fines incurred by water and wastewater systems may be the responsibility of the owner of the system under these contracts, such non-compliance events may reflect poorly on us as the operator of the system and harm our reputation, and in some cases, may result in liability to the same extent as if we were the owner.

The necessity for ongoing physical and technological security has resulted, and may continue to result, in increased operating costs.

The necessity for ongoing physical and technological security has resulted, and may continue to result, in increased operating costs. Because of physical and technological threats to the health and security of the United States of America, we employ procedures to review and modify security measures. We provide ongoing training and communications to our employees about threats to our water supply, our assets and related systems and our employees' personal safety. We have incurred, and will continue to incur, costs for security measures in efforts to protect against such risks.

Water Utility Services rely on information technology and systems that are key to business operations. A system malfunction, security breach, cyber-attacks, or other disruption that compromises our information could expose us to liability and adversely affect business operations. In addition, noncompliance could expose us to liability and adversely affect business operations.

Information technology is key to the operation of the Water Utility Services, including but not limited to payroll, general ledger activities, outsourced bill preparation and remittance processing, providing customer service and the use of Supervisory Control and Data Acquisition systems to operate our distribution system. Among other things, system malfunctions, computer viruses and security breaches could prevent us from operating or monitoring our facilities, billing, and collecting cash accurately and timely analysis and reporting of financial results. In addition, we collect, process, and store sensitive data from our customers and employees, including personally identifiable information, on our networks. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance, or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed without our authorization, publicly disclosed, lost, or stolen which could result in legal claims or proceedings, violation of privacy laws or damage to our reputation and customer relationships. Our profitability and cash flow could be affected negatively in the event these systems do not operate effectively or are breached. Further, the use of AI by cybercriminals may increase the frequency and severity of cybersecurity attacks, including against us or our third-party vendors. In addition, we may not be able to develop or acquire information technology that is competitive and responsive to the needs of our business, and we may lack sufficient resources to make the necessary upgrades or replacements of our outdated existing technology to allow us to continue to operate at our current level of efficiency.

In addition, we must comply with privacy laws such as The California Consumer Privacy Act, as amended by the California Privacy Rights Act (collectively, the "CCPA"). The CCPA requires, among other things, covered companies to provide enhanced disclosures to California consumers and to afford such consumers certain privacy rights and consumer protections. The CCPA also establishes statutory damages for victims of data security breaches, and provides additional rights for consumers to obtain their data from any business that has their personally identifying information. We are anticipating updated and finalized implementing regulations under the CCPA that may impact our compliance obligations. We are also subject to Connecticut's Act Concerning Personal Data Privacy and Online Monitoring, a similar law that took effect July 1, 2023, and will be subject to Texas Data Privacy and Security Act, a consumer privacy law that will be effective July 1, 2024. Moreover, additional state privacy laws have been passed or may be passed in the future, and they may have potential compliance obligations that impact our operations depending on whether we fall under their scope. The effects of these laws have been significant, requiring us to modify our data processing practices and policies and to incur costs and expenses for compliance. Despite our efforts to comply with these laws, we may fail to do so, which may lead to investigations, claims, and proceedings by governmental entities and private parties, damages for breach, and cause us to incur other significant costs, penalties, and other liabilities, as well as harm to our reputation.

A failure of our reservoirs, storage tanks, mains or distribution networks could result in losses and damages that may adversely affect our financial condition and reputation.

We distribute water through an extensive network of mains and store water in reservoirs and storage tanks located across our service areas. The Water Utility Services' distribution systems were constructed during the period from the early 1900's through today. A failure of major mains, reservoirs, or tanks could result in injuries and damage to residential and/or commercial property for which we may be responsible, in whole or in part. The failure of major mains, reservoirs or tanks may also result in the need to shut down some facilities or parts of our water distribution network in order to conduct repairs. Such failures and shutdowns may limit our ability to supply water in sufficient quantities to our customers and to meet the water delivery requirements prescribed by governmental regulators, which could adversely affect our financial condition, results of operations, cash flow, liquidity and reputation. We also own and operate numerous dams in California, Connecticut and Maine, and a failure of such dams could result in losses and damages that may adversely affect our financial condition and reputation. Any business interruption or other losses might not be covered by existing insurance policies or be recoverable in rates, and such losses may make it difficult for us to secure insurance in the future at acceptable rates. Our insurance policies may not cover or may not be sufficient to cover the costs of these claims.

The operations of our water and wastewater treatment plants involve physical, chemical, and biological processes and the use of pumps, generators, and other industrial equipment. As a result, our operations are subject to various industrial risks, including chemical spills, discharges or releases of toxic or hazardous substances or gases, effects resulting from confined operating spaces, fires, explosions, mechanical failures, storage tank leaks, and electric shock. These risks can result in personal injury, loss of life, catastrophic damage to or destruction of property and equipment or environmental damage, and related legal proceedings, including those commenced by regulators, neighbors, or others. They may also result in an unanticipated interruption or suspension of our operations and the imposition of liability. The loss or shutdown over an extended period of

operations at any of our treatment facilities or any losses relating to these risks could have a material adverse impact on our profitability, results of operations, liquidity, and cash flows.

Our business and financial performance may be adversely affected by high inflation.

Inflation has the potential to adversely affect our liquidity, business, financial condition and results of operations by increasing our overall cost structure, particularly if we are unable to achieve increases in the rates we charge our customers. There is no guarantee that any future rate increase requests will be approved and granted in a timely manner and/or will be sufficient to cover costs for the impact of high inflation. The existence of inflation in the economy has resulted in, and may continue to result in, higher interest rates and capital costs, shipping costs, supply shortages, increased costs of labor and other similar effects. As a result of inflation, we have experienced and may continue to experience, cost increases. Although we may take measures to mitigate the impact of this inflation, if these measures are not effective, our business, financial condition, results of operations and liquidity could be materially adversely affected. Even if such measures are effective, there could be a difference between the timing of when these beneficial actions impact our results of operations and when the cost of inflation is incurred.

SJW Land Company and Chester Realty, Inc. have real estate holdings that are subject to various business and investment risks.

SJW Land Company owns real estate in California and Tennessee, and Chester Realty, Inc. owns real estate in Connecticut. The risks of investing directly in real estate vary depending on the investment strategy and investment objective and include the following:

- Market and general economic risks—real estate investment is tied to overall domestic economic growth and, therefore, carries market risk which cannot be eliminated by diversification. Generally, all property types benefit from national economic growth, though the benefits range according to local factors, such as local supply and demand and job creation. Because real estate leases are typically staggered and last for multiple years, there is generally a delayed effect in the performance of real estate in relation to the overall economy. This delayed effect can insulate or deteriorate the financial impact to SJW Land Company and Chester Realty, Inc. in a downturn or an improved economic environment.
- Vacancy rates can climb and market rents can be impacted and weakened by general economic forces, therefore affecting income to SJW Land Company and Chester Realty, Inc.
- A decrease in the value of a real estate property or increase in vacancy could result in reduced future cash flows to amounts below the property's current carrying value and could result in an impairment charge.

The value of real estate can decrease materially due to a deflationary market, decline in rental income, market cycle of supply and demand, long lag time in real estate development, legislative and governmental actions, environmental concerns, increases in rates of returns demanded by investors, and fluctuation of interest rates, eroding any unrealized capital appreciation and, potentially, invested capital.

The success of SJW Land Company and Chester Realty, Inc.'s real estate investment strategy depend largely on ongoing local, state and federal land use development activities and regulations, future economic conditions, the development and fluctuations in the sale of the undeveloped properties, the ability to identify the developer/potential buyer of the available-for-sale real estate, the timing of the transaction, favorable tax law, and the ability to maintain and manage portfolio properties. There is no guarantee that we will be able to execute the strategy successfully and failure to do so may adversely affect our operating results and financial condition.

Work stoppages and other labor relations matters could adversely affect our business and operating results.

As of December 31, 2023, 240 of our 808 total employees were union members. Most of our unionized employees are represented by the UWUA, except certain employees in the engineering department who are represented by the OE. Only employees at SJWC are union members. The current three-year bargaining agreements will expire on December 31, 2025.

We may experience difficulties and delays in the collective bargaining process to reach suitable agreements with union employees, particularly in light of increasing healthcare and pension costs. In addition, changes in applicable law and regulations could have an adverse effect on management's negotiating position with the unions. Labor actions, work stoppages or the threat of work stoppages, and our failure to obtain favorable labor contract terms during future negotiations may adversely affect our business, financial condition, results of operations, cash flows and liquidity.

If we fail to maintain safe work sites, we can be exposed to not only people impacts but also to financial losses such as penalties and other liabilities.

Our safety record is critical to our reputation because our business operation involves inherently dangerous activities. We maintain health and safety standards to protect our employees, customers, vendors and the public. Although we intend to adhere to such health and safety standards and aim for zero injuries, it is difficult to avoid accidents at all times.

Our business sites, including construction and maintenance sites, often place our employees and others in close proximity with large pieces of heavy equipment, moving vehicles, pressurized water, underground trenches and vaults, chemicals and other regulated materials. On many sites we are responsible for safety and, accordingly, must implement safety procedures. If we fail to implement such procedures or if the procedures we implement are ineffective or are not followed by our employees or others, or if accidents occur outside of our control, our employees and others may be injured or die. Unsafe work sites also have the potential to increase employee turnover and raise our operating costs. Any of the foregoing could result in financial losses, which could have a material adverse impact on our business, financial condition, results of operations and cash flows.

In addition, our operations can involve the handling and storage of hazardous chemicals, which, if improperly handled, stored or disposed of, could subject us to penalties or other liabilities. We are also subject to regulations dealing with occupational health and safety. Although we maintain functional employee groups whose primary purpose is to ensure we implement effective health, safety, and environment work procedures throughout our organization, including construction sites and maintenance sites, the failure to comply with such regulations or procedures could subject us to a liability.

Risks Relating To Our Finances and Corporate Matters

We may not have sufficient cash flow or capital resources to fund capital expenditures of our business, and our access to liquidity through the capital markets may be limited.

Our business is capital-intensive. Expenditure levels for renewal and modernization of the system will grow at an increasing rate as components reach the end of their useful lives. SJW Group's subsidiaries fund capital expenditures through a variety of sources, including cash received from operations, funds received from developers as contributions or advances, borrowings through lines of credit and debt financings, as well as equity financings by SJW Group. We cannot provide any assurance that the historical sources of funds for capital expenditures will continue to be adequate or that the cost of funds will remain at levels permitting us to earn a reasonable rate of return. A significant change in any of the funding sources could impair the ability of Water Utility Services to fund its capital expenditures, which could impact our ability to grow our utility asset base and earnings. Any increase in the cost of capital through higher interest rates or otherwise could adversely affect our results of operations.

Our ability to raise capital through equity or debt may be affected by the economy and condition of the debt and equity markets. Disruptions in the capital and credit markets or deterioration in the strength of financial institutions could adversely affect SJW Group's ability to draw on its lines of credit, issue long-term debt or sell its equity. In addition, government policies, the state of the credit markets and other factors could result in increased interest rates, which would increase SJW Group's cost of capital. Furthermore, equity financings may result in dilution to our existing stockholders and debt financings may contain covenants that restrict the actions of SJW Group and its subsidiaries.

We have incurred substantial additional indebtedness that may reduce our business and operational flexibility and increase our borrowing costs.

We have incurred substantial indebtedness resulting in higher debt-to-equity ratio, which may have the effect, among other things, of: reducing our flexibility to respond to changing business, industry and economic conditions; increasing borrowing costs; placing us at a competitive disadvantage relative to other companies in our industry with less debt; potentially having an adverse effect on our issuer and issue ratings; requiring additional cash flow to be used to service debt instead of for other purposes; and potentially impairing our ability to obtain other financing.

In addition, the terms and conditions of such indebtedness, including financial covenants and restrictive covenants, may reduce our business flexibility and adversely affect our business, financial condition, results of operations and prospects. The agreements governing the indebtedness contain covenants that impose significant operating and financial limitations and restrictions on us, including restrictions on the ability to enter particular transactions and engage in other activities that we may believe will be advisable or necessary for our business. In addition, failure to comply with any of the covenants in our existing or future debt agreements could result in a default under those agreements and under other existing agreements containing cross-default provisions. A default would permit lenders to accelerate the maturity of indebtedness under these agreements. Under certain circumstances, we may not have sufficient funds or other resources to satisfy all of our obligations under our indebtedness, including principal and interest payments, which, if not cured, may cause an event of default.

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Our senior note borrowings include certain financial covenants regarding a maximum debt to equity ratio and an interest coverage requirement. In the event the relevant borrower exceeds the maximum debt to equity ratio or interest coverage requirement, we may be restricted from issuing future debt. In addition, we have issued certain revenue bonds that contain affirmative and negative covenants customary for a loan agreement relating to revenue bonds, including, among other things, certain disclosure obligations, the tax exempt status of the interest on the bonds, and limitations and prohibitions on the transfer of projects funded by the loan proceeds and assignment of the loan agreement.

Certain subsidiaries are required to comply with certain covenants in connection with their various long term loan agreements. These covenants include requirements to maintain a consolidated debt to capitalization ratio and restrictions on cash dividends paid based on restricted net assets. In the event that we violate any of these covenants, an event of default may occur and all amounts due under such loans, senior notes or bonds may come due, which would have an adverse effect on our business operations and financial conditions.

SJW Group has committed to certain "ring-fencing" measures which will enhance CTWS's separateness from SJW Group, which may limit SJW Group's ability to influence the management and policies of CTWS (beyond the limitations included in other existing governance mechanisms).

Pursuant to the agreements related to the acquisition of CTWS and commitments made by SJW Group as part of the application for PURA and MPUC approval of the acquisition of CTWS, SJW Group has instituted certain "ring-fencing" measures to enhance CTWS's separateness from SJW Group and to mitigate the risk that CTWS would be negatively impacted in the event of a bankruptcy or other adverse financial developments affecting SJW Group or its non-ring-fenced affiliates. These commitments became effective upon the closing of the acquisition.

In order to satisfy the ring-fencing commitments, SJW Group formed SJWNE LLC a wholly owned special purpose entity ("SPE") to own the capital stock of CTWS. The SPE, CTWS and its subsidiaries (collectively, the "CTWS Entities") adopted certain measures designed to enhance their separateness from SJW Group, with the intention of mitigating the effects on the CTWS Entities of any bankruptcy of SJW Group and its affiliates other than the CTWS Entities (collectively, the "Non-CTWS Entities"). As a result of these ring-fencing measures, in certain situations, SJW Group will be restricted in its ability to access assets of the CTWS Entities as dividends or intercompany loans to satisfy the debt or contractual obligations of any Non-CTWS Entity, including any indebtedness or other contractual obligations of SJW Group. In addition, the ring-fencing structure may negatively impact SJW Group's ability to achieve certain benefits, including synergies and economies of scale to reduce operating costs of the combined entity, that it anticipates will result from the merger. This ring-fencing structure also subjects SJW Group and the CTWS Entities to certain governance, operational and financial restrictions since the closing of the merger. Accordingly, SJW Group may be restricted in its ability to direct the management, policies and operations of the CTWS Entities, including the deployment or disposition of their respective assets, declarations of dividends, strategic planning and other important corporate issues. Furthermore, the CTWS Entities' directors have considerable autonomy and, as described in our commitments, have a duty to act in the best interest of the CTWS Entities consistent with the ring-fencing structure and applicable law, which may be contrary to SJW Group's best interests or be in opposition to SJW Group's preferred strategic direction for the CTWS Entities. To the extent they take actions that are not in SJW Group's interests, our financial condition, results of operations and prospects may be materially adversely affected.

Our business strategy, which includes acquiring water systems and expanding non-tariffed services, will expose us to new risks which could have a material adverse effect on our business.

Our business strategy focuses on the following:

(1) Regional regulated water utility operations (includes water and wastewater);

(2) Regional non-tariffed water utility related services provided in accordance with the guidelines established by the applicable state public utility commissions; and

(3) Out-of-region water and utility related services.

As part of our pursuit of the above three strategic areas, we consider from time-to-time opportunities to acquire businesses and assets. However, we cannot be certain we will be successful in identifying and consummating any strategic business combination or acquisitions relating to such opportunities. In addition, the execution of our business strategy will expose us to different risks than those associated with the current utility operations. We expect to incur costs in connection with the execution of this strategy and any integration of an acquired business could involve significant costs, the assumption of certain known and unknown liabilities related to the acquired assets, the diversion of management's time and resources, the potential for a negative impact on SJW Group's financial position and operating results, entering markets in which SJW Group has no or limited direct prior experience and the potential loss of key employees of any acquired company. Any strategic combination or

acquisition we decide to undertake may also impact our ability to finance our business, affect our compliance with regulatory requirements, and impose additional burdens on our operations. Any businesses we acquire may not achieve sales, customer growth and projected profitability that would justify the investment. Any difficulties we encounter in the integration process, including the integration of controls necessary for internal control and financial reporting, could interfere with our operations, reduce our operating margins and adversely affect our internal controls. SJW Group cannot be certain that any transaction will be successful or that it will not materially harm operating results or our financial condition.

Adverse investment returns and other factors may increase our pension costs and pension plan funding requirements.

A substantial number of our employees are covered by defined benefit pension plans. Our pension costs and the funded status of the plans are affected by a number of factors including the discount rate, applicable mortality tables, mortality rates of plan participants, investment returns on plan assets, and pension reform legislation. Any change in such factors could result in an increase in future pension costs and an increase in our pension liabilities, requiring an increase in plan contributions which may adversely affect our financial conditions and results of operations.

SJW Group's dividend policy is subject to the discretion of our board of directors and may be limited by legal and contractual requirements.

We anticipate to continue to pay a regular quarterly dividend, though any such determination to pay dividends will be at the discretion of our board of directors and will be dependent on then-existing conditions, including our financial condition, earnings, legal requirements, including limitations under Delaware law, restrictions in our credit agreements and other debt instruments that limit our ability to pay dividends to stockholders and other factors the board of directors deems relevant. The board of directors of SJW Group may, in its sole discretion, change the amount or frequency of dividends or discontinue the payment of dividends entirely. In addition, our subsidiaries may be subject to restrictions on their ability to pay dividends to us, including under state law, pursuant to regulatory commitments and under their credit agreements and other debt instruments. In this regard, the CTWS Entities are limited from paying dividends to us in certain circumstances under PURA and MPUC regulatory commitments. Any inability of our subsidiaries to pay us dividends may have a material and adverse effect on our ability to pay dividends to our stockholders.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also make it more difficult for stockholders to influence our policies or may reduce the rights of stockholders.

SJW Group's Certificate of Incorporation and Bylaws contain provisions that could delay or prevent a change in control of SJW Group. These provisions could also make it more difficult for our stockholders to elect directors and take other corporate actions. These provisions include, but are not limited to, the following:

- Authorizing Board of Directors to issue "blank check" preferred stock;
- Prohibiting cumulative voting in the election of directors;
- Limiting the ability of stockholders to call a special meeting of stockholders to only stockholders holding not less than 20% of outstanding voting power; and
- Requiring advance notification of stockholder nomination of directors and proposals.

These provisions may frustrate or prevent any attempts by stockholders of SJW Group to replace or remove its current management by making it more difficult for stockholders to replace members of the Board of Directors, which is responsible for appointing the members of management. In addition, the provisions of Section 203 of the Delaware General Corporate Law ("DGCL") govern SJW Group. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time without the consent of the Board of Directors.

Furthermore, SJW Group's Certificate of Incorporation provides that a state or federal court located within Delaware is the sole and exclusive forum (unless the company consents in writing to the selection of an alternate forum) for (i) any derivative action or proceeding brought on behalf of SJW Group, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of SJW Group to the company or its stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, or (iv) any action asserting a claim governed by the internal affairs doctrine. Such "exclusive forum" provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with SJW Group or its directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees.

We may not be able to maintain adequate insurance coverage at reasonable costs, or at all, to cover all losses incurred in our operations.

We maintain insurance coverage as part of our overall legal and risk management strategy to minimize potential liabilities arising from our operations. Our insurance programs have varying coverage limits, deductibles, exclusions and maximums, and our insurance coverages include: worker's compensation, employer's liability, damage to our property, general liability, pollution liability, cybersecurity, and automobile liability. Each policy includes either deductibles or self-insured retentions and policy limits for covered claims. As a result, we may sustain losses that exceed or are excluded from our insurance coverage or for which we are self-insured. The insurance companies may also seek to challenge, reduce or deny any claims we submit, which may prevent us from recovering fully the losses we incurred. In addition, insurance companies may increase premiums or deductibles or reduce coverage limits based on factors that are beyond our control, including industry trends, financial conditions of insurance companies and catastrophic events such as wildfire, earthquake and pandemic. There can be no assurance that we can secure all necessary or appropriate insurance in the future, or that such insurance can be obtain at reasonable cost, or at all.

General Risk Factors

We operate in areas subject to natural disasters, and we may be the target of terrorist activities and other physical threats.

We operate in areas that are prone to earthquakes, fires, floods, extreme weather and other natural disasters. A significant seismic event in northern California, where the majority of our operations are concentrated, or other natural disaster in northern California, Connecticut, Texas or Maine could adversely impact our ability to deliver water to our customers and our costs of operations. A major disaster could damage or destroy our capital assets, harm our reputations and adversely affect our results of operations. The Regulators have historically allowed utilities to establish catastrophic event memorandum accounts as a possible mechanism to recover costs, such as the CEMA memorandum account in California. However, we can give no assurance that our regulators, or any other commission would allow any such cost recovery mechanism in the future.

In light of the potential threats to the nation's health and security due to terrorist attacks, we have taken steps to increase security measures at our facilities and heighten employee awareness of threats to our water supply. We have also tightened our security measures regarding the delivery and handling of certain chemicals used in our business. In addition, because our operation requires us to interact extensively with the general public, we may be subject to complaints, threats and potentially violent actions by our customers or the public, which may disrupt our business activities and damage our reputation.

We have and will continue to bear increased costs for security precautions to protect our facilities, operations and supplies. These costs may be significant. While some of these costs are likely to be recovered in the form of higher rates, there can be no assurance that the Regulators will approve a rate increase to recover all or part of such costs and, as a result, our operating results and business may be adversely affected. Further, despite these tightened security measures, we may not be in a position to control the outcome of terrorist events should they occur.

Our operations, liquidity, and earnings may be adversely affected by wildfires and risk of fire hazards.

It is possible that wildfires and other fire hazards may occur more frequently, be of longer duration or impact larger areas as a result of drought-damaged plants and trees, lower humidity or higher winds that might be occurring as result of changed weather patterns. The effects of these natural disasters in California's drought-prone areas, such as the Santa Cruz Mountains, the watershed of which SJWC owns approximately 6,400 acres and where SJWC typically obtains approximately up to 10% of its water supply, may temporarily compromise its surface water supply resulting in disruption in our services and litigation which could adversely affect our business, operating results, and financial condition.

If our surface water supply is compromised, we may have to interrupt the use of that water supply until we are able to substitute the flow of water from an alternative water source.

In addition, we may incur significant costs in order to treat the impacted source through expansion of our current treatment facilities, or development of new treatment methods. If we are unable to substitute water supply from an alternative water source, or to adequately treat the impacted water source in a cost-effective manner, there may be an adverse effect on our revenues, operating results, and financial condition. The costs we incur to secure an alternative water source or an increase in draws from our underground water system could be significant and may not be recoverable in rates.

Wildfires may destroy or cause damage to properties, facilities, equipment and other assets owned and operated by SJWC or result in personal injuries to our employees and personnel, which may cause temporary or permanent disruption to our water services. In such a case, we may be required to incur significant expenses to repair, replace or upgrade our assets, or to defend

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against costly litigation or disputes with third parties, any of which may adversely affect our business operations or financial conditions.

While we maintain a business insurance policy, such policy includes limitation and retention that may reduce, or in some cases eliminate, our ability to recover all or a substantial portion of the losses and damages due to wildfire. Our inability to rely fully on insurance coverage may negatively impact our results of operations. Losses by insurance companies resulting from wildfires in California may also cause insurance coverage for wildfire risks to become more expensive or unavailable under reasonable terms, and our insurance may be inadequate to recover all our losses incurred in a wildfire. Furthermore, we might not be allowed to recover in our rates any increased costs of wildfire insurance or the costs of any uninsured wildfire losses.

The price of our common stock may be volatile and may be affected by market conditions beyond our control.

The trading price of our common stock may fluctuate in the future based on a variety of factors, many of which are beyond our control and unrelated to our financial results. Factors that could cause fluctuations in the trading price of our common stock include volatility of the general stock market or the utility index, regulatory developments, public announcement of material development in strategic transactions, general economic conditions and trends, actual or anticipated changes or fluctuations in our results of operations, actual or anticipated changes in the expectations of investors or securities analysts, actual or anticipated developments in our competitors' businesses or the competitive landscape generally, litigation involving us or our industry, and major catastrophic event(s) or sales of large blocks of our stock. Furthermore, we believe that stockholders invest in public stocks in part because they seek reliable dividend payments. If there is an oversupply of stock of public utilities in the market relative to demand by such investors, the trading price of our common stock may decrease. Additionally, if interest rates rise above the dividend yield offered by our common stock, demand for our stock and its trading price may also decrease.

We must continue to attract and retain qualified technical and managerial personnel in order to succeed.

Our future success depends substantially upon our ability to attract and retain highly skilled technical, operational and financial managers. There is a significant competition for such personnel in our industry. Our ability to recruit and retain qualified personnel depends on many factors, including but are not limited to, our ability to provide competitive compensation and benefit packages, availability of talents in our industry, general workforce trends and macroeconomic conditions. The loss of the services of any member of our management team or the inability to hire and retain experienced management personnel could have an adverse effect on our business, as our management team has knowledge of our industry and customers and would be difficult to replace. We believe we offer competitive compensation and benefits as well as conduct succession planning and provide opportunities for continued development, and we continually strive to recruit and train qualified personnel and retain key employees. There can be no assurance, however, that we will continue to be successful in attracting and retaining the personnel we require to grow and operate profitably.

Item 1B. ***Unresolved Staff Comments***

None.

Item 1C. ***Cybersecurity***

Cybersecurity Risk Management and Strategy

We have taken critical steps to ensure the security and protection of our computer systems and networks. Our processes for assessment, identification and management of material risks from cybersecurity threats include routine monitoring of vulnerabilities, evaluations of new service providers, written policies for incident identification and management, and regular testing and assessment of our cybersecurity posture.

We have integrated cybersecurity risk management as part of our company-wide culture. The measures undertaken include, but are not limited to, monthly cybersecurity training for all employees and frequent communication to all employees on the importance of cybersecurity measures.

We have engaged third-party experts to assist us in monitoring and managing our cybersecurity process. Furthermore, we monitor cybersecurity threats at certain of our third-party vendors on a regular basis. As of the date of this report, we are not aware of any material risks from cybersecurity threats that have materially affected or are reasonably likely to materially affect the company, including our business strategy, results of operations, or financial condition. We have discussed cybersecurity risks that may affect the company in Item 1A, "Risk Factors," under the headings, "The necessity for ongoing physical and technological security has resulted, and may continue to result, in increased operating costs," "Water Utility Services rely on information technology and systems that are key to business operations. A system malfunction, security breach, cyber-attacks or other disruption that compromises our information and expose us to liability and adversely affect business operations. In addition, noncompliance could expose us to liability and adversely

affect business operations," and "We may not be able to maintain adequate insurance coverage at reasonable costs, or at all, to cover all losses incurred in our operations."

Cybersecurity Governance

We have implemented an internal risk assessment process that focuses on the principal risks that have been identified for us, including risks associated with our regulatory environment, business operations and continuity, compliance requirements, information technology and data storage and retrieval facilities, cyber risk, insurance coverage. The Audit Committee, pursuant to its charter, meets at least quarterly with senior leadership and other employees to discuss identified risks and the measures taken to control, manage and mitigate those risks, which include cyber and information security risk. On the basis of these meetings and discussions regarding such risks, the Chairman of the Audit Committee reports periodically to the full Board. The Vice President, Information Security Officer provides cybersecurity updates to the Audit Committee and other members of our senior management as appropriate at least quarterly. Our Vice President, Information Security Officer, and his team is responsible for leading enterprise-wide cybersecurity strategy, policy, standards, architecture, and processes, with the support of third-party experts. The Vice President, Information Security Officer has over 30 years of experience in information technology of which over 20 years is in cybersecurity, with industry experience in utilities, banking and e-commerce.

Item 2. ***Properties***

The properties of SJWC consist of a unified water production system located in the County of Santa Clara in the State of California. In general, the property is comprised of franchise rights, water rights, necessary rights-of-way, approximately 6,400 acres of land held in fee (which is primarily non-developable watershed), impounding reservoirs with a capacity of approximately 2.3 billion gallons, 2,492 miles of transmission and distribution mains, distribution storage of approximately 0.20 billion gallons, wells, boosting facilities, diversions, surface water treatment plants, equipment, office buildings and other property necessary to provide water service to its customers.

SJWC maintains all of its properties in good operating condition in accordance with customary practice for a water utility. SJWC's groundwater pumping stations have a production capacity of approximately 0.26 billion gallons per day and the present capacity for taking purchased water is approximately 0.08 billion gallons per day. The surface water collection system has a physical delivery capacity of approximately 0.03 billion gallons per day. During 2023, a maximum and average of 0.13 billion gallons and 0.09 billion gallons of water per day, respectively, were delivered to the system.

The properties of CTWS consist of land, easements, rights (including water rights), buildings, reservoirs with a capacity of approximately 9.4 billion gallons, standpipes, dams, wells, supply lines, water treatment plants, pumping plants, 2,317 miles of transmission and distribution mains and other facilities and equipment used for the collection, purification, storage and distribution of water throughout Connecticut and Maine. In certain cases, CWC and MWC are or may be a party to limited contractual arrangements for the provision of water supply from neighboring utilities.

Sources of water supply owned, maintained and operated by CTWS include 25 surface water reservoirs and 108 well fields. In addition, CWC and MWC have agreements with various neighboring water utilities to provide water, at negotiated rates, to our water systems. Collectively, these sources have the capacity to deliver approximately 0.08 billion gallons of potable water daily to the 27 major operating systems. CTWS also owns, maintains and operates 50 small, non-interconnected satellite and consecutive water systems, that combined, have the ability to deliver about 3.5 million gallons of additional water per day to their respective systems. CTWS's 30 water treatment plants have a combined treatment capacity of approximately 0.05 billion gallons per day. In addition, CTWS owns and operates one wastewater treatment plant with a capacity of 780,000 gallons per day.

The properties of TWC consist of land, easements, rights (including water rights), buildings, reservoirs, standpipes, wells, supply lines, water treatment plants, pumping plants, 818 miles of transmission and distribution mains and other facilities and equipment used for the collection, purification, storage and distribution of water throughout its service area. TWC maintains a service area that covers approximately 271 square miles located in the southern region of the Texas hill country in Bandera, Blanco, Comal, Hays, Kendall, Medina and Travis counties. The majority of the service area surrounds an 8,200-surface acre reservoir, Canyon Lake. TWC production wells have the ability to pump a combined 5.8 billion gallons annually. TWC has contracts for 2 billion gallons of untreated surface water and 0.24 billion gallons of treated surface water from the GBRA annually, and 0.11 billion gallons of treated surface water from LCRA. TWC owns and operates three surface water treatment plants with a combined production capacity of 9 million gallons per day. TWC maintains 87 storage tanks with a total storage capacity of 0.02 billion gallons. TWC owns and operates four wastewater treatment plants with a combined capacity of 293,500 gallons per day. In August 2023, TWR acquired eight wells and the water rights of KT Water Resources LLC. These wells have been projected to yield an additional 2.0 billion gallons per year or more.

Water Utility Services hold all of its principal properties in fee simple, subject to current tax and assessment liens, rights-of-way, easements, and certain minor defects in title which do not materially affect their use. A substantial portion of treatment, storage and distribution properties owned by MWC are subject to liens of mortgage or indentures that secure bonds, notes and other evidences of long-term indebtedness.

As of December 31, 2023, SJW Land Company and Chester Realty, Inc. own approximately 101 acres of property in the State of California, 55 acres of property in the State of Tennessee and 23 acres of property in State of Connecticut.

The following table is a summary of SJW Land Company and Chester Realty, Inc. properties described previously:

				% for Year Ended December 31, 2023 of Real Estate Services	
Description	Location	Acreage	Square Footage	Revenue	Expense
Warehouse building	Knoxville, TN	30	361,500	52 %	47 %
Commercial building	Knoxville, TN	15	135,000	47 %	52 %
Undeveloped land and parking lot	Knoxville, TN	10	N/A	N/A	N/A
Undeveloped land	San Jose, CA	101	N/A	N/A	N/A
Commercial building	Clinton, CT	22	9,000	1 %	1 %
Commercial building	Guilford, CT	1	1,300	— %	— %

Item 3. ***Legal Proceedings***

SJW Group and its subsidiaries are subject to ordinary routine litigation incidental to its business. In October 2023, The Connecticut Water Company, a subsidiary of SJW Group, was named as a defendant in a class action lawsuit alleging that the water provided by Connecticut Water contained contaminants. Connecticut Water intends to vigorously defend itself in this lawsuit. There are no pending legal proceedings to which SJW Group or any of its subsidiaries is a party, or to which any of its properties is the subject, that are expected to have a material effect on SJW Group's business, financial position, results of operations or cash flows.

Item 4. ***Mine Safety Disclosures***

None.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

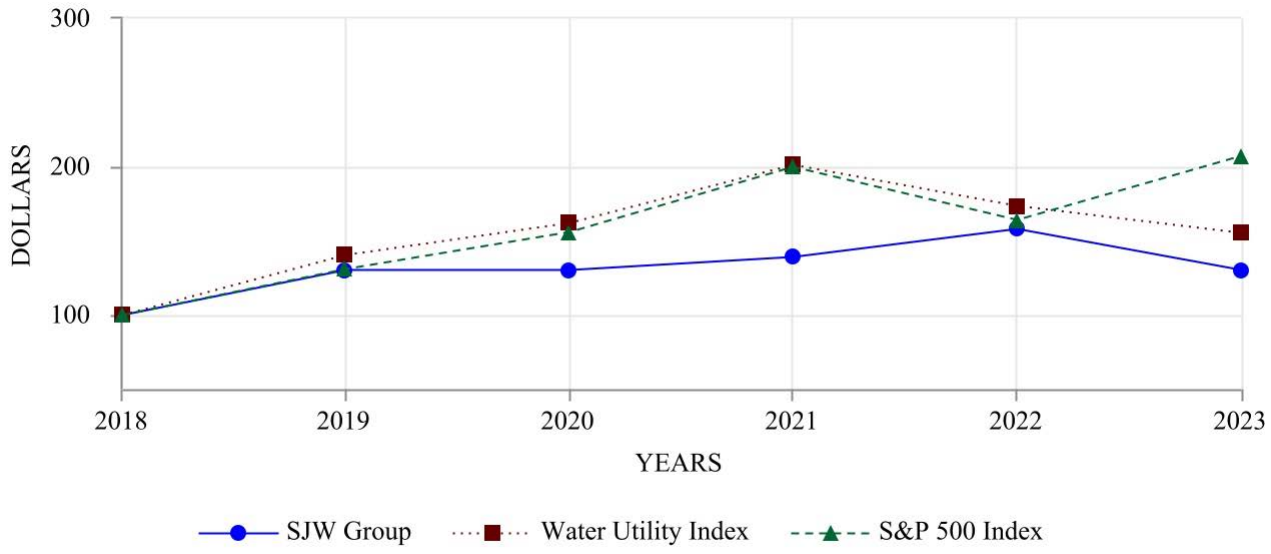
Market Information

SJW Group's common stock is traded on the New York Stock Exchange under the symbol "SJW." As of December 31, 2023, there were 271 record holders of SJW Group's common stock, excluding those shares held in street or nominee name.

Five-Year Performance Graph

The following performance graph compares the changes in the cumulative stockholder return on SJW Group's common stock with the cumulative total return on a Water Utility Index and the Standard & Poor's 500 Index during the last five years ended December 31, 2023. The comparison assumes $100 was invested on December 31, 2018 in SJW Group's common stock and in each of the foregoing indices and assumes reinvestment of dividends.

COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN
Among SJW Group, a Water Utility Index and the S&P 500 Index



The following descriptive data of the performance graph is supplied in accordance with Rule 304(d) of Regulation S-T (numbers represent U.S. dollars ($)):

	2018	2019	2020	2021	2022	2023
SJW Group	$ 100	130	130	139	158	130
Water Utility Index	$ 100	140	162	201	173	155
S&P 500 Index	$ 100	131	156	200	164	207

The Water Utility Index is the nine water company Water Utility Index (including CTWS up to the time of its merger with SJW Group) prepared by Wells Fargo Securities, LLC. The above performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that the company specifically incorporates it by reference into such filing.

Item 6. **[Reserved]**

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Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***
(Dollar amounts in thousands, except where otherwise noted)

The following discussion and analysis of our financial condition and results of operations should be read together with "Forward-Looking Statements," Part 1, Item 1 "Business," Part I, Item 1A "Risk Factors," and our consolidated financial statements and notes included under Item 8 of this Annual Report on Form 10-K. The following sections include a discussion of results for the year ended December 31, 2023 compared to the year ended December 31, 2022. The comparative results for the year ended December 31, 2022 with for the year ended December 31, 2021 generally have not been included in this Form 10-K but may be found in "Part II - Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of the company's Annual Report on Form 10-K for the year ended December 31, 2022.

Business Strategy for Water Utility Services

SJW Group focuses its business initiatives in three strategic areas:

(1) Investing in regional regulated water utility operations to support the health, safety and quality of life of our customers;

(2) Regional non-tariffed water utility related services provided in accordance with the guidelines established by the applicable state public utility commissions; and

(3) Out-of-region water and utility related services.

Regional Regulated Activities

SJW Group's regulated utility operation is conducted through SJWC, CWC, TWC and MWC. SJW Group plans and applies a diligent and disciplined approach to maintaining and improving its water system infrastructures and also seeks to acquire regulated water systems adjacent to or near its existing service territory. CWC and TWC also provide regulated wastewater services.

The United States water utility industry is largely fragmented and is dominated by municipal-owned water systems. The water industry is regulated, and provides a life-sustaining product. This makes water utilities subject to lower business cycle risks than non-tariffed industries.

Regional Non-tariffed Activities

SJWC provides non-tariffed services, such as water system operations, maintenance agreements and antenna site leases under agreements with municipalities and other utilities. TWC provides non-tariffed wholesale water service to adjacent utilities and non-tariffed wastewater services. CTWS provides non-tariffed services, such as water system operations and maintenance under agreements with municipalities and other utilities. Additionally, CTWS offers *Linebacker©,* an optional service line protection program covering a limited amount of the cost of repairs for leaking or broken water and wastewater service lines and in-home plumbing to eligible residential customers in Connecticut and water service lines to eligible residential customers in Maine.

SJW Group also seeks appropriate non-tariffed business opportunities that complement its existing operations or that allow it to extend its core competencies beyond existing operations. SJW Group seeks opportunities to fully utilize its capabilities and existing capacity by providing services to other regional water systems, which also will benefit its existing regional customers.

Out-of-Region Opportunities

SJW Group also from time to time pursues opportunities to participate in out-of-region water and utility related services, particularly regulated water and wastewater businesses. SJW Group evaluates out-of-region and out-of-state opportunities that meet SJW Group's risk and return profile.

The factors SJW Group considers in evaluating such opportunities include:

- Potential profitability;
- Regulatory environment;
- Additional growth opportunities within the region;
- Water supply, water quality and environmental issues;
- Capital requirements;
- General economic conditions; and
- Synergy potential.

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As part of our pursuit of the above three strategic areas, we consider from time-to-time opportunities to acquire businesses and assets. However, we cannot be certain we will be successful in identifying and consummating any strategic business combination or acquisitions relating to such opportunities. In addition, the execution of our business strategy will expose us to different risks than those associated with the current utility operations. We expect to incur costs in connection with the execution of this strategy and any integration of an acquired business could involve significant costs, the assumption of certain known and unknown liabilities related to the acquired assets, the diversion of management's time and resources, the potential for a negative impact on SJW Group's financial position and operating results, entering markets in which SJW Group has no or limited direct prior experience and the potential loss of key employees of any acquired company. Any strategic combination or acquisition we decide to undertake may also impact our ability to finance our business, affect our compliance with regulatory requirements, and impose additional burdens on our operations. Any businesses we acquire may not achieve sales, customer growth and projected profitability that would justify the investment. Any difficulties we encounter in the integration process, including the integration of controls necessary for internal control and financial reporting, could interfere with our operations, reduce our operating margins and adversely affect our internal controls. SJW Group cannot be certain that any transaction will be successful or that it will not materially harm operating results or our financial condition.

Real Estate Services

SJW Group's real estate investment activity is conducted through SJW Land Company and Chester Realty, Inc. SJW Land Company owns undeveloped land in California and Tennessee and owns and operates commercial buildings in Tennessee. Chester Realty, Inc. owns and operates land and commercial buildings in the State of Connecticut. SJW Land Company and Chester Realty, Inc. manage its acquired income producing and other properties until such time a determination is made to reinvest proceeds from sale of such properties.

Critical Accounting Policies

SJW Group has identified accounting policies delineated below as the policies critical to its business operations and the understanding of the results of operations. The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and revenues and expenses during the reporting period. SJW Group bases its estimates on historical experience and other assumptions that are believed to be reasonable under the circumstances. For a detailed discussion on the application of these and other accounting policies, see Note 2 of "Notes to Consolidated Financial Statements." SJW Group's critical accounting policies are as follows:

Recognition of Regulatory Assets and Liabilities

Generally accepted accounting principles for water utilities include the recognition of regulatory assets and liabilities as permitted by ASC Topic 980. In accordance with ASC Topic 980, Water Utility Services, to the extent applicable, records regulatory assets for incurred costs that are deemed probable of recovery from customers. Also, Water Utility Services recognizes regulatory liabilities for amounts expected to be refunded to customers in the rate-making process and for amounts collected in advance of the related expenditures. Regulatory assets or liabilities are also recognized for special revenue programs such as WCMA and WRA in accordance with guidance on alternative revenue programs under ASC Topic 980, including the requirement that such revenues will be collected within 24 months of the year-end in which the revenue is recorded. A reserve is recorded for amounts SJW Group estimates will not be collected within the 24-month period. This reserve is based on an estimate of actual usage over the recovery period, offset by applicable drought surcharges. Application of ASC Topic 980, including determining whether recovery is probable, requires significant judgement by management and includes assessing evidence that may exist prior to regulatory authorization, including regulatory rules and decisions, historical ratemaking practices, and other facts and circumstances that would indicate the recovery or refund is probable. The regulatory assets and liabilities recorded by Water Utility Services primarily relate to asset removal costs, the recognition of deferred income taxes for ratemaking versus tax accounting purposes, balancing and memorandum accounts, pensions and other postretirement benefits, and employee benefit costs. The disallowance of any asset in future ratemaking, including regulatory assets, would require Water Utility Services to immediately recognize the impact of the costs for financial reporting purposes. No disallowances were recognized during the years ended December 31, 2023, 2022 and 2021.

Recognition of Balancing and Memorandum Accounts

Balancing and memorandum accounts are utilized by our California operations. The purpose of a balancing account is to track the under-collection or over-collection associated with expense changes and the revenue authorized by the CPUC to offset those expense changes. Pursuant to Section 792.5 of the California Public Utilities Code, a balancing account must be maintained for expense items for which revenue offsets have been authorized. Balancing and memorandum accounts are recognized by SJWC when it is probable that future recovery of previously incurred costs or future refunds that are to be credited to customers will occur through the ratemaking process.

Balancing accounts are currently being maintained for the following items: purchased water, purchased power, groundwater extraction charges, pensions, and general rate case and cost of capital true-ups. The amount in the water production balancing accounts varies with the seasonality of the water utility business such that, during the summer months when the demand for water is at its peak, the account tends to reflect an under-collection, while during the winter months when demand for water is relatively lower, the account tends to reflect an over-collection. The pension balancing account is intended to capture the difference between actual pension expense and the amount approved in rates by the CPUC. The general rate case true-up accounts are a result of revenue shortfalls authorized for collection or refund by the CPUC due to delayed rate case and cost of capital decisions. The MWRAM tracks the difference between the revenue received for actual metered sales through the tiered volumetric rate and the revenue that would have been received with the same actual metered sales if a uniform rate would have been in effect.

SJWC also maintains memorandum accounts to track impacts due to catastrophic events, certain unforeseen water quality expenses related to new federal and state water quality standards, energy efficiency, water conservation, water tariffs, and other approved activities or as directed by the CPUC. The WCMA allows SJWC to track revenue, net of related water costs, associated with reduced sales due to water conservation and associated calls for water use reduction. SJWC records the lost revenue captured in the WCMA balancing accounts. Applicable drought surcharges collected are used to offset the revenue losses tracked in the WCMA.

In assessing the probability criteria for balancing and memorandum accounts between general rate cases, SJWC considers evidence that may exist prior to CPUC authorization that would satisfy ASC Topic 980 subtopic 340-25 recognition criteria. Such evidence may include regulatory rules and decisions, past practices, and other facts and circumstances that would indicate that recovery or refund is probable. When such evidence provides sufficient support, the balances are recorded in SJW Group's financial statements.

It is typical for the CPUC to incorporate any over-collected and/or under-collected balances in balancing or memorandum accounts into customer rates at the time rate decisions are made as part of SJWC's general rate case proceedings by assessing temporary sur-credits and/or surcharges. In the case where SJWC's balancing or memorandum-type accounts that have been authorized by the CPUC reach certain thresholds or have termination dates, SJWC can request the CPUC to recognize the amounts in customer rates prior to the next regular general rate case proceeding by filing an advice letter.

Goodwill

Goodwill represents the excess of the purchase price paid over the estimated fair value of the assets acquired and liabilities assumed in the acquisition of a business. Goodwill is not amortized but is tested for impairment annually on October 1st or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. SJW Group first performs a qualitative assessment to determine whether it is necessary to perform the quantitative impairment test. In assessing the qualitative factors, SJW Group considers the impact of these key factors: change in industry and competitive environment, financial performance, macroeconomic conditions, and other relevant Company-specific events. If SJW Group determines that as a result of the qualitative assessment it is more likely than not (> 50% likelihood) that the fair value is less than carrying amount, then a quantitative test is performed. SJW Group performed an impairment analysis as of October 1, 2023. The qualitative assessment found no indicators of impairment and therefore did not perform the quantitative impairment test. No impairments occurred during the years ended December 31, 2023, 2022 or 2021.

Factors Affecting Our Results of Operations

SJW Group's financial condition and results of operations are influenced by a variety of factors including the following:

- Economic utility regulation;
- Infrastructure investment;
- Compliance with environmental, health and safety standards;
- Production expenses;
- Customer growth;
- Water usage per customer;
- Weather conditions, seasonality and sources of water supply; and
- Merger and acquisition activities, if any.

Economic Utility Regulation

Water Utility Services is generally subject to economic regulation by the Regulators overseeing public utilities. Regulatory policies vary from state to state and may change over time. In addition, there may be regulatory lag between the time a capital investment is made, a consumption decrease occurs, or an operating expense increases and when those items are adjusted in utility rates.

SJWC employs a forward-looking test year and has been authorized to use several mechanisms to mitigate risks faced due to regulatory lag and new and changing legislation, policies and regulation. These include memorandum accounts to track revenue impacts due to catastrophic events, certain unforeseen water quality expenses related to new federal and state water quality standards, energy efficiency, water conservation, water tariffs, and other approved activities or as directed by the CPUC. Rate recovery for the balances in these memorandum accounts is generally allowed in a subsequent general rate case. SJWC also maintains balancing accounts to track changes in purchased water, purchased power, groundwater extraction charges and pension costs for later rate recovery. Regulatory risk in California is mitigated by use of a forward-looking test year which allows the return on and return of utility plant on a forecasted basis as it is placed in service, and in some cases interim rate relief is allowed in the event of regulatory lag. The CPUC permits its regulated utilities to acquire other utilities if the proposed sale and asset purchase transaction is determined to be in the public interest. Under Public Utilities Code § 2720, the purchase price, subject to a reasonable test involving appraisals from the acquirer as well as the Public Advocates Office, represents the Fair Market Value. Upon CPUC approval, acquiring utilities can include the Fair Market Value in rate base.

Pursuant to Connecticut regulations, CWC employs a historical test year. To address regulatory risk due to regulatory lag and changing legislation policies and regulations, rate cases may be filed as necessary in Connecticut. Additionally, to mitigate regulatory lag for pipeline replacement and conservation related projects, the Connecticut State Legislature has approved WICA that allows for a surcharge to be added to customer bills semi-annually for certain eligible pre-approved projects. Further, to mitigate risks from variations in revenues from changes in customer usage, the Connecticut State Legislature has approved a WRA to provide for recovery of the company's authorized revenues.

Pursuant to Texas regulation, TWC employs a historical test year. To address regulatory risk due to regulatory lag and changing legislation policies and regulations, rate cases may be filed as necessary in Texas, provided there is no current rate case outstanding. Further, rate cases may not be filed more frequently than once every 12 months. Additionally, to mitigate regulatory lag for capital improvements, Texas seeks to implement its first SIC. The SIC will allow TWC to earn a return on some of its capital improvements made after 2020 through a surcharge to its customers. The SIC is a cost recovery mechanism recently adopted in Texas that avoids the immediate need for a general rate case. The PUCT permits the acquisition of utilities using a process termed the Fair Market Value. This process brings in three appraisers to determine the market value of a system which the acquiring utility can apply as the value of utility plant included in rate base. In addition, after recent legislation the PUCT adopted rules allowing the application of the Filed Rate Doctrine. This allows water utilities the option of applying their previously approved rates to the customers of newly acquired systems, which encourages consolidation by minimizing rate case expenses.

Pursuant to Maine regulations, MWC employs a historical test year. To address regulatory risk due to regulatory lag and changing legislation policies and regulations, rate cases may be filed as necessary in Maine. Additionally, to mitigate regulatory lag for all infrastructure replacements (except meters), the Maine State Legislature has approved of WISC that allows for a surcharge to be added to customer bills semi-annually for certain pre-approved projects.

Infrastructure Investment

The water utility business is capital-intensive. In 2023 and 2022, company-funded capital improvements were $271,772 and $218,784, respectively, for additions to, or replacements of, property, plant and equipment for our Water Utility Services. We plan to spend approximately $332,000 in 2024 and $1,621,000 over five years for capital improvements. SJW Group funds these expenditures through a variety of sources, including earnings received from operations, debt and equity financing, and other borrowings. SJW Group relies upon lines of credit to fund capital expenditures in the short term and has historically issued long-term debt to refinance our short-term debt. While our ability to obtain financing will continue to be a key risk, we believe that based on our successful 2023 activities, we will have access to the external funding sources necessary to implement our ongoing capital investment programs in the future.

Compliance with Environmental, Health and Safety Standards

Water Utility Services' operations are subject to water quality and pollution control regulations issued by the EPA and environmental laws and regulations administered by the respective states and local regulatory agencies. Under the federal Safe Drinking Water Act, Water Utility Services is subject to regulation by the EPA of the quality of water it sells and treatment techniques it uses to make the water potable. The EPA promulgates nationally applicable standards, including maximum contaminant levels for drinking water. Water Utility Services has implemented monitoring activities and installed specific water

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treatment improvements enabling it to comply with existing maximum contaminant levels and plan for compliance with future drinking water regulations. However, the EPA and the respective state agencies have continuing authority to issue additional regulations under the Safe Drinking Water Act. Water Utility Services incur substantial costs associated with compliance with environmental, health and safety and water quality regulation to which our water services are subject.

Environmental, health and safety, and water quality regulations are complex and change frequently, and the overall trend has been that they have become more stringent over time. It is possible that new or more stringent environmental standards and water quality regulations could be imposed that will increase Water Utility Services' water quality compliance costs, hamper Water Utility Services' available water supplies, and increase future capital expenditures. Future drinking water regulations may require increased monitoring, additional treatment of underground water supplies, fluoridation of all supplies, more stringent performance standards for treatment plants and procedures to further reduce levels of disinfection by-products. In the past, Water Utility Services have generally been able to recover expenses associated with compliance related to environmental, health and safety standards, but future recoveries could be affected by regulatory lag and the corresponding uncertainties surrounding rate recovery.

Production Expenses

Water Utility Services' operations require significant production inputs which result in substantial production expenses. These expenses include power, which is used to operate pumps and other equipment, purchased water and groundwater extraction charges. For 2023, production expenses accounted for 49% of our total operating expenses. Price increases associated with these production inputs would adversely impact our results of operations until rate relief is granted.

Customer Growth

Customer growth in our Water Utility Services' is driven by: (i) organic population growth within our authorized service areas and (ii) the addition of new customers to our regulated customer base by acquiring regulated water systems adjacent to or near our existing service territories. During 2023, we had cash outflows of $7,537 for business acquisitions which we believe will allow SJW Group to expand our regulated customer base. Before entering new regulated markets, we evaluate the regulatory environment to ensure that we will have the opportunity to achieve an appropriate rate of return on our investment while maintaining our high standards for quality, reliability and compliance with environmental, health and safety, and water quality standards.

Water Usage Per Customer

Fluctuations in customer demand for water could be due to seasonality, restrictions of use, weather or lifestyle choices, all of which could affect Water Utility Services' results of operations.

The following is the change in customer usage in 2023 compared to 2022:

- SJWC residential usage decreased 2.9% and business usage decreased 0.8%.
- TWC residential and business usage decreased 8.8%.
- CWC residential usage decreased 7.9% and business usage decreased 3.3%.
- MWC residential usage decreased 7.3% and business usage decreased 14.3%.

For the year ended December 31, 2023, SJWC's residential and business usage was lower by 15.0% and 3.2%, respectively, than the amount authorized in our 2022-2024 general rate case. SJWC's service area is currently under voluntary 15% reduction of water consumption. To address the difference between conservation usage and authorized usage in the rate case, the CPUC has approved the activation of the WCMA which tracks the divergence between authorized versus actual consumption in a balancing account for future recovery.

With the availability of the WRA in Connecticut, which allows for recovery of authorized revenues, decreases in consumption year to year do not present the same financial risk as in our other water utility services utilities.

Weather Conditions, Seasonality and Sources of Water Supply

Our ability to meet the existing and future water demands of our customers depends on an adequate supply of water. Drought, governmental restrictions, overuse of sources of water, the protection of threatened species or habitats or other factors may limit the availability of ground and surface water. Also, customer usage of water is affected by weather conditions, in particular during the warmer months. Our water systems experience higher demand in the summer due to the warmer temperatures and increased usage by customers for outside irrigation of lawns and landscaping. In periods of drought, if customers are encouraged or required to conserve water due to a shortage of supply or restriction of use, revenue tends to be lower. Water use restrictions may be imposed at a regional or state level and may affect our service areas regardless of our readiness to meet

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unrestricted customer demands. Similarly, in unusually wet periods, water supply tends to be higher and customer demand tends to be lower, again resulting in lower revenues.

SJWC believes that its various sources of water supply, which consists of groundwater from wells, surface water from watershed run-off and diversion, reclaimed water, and purchased imported water, will be sufficient to meet customer demand for 2024. In addition, SJWC actively works with Valley Water to address California's long-term water supply challenges by continuing to educate customers on responsible water use practices and to conduct long-range water supply planning. CWC and MWC believes that they will be able to meet customer demand for 2024 with their existing water supply which consists of groundwater from wells, surface water in reservoirs and purchased water treated by neighboring water utilities. TWC believes that it will be able to meet customer demand for 2024 with their water supply which consists of groundwater from wells and purchased treated and raw water from the GBRA.

Results of Operations

Water sales are seasonal in nature and influenced by weather conditions. The timing of precipitation and climatic conditions can cause seasonal water consumption by customers to vary significantly. Revenue is generally higher in the warm, dry summer months when water usage and sales are greater and lower in the winter months when cooler temperatures and increased rainfall curtail water usage and sales.

See Item 1, "Business" and Item 1A, "Risk Factors" for a discussion of SJW Group's general business and regulatory activities.

Overview

SJW Group's consolidated net income for the year ended December 31, 2023 was $84,987, compared to $73,828 for the same period in 2022. This represents an increase of $11,159 or 15%, from 2022. The increase in net income was primarily driven by rate filings in California and Maine, lower maintenance costs due in part to prior year incurred costs related to the Order of Instituting Investigation settlement agreement, and a decrease in income taxes due to the partial release of an uncertain tax position reserve, partially offset by higher water production expenses, higher debt interest expenses, increased allowances for credit losses, higher depreciation and amortization expense related to new utility plant additions, and a gain on sale of nonutility properties of $6,197 in 2022 that did not recur in 2023.

Operating Revenue

Operating revenue by segment was as follows:

Operating Revenue

	2023	2022
Water Utility Services	$ 664,679	615,093
Real Estate Services	5,684	5,605
Total operating revenue	$ 670,363	620,698

The change in consolidated operating revenues was due to the following factors:

	2023 vs. 2022 Increase/(decrease)	
Water Utility Services:		
Consumption changes	$ (6,624)	(2)%
Increase in customers	3,780	1 %
Rate increases	46,592	8 %
Balancing and memorandum accounts:		
MWRAM	628	— %
WCMA	1,994	1 %
All other	1,187	— %
Other regulatory mechanisms	1,875	— %
Other	154	— %
Real Estate Services	79	— %
Total change in operating revenue	$ 49,665	8 %

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The revenue increase consists of $49,586 from Water Utility Services and $79 from Real Estate Services.

The revenue increase for Water Utility Services is primarily due to an increase in authorized rates in California and Maine which resulted in $46,592 of additional revenue, an increase of $3,780 from new customers, balancing and memorandum accounts increases were primarily due to WCMA for $1,994 and $1,187 for all other balancing and memorandum accounts, and increases in other regulatory mechanisms by $1,875, partially offset by decreases of $6,624 due to lower usage.

Water Utility Services' Operating Revenue and Customer Counts

The following tables present operating revenues and number of customers by customer group of Water Utility Services:

Operating Revenue by Customer Group

	2023	2022
Residential and business	$ 566,651	509,284
Industrial	5,038	5,619
Public authorities	24,395	22,633
Others	56,823	50,821
Balancing and memorandum accounts and other regulatory mechanisms	11,772	26,736
	$ 664,679	615,093

Number of Customers

	2023	2022
Residential and business	387,616	384,346
Industrial	614	609
Public authorities	2,424	2,389
Others	11,056	10,982
	401,710	398,326

Operating Expense

Operating expense by segment was as follows:

Operating Expense

	2023	2022
Water Utility Services	$ 514,375	482,679
Real Estate Services	2,956	3,719
All Other	3,597	3,322
	$ 520,928	489,720

The change in consolidated operating expenses was due to the following factors:

	2023 vs. 2022 Increase/(decrease)	
Water production expenses:		
Change in surface water use	$ (11,510)	(2)%
Change in usage and new customers	(9,716)	(2)%
Purchased water and groundwater extraction charge, energy price change and other production expenses, net	31,767	7 %
Balancing and memorandum account cost recovery	12,869	2 %
Total water production expenses	23,410	5 %
Administrative and general	3,252	1 %
Maintenance	(5,005)	(1)%
Property taxes and other non-income taxes	1,903	— %
Depreciation and amortization	1,451	— %
Gain on sale of nonutility property	6,197	1 %
	$ 31,208	6 %

Sources of Water Supply

SJWC's water supply consists of groundwater from wells, surface water from watershed run-off and diversion, reclaimed water, and imported water purchased from Valley Water under the terms of a master contract with Valley Water expiring in 2051. Surface water is sourced from SJWC's 6,400 acres of watershed in the Santa Cruz mountains. In 2022, SJWC's general rate case decision approved the use of the Full Cost Balancing Account which mitigates the cost of the water supply from changes and variations in quantities from each of these sources which affect the overall mix of the water supply. The water rates for purchased water and the groundwater extraction charge may be increased by Valley Water at any time. If an increase occurs, then SJWC would file an advice letter with the CPUC seeking authorization to increase revenues to offset the rate increase.

CWC's water sources vary among the individual systems, but overall, approximately 80% of the total dependable yield comes from surface water supplies and 20% from wells. In addition, CWC has water supply agreements to supplement its water supply with the South Central Connecticut Regional Water Authority and The Metropolitan District that expire in 2058 and 2053, respectively.

TWC's water supply consists of groundwater from wells and purchased treated and raw water from the GBRA. TWC has long-term agreements with the GBRA, which expire in 2037, 2040, 2044 and 2050. The agreements, which are take-or-pay contracts, provide TWC with an aggregate of 7,650 acre-feet of water per year from Canyon Lake at prices that may be adjusted periodically by GBRA. TWC also has raw water supply agreements with the LCRA and WTPUA expiring in 2059 and 2046, respectively, to provide for 350 acre-feet of water per year from Lake Austin and the Colorado River, respectively, at prices that may be adjusted periodically by the agencies. Forty active production wells located in a Comal Trinity Groundwater Conservation District, a regulated portion of the Trinity aquifer, are charged a groundwater pump tax based upon usage.

In August 2023, SJWTX Holdings Inc.'s unregulated subsidiary, TWR acquired eight wells and the water rights of KTR. These wells have been projected to yield an additional 6,000 acre-feet per year or more. TWC staff is currently working on acquiring easements and routing of the waterline and infrastructure needed to get this water into our Triple Peak water system to serve existing customers and planned new developments.

Water sources at MWC vary among the individual systems, but overall, approximately 90% of the total dependable yield comes from surface water supplies and 10% from wells. MWC has a water supply agreement with the Kennebec Water District expiring in 2040.

The following table presents the sources of water supply for water utility services:

	Source of Water Supply	
	2023	2022
	(billion gallons)	
Purchased water	19.5	19.7
Groundwater	12.4	18.2
Surface water	14.6	10.5
Reclaimed water	0.8	0.9
	47.3	49.3
Average water production expense per billion gallons	$5.420 million	$4.719 million

The percentages of water supply by source excluding reclaimed water by state is presented below:

	Purchased Water		Groundwater		Surface Water	
	2023	2022	2023	2022	2023	2022
California	54 %	52 %	32 %	40 %	12 %	5 %
Connecticut	6 %	7 %	36 %	36 %	58 %	57 %
Maine	2 %	3 %	7 %	8 %	91 %	89 %
Texas	17 %	28 %	34 %	28 %	49 %	44 %

Water production in 2023 for Water Utility Services decreased 2.0 billion gallons from 2022. The changes are primarily attributable to changes in consumption by customers driven primarily by weather conditions in California, Maine and Texas.

The contract water rates for SJWC are determined by Valley Water. These rates are adjusted periodically and coincide with Valley Water's fiscal year, which ends on June 30. The contract water rate for Valley Water's fiscal years 2024, 2023 and 2022 was $6.411 million, $5.644 million and $4.953 million per billion gallons, respectively. The contractual cost of the groundwater extraction charge for water pumped from the ground basin was $6.058 million, $5.290 million and $4.600 million per billion gallons for Valley Water's fiscal years 2024, 2023 and 2022, respectively. SJWC's unaccounted-for water for 2023 and 2022 approximated 8.4% and 8.9%, respectively, as a percentage of production. The unaccounted-for water estimate is based on the results of past experience and the impact of flows through the system, partially offset by SJWC's main replacements and water loss reduction programs.

CWC has an agreement with the South Central Connecticut Regional Water Authority ("RWA") to purchase water from RWA. The agreement was signed in April 2006 and became effective upon the receipt of all regulatory approvals in 2008 and will remain in effect for a minimum of fifty years upon becoming effective. In addition, CWC is able, but under no obligation, to purchase up to one million gallons of water per day at the then current wholesale rates per the agreement, $3.1 million per billion gallons as of December 31, 2023. CWC has an agreement with The Metropolitan District ("MDC") to purchase water from MDC to serve the Unionville system. The agreement became effective on October 6, 2000 and has a term of fifty years beginning May 19, 2003, the date the water supply facilities related to the agreement were placed in service. CWC has agreed to purchase 0.28 billion gallons of water annually from MDC at the published retail rate, three dollars and eighty cents per hundred cubic feet as of December 31, 2023.

MWC has an agreement with the Kennebec Water District for potable water service. The agreement has been in place for 20 years and was extended on November 7, 2020 for a new term of up to 20 years. MWC guarantees a minimum consumption of 0.05 billion gallons of water annually. Water sales to MWC are billed at a wholesale discount of twenty cents per hundred cubic feet of water below Kennebec Water District's tariffed rates. The current tariff rate was one dollar and fifty-one cents per hundred cubic feet as of December 31, 2023.

CTWS's unaccounted-for water for 2023 and 2022 approximated 13.1% and 14.2%, respectively, as a percentage of production. The unaccounted-for water estimate is based on the results of past experience and the impact of flows through CTWS's systems, unadjusted for any required system flushing, partially offset by WICA and WISC main replacement programs and lost water reduction initiatives.

The various components of operating expenses are discussed below.

Water production expenses

Water production expenses increased $31,767 in higher per unit costs paid for purchased water, groundwater extraction, energy price charges and other production expenses and increased $12,869 in water production balancing and memorandum accounts for the Full Cost Balancing Account, offset by decreases of $11,510 as a result of increased availability of California surface water in 2023 compared to 2022 and $9,716 due to lower customer usage.

Administrative and General Expense

Administrative and general expenses include payroll related to administrative and general functions, all employee benefits charged to expense accounts, insurance expenses, legal fees, regulatory utility commissions' expenses, expenses associated with being a public company, and general corporate expenses.

Administrative and general expense increased $3,252 in 2023, or 1% of the total operating expenses in 2022 primarily due to an increase in allowances for customer credit losses.

Maintenance Expense

Maintenance expenses decreased $5,005 or 1%, primarily due to prior year incurred costs related to the Order of Instituting Investigation settlement agreement. In addition, proactive asset management and advanced leak detection reducing emergency projects and replacing them with scheduled improvements that are no longer temporary in nature reduced maintenance expenses for the year.

Property Taxes and Other Non-income Taxes

Property taxes and other non-income taxes for 2023 increased $1,903 from 2022. The increase was primarily the result of increased property taxes due to utility plant additions, and an increase in payroll taxes due to increases in wages.

Depreciation and Amortization

Depreciation and amortization expense increased $1,451 in 2023. The increases were primarily due to increases in depreciation related to new utility plant additions; partially offset by a $2,400 one-time impact related to amortization on certain Cupertino concession assets in 2022.

Sale of nonutility properties

Gain on sale of nonutility properties decreased $6,197 in 2023 primarily due to the recording of a non-recurring sale of non-utility properties in 2022, and no recorded gain on the sale of nonutility properties in 2023.

Other Income and Expense

The change in other (expense) income in 2023 compared to 2022 was primarily due to an increase in interest expense due to an increase in long-term debt balances, higher interest rates on lines of credit borrowings and an increase in pension non-service cost, offset by the changes in the Rabbi Trust and life insurance policy values and a true-up on prior real estate sale transactions.

SJW Group's consolidated weighted-average cost of long-term debt, including the amortization of debt issuance costs, was 3.97% and 4.0% for the years ended December 31, 2023 and 2022. Cost of borrowing on the lines of credit averaged 6.29% and 3.41% for the years ended December 31, 2023 and 2022, respectively.

Provision for Income Taxes

Income tax expense for 2023 was $5,956, compared to $8,496 in 2022. The effective consolidated income tax rate was 7% for 2023 and 10% for 2022. The decrease in income tax expense and the effective income tax rate was primarily due to the partial release of an uncertain tax position reserve.

Please refer to Note 7, "Income Taxes," of Notes to Consolidated Financial Statements for a reconciliation of income tax computed at the federal statutory rate to actual income tax expense.

Other Comprehensive Income

The change in other comprehensive income in 2023 compared to 2022 was primarily due to the change in the benefit obligation for CWC's supplemental executive retirement plan primarily as a result of changes in the discount rate and the unrealized gain on its investments.

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Liquidity and Capital Resources

Water Utility Services' business derives the majority of its revenue directly from residential and business customers. Water Utility Services bills the majority of its customers on a bi-monthly basis. Management believes that the collection rate for its accounts receivables will increase as service disconnections gradually return to normal operations following the expiration of remaining state orders to suspend water service disconnections in 2022 that were instituted as a result of the COVID-19 pandemic. On December 28, 2023, SJWC submitted the application to receive $10,237 through the State of California Water and Wastewater Arrearages Payment Program to relieve outstanding payment delinquencies for customer accounts greater than 60-days past due as of December 31, 2022. We anticipate the funds to be received in the first quarter of 2024 after the State of California Water and Wastewater Arrearages Payment Program completes the review of this application.

Funds collected from Water Utility Services' customers are used to pay for water production expenses, in addition to costs associated with general operations. Funds were also generated from borrowings. In 2023, SJW Group and its subsidiaries obtained $70,000 in funds from new long-term debt and $80,659 in funds from equity issuances. From these amounts, SJW Group funded its 2023 capital expenditure programs, refinanced certain short and long-term borrowings, and funded working capital. See Note 4 and Note 6 of "Notes to Consolidated Financial Statements" for discussion on the equity and debt financing activities of SJW Group. In addition, SJW Group paid cash dividends of $47,905 during the year ended December 31, 2023.

In 2023, the common dividends declared and paid on SJW Group's common stock represented 56% of net income. Dividends have been paid on SJW Group's and its predecessor's common stock for 321 consecutive quarters and the annual dividend amount has increased in each of the last 56 years. While historically SJW Group has generally paid dividends equal to approximately 50% to 60% of its net income, SJW Group cannot guarantee that this trend will continue in the future.

Cash Flow from Operations

In 2023, SJW Group generated cash flow from operations of approximately $190,800 compared to $166,200 in 2022. Cash flow from operations is primarily generated by net income from revenue producing activities, adjusted for non-cash expenses for depreciation and amortization, deferred income taxes, share-based compensation, allowance for equity funds used during construction, gains on the sale of assets, and other changes in working capital items. Cash flow from operations increased in 2023 by approximately $24,600. The increase was primarily due to a combination of the following factors: (1) an increase of $16,100 due to higher net income adjusted for non-cash items and general working capital changes, (2) an increase in collections against our regulatory assets and liabilities which generated an increase of $10,600, (3) an increase from postretirement benefits assets and obligations of $5,600, and (4) an increase from other noncurrent assets and noncurrent liabilities of $2,800, offset by (5) a decrease of $10,500 attributable to tax accruals compared to the prior period.

Cash Flow from Investing Activities

In 2023, SJW Group used approximately $271,800 of cash for Company funded capital expenditures, $16,900 for developer funded capital expenditures, $24,200 and $7,537 for nonutility assets and business acquisitions, respectively, primarily for ongoing business and asset acquisition activities in Texas, and $2,100 in utility plant retirement costs. In 2022, SJW Group used approximately $218,800 of cash for Company funded capital expenditures, $22,900 for developer funded capital expenditures, $2,500 in utility plant retirement costs, $600 for real estate investments related to leasehold improvement additions for the properties located in Knoxville, Tennessee, and $400 for ongoing business and asset acquisition activities in Texas. These uses were offset by cash proceeds of $1,000 from the sale of various nonutility properties during the year.

Water Utility Services has budgeted 2024 capital expenditures of approximately $332,000, excluding capital expenditures financed by customer contributions and advances. The 2024 budget is comprised of as follows:

	Budgeted Capital Expenditures 2024
SJWC	$ 169,000
CWC	94,000
TWC	49,000
MWC	20,000
Total capital expenditures	$ 332,000

The 2024 capital expenditures budget is concentrated in main replacements. Water Utility Services' capital expenditures are incurred in connection with normal upgrading and expansion of existing facilities and to comply with environmental regulations. Over the next five years, Water Utility Services expects to incur approximately $1,621,000 in capital expenditures. A significant portion of this amount is subject to future approval from the Regulators. Capital expenditures have the effect of

increasing utility plant rate base on which Water Utility Services earns a return. Water Utility Services' actual capital expenditures may vary from projections due to changes in the expected demand for services, weather patterns, actions by governmental agencies and general economic conditions. Total additions to utility plant normally exceed company-financed additions as a result of new facilities construction funded with advances from developers and contributions in aid of construction.

The Water Utility Services' distribution systems were constructed during the period from the early 1900's through today. Expenditure levels for renewal and modernization will occur as the components reach the end of their useful lives. In most cases, replacement cost will significantly exceed the original installation cost of the retired assets due to increases in the costs of goods and services and increased regulation.

Cash Flow from Financing Activities

Net cash provided by financing activities for the year ended December 31, 2023, increased by approximately $50,500 from the same period in the prior year, primarily as a result of increase in cash proceeds from long-term debt and issuances of common stock, partially offset by an increase in the amount of net borrowings on our lines of credit, and an increase in payments of dividends. SJW Group's cash management policy includes the issuance of long-term debt to pay down borrowings on our lines of credit. As such, during years when long-term borrowings are high, borrowings on our line of credit tend to be low and when long-term borrowings are low, borrowings on our line of credit tend to be high.

SJW Group and its subsidiaries have unsecured bank lines of credit totaling $350,000 as of December 31, 2023. Drawdowns on our lines of credit are restricted by our funded debt not exceeding a percent of total capitalization as defined in our debt covenants. SJW Group expects to periodically draw down on its lines of credit as dictated by our funding needs and subsequently repay such borrowings with cash from operations and issuance of long-term debt or equity. See also "Sources of Capital" below.

Sources of Capital

SJW Group's regulated operations' ability to finance future construction programs and sustain dividend payments depends on its ability to maintain or increase internally generated funds and obtain external financing through the issuance of new long-term debt or issuance of equity. The level of future earnings and the related cash flow from operations is dependent, in large part, on the timing and outcome of regulatory proceedings. SJW Group's regulated operations' financing activity is designed to achieve capital structures consistent with regulatory guidelines in the locations where the companies operate. See current authorized capital structures in Item 1, "Business" under "Regulation and Rates."

Short-term Financing Arrangements

SJW Group and its subsidiaries have unsecured line of credit agreements where borrowings are used to refinance existing debt, for working capital, and for general corporate purposes. A summary of the line of credit agreements as of December 31, 2023, and 2022 are as follows:

		2023			2022
	Maturity Date	Line Limit	Amounts Outstanding	Unused Portion	Amounts Outstanding
Syndicated credit agreement:	August 2, 2028				
SJW Group		$ 50,000	10,000	40,000	—
SJWC		140,000	56,000	84,000	95,000
CTWS		90,000	53,000	37,000	20,000
TWC		20,000	2,500	17,500	—
Total syndicated credit agreement		300,000	121,500	178,500	115,000
CTWS credit agreement	August 2, 2028	10,000	10,000	—	4,578
CTWS credit agreement	May 15, 2025	40,000	40,000	—	40,000
		$ 350,000	171,500	178,500	159,578

Cost of borrowing on the lines of credit averaged 6.29% and 3.41% for the years ended of December 31, 2023 and 2022, respectively.

All of SJW Group's and subsidiaries' lines of credit contain customary representations, warranties and events of default, as well as certain restrictive covenants customary for facilities of this type, including restrictions on indebtedness, liens, acquisitions

and investments, restricted payments, asset sales, and fundamental changes. All of the lines of credit also include certain customary financial covenants such as a funded debt to capitalization ratio and a minimum interest coverage ratio. As of December 31, 2023, SJW Group and its subsidiaries were in compliance with all covenants on their lines of credit.

For additional information on SJW Group's lines of credit, see Note 5 of "Notes to Consolidated Financial Statements."

Long-term Financing Arrangements

SJW Group's and its subsidiaries' long-term debt activities are for purposes of refinancing short-term borrowings, funding capital expenditures and working capital, and repayments of maturing long-term debt. The following table summarizes the long-term debt issuances and repayments for the year ended December 31, 2023:

	Issuance (Repayment)	Activity Date	Maturity Date
SJWC:			
Senior note, Series P, 4.85%	$ 70,000	Jan 2023	Feb 2053
CTWS:			
Bank term loan, 4.09%	(1,377)	2023	December 2027
Bank term loan, 4.15%	(610)	2023	August 2037
MWC:			
Senior Note, Series G, 8.95%	(900)	Nov 2023	December 2024
State revolving fund loans, various series, 0.00%-2.58%	(1,460)	2023	2022-2048
	$ 65,653		

Additionally, on August 14, 2023, in connection with the KT Water Resources acquisition, TWR entered into a post-closing production payment obligation to pay a total amount of $29,000 to the seller over a period up to 29 years. The repayment schedule is based on the quantity of groundwater produced from the acquired wells, subject to certain provisions in the purchase agreement.

On January 22, 2024, CWC sold an aggregate principal amount of $25,000,000 of its 6.46% Senior Notes, Series 2023 due January 1, 2054.

The debt and credit agreements of SJW Group and its subsidiaries contain various financial and other covenants. Non-compliance with these covenants could result in accelerated due dates and termination of the agreements. In addition, the credit agreements contain customary representations and warranties and are subject to customary events of default, which may result in the outstanding debt becoming immediately due and payable. As of December 31, 2023, SJW Group and its subsidiaries were in compliance with all covenants related to its long-term debt agreements.

For additional information, see Note 6 of "Notes to Consolidated Financial Statements."

Equity Financing Arrangements

On March 1, 2023, SJW Group entered into Amendment No. 1 to the equity distribution agreement (the "Equity Distribution Agreement"), dated November 17, 2021, between SJW Group and J.P. Morgan Securities LLC, Janney Montgomery Scott LLC, RBC Capital Markets, LLC and Wells Fargo Securities, LLC (each a "Sales Agent" and, collectively, the "Sales Agents"), pursuant to which SJW Group increased the aggregate gross sales price of shares of SJW Group's common stock, $0.001 par value per share, that may be sold under the Equity Distribution Agreement from $100,000 to $240,000. For the year ended December 31, 2023, SJW Group issued and sold a total of 1,119,806 shares of common stock with a weighted average price of $73.68 per share and received $80,659 in net proceeds under the Equity Distribution Agreement. Since the inception of the Equity Distribution Agreement, SJW Group has issued and sold 2,004,657 shares of common stock with a weighted average price of $73.57 for a total net proceeds of $143,998 and has a remaining $92,509 under the Equity Distribution Agreement.

Credit Rating

The condition of the capital and credit markets or the strength of financial institutions could impact SJW Group's ability to draw on its lines of credit, issue long-term debt, sell its equity or earn interest income. In addition, government policies, the state of the credit markets and other factors could result in increased interest rates, which would increase SJW Group's cost of capital. While our ability to obtain financing will continue to be a risk, we believe that based on our 2023 and 2022 activities, we will have access to the external funding sources necessary to implement our ongoing capital investment programs in the future. SJW Group, CTWS and CWC were put on negative watch on September 19, 2023. Standard & Poor's noted the change in outlook is due to recent regulatory and legislative developments in Connecticut that are not consistent with Standard & Poor's view of the regulatory framework for investor owned utilities.

The following table are the current Standard & Poor's Rating Service assigned company ratings:

Entity	Rating	Outlook
SJW Group	A-	Negative
SJWC	A	Stable
CTWS	A-	Negative
CWC	A-	Negative

Off-Balance Sheet Arrangement/Contractual Obligations

SJW Group has no significant contractual obligations not fully recorded on its Consolidated Balance Sheet or not fully disclosed in the Notes to Consolidated Financial Statements.

SJW Group's contractual obligations and commitments as of December 31, 2023 are as follows:

		Contractual Obligations Due in			
	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Senior notes, Water Utility Services	$ 680,900	40,900	15,000	15,000	610,000
Bank term loans, Water Utility Services	190,795	4,500	5,000	17,020	164,275
Advances for construction, SJWC (1)	60,975	3,034	5,848	5,520	46,573
California Pollution Control Financing Authority Revenue Bond, SJWC	70,000	—	—	—	70,000
Connecticut Innovations Revenue Bonds, CWC	22,050	—	—	9,550	12,500
State revolving fund loans, MWC	14,239	1,504	2,546	2,396	7,793
Senior notes, SJW Group	560,000	—	—	—	560,000
Bank term loans, CTWS	16,457	2,071	4,405	1,873	8,108
Seller financing debt, TWR (2)	29,000	—	437	1,642	26,921
Total contractual cash obligation	$ 1,644,416	52,009	33,236	53,001	1,506,170
Total interest on contractual obligations	$ 939,978	59,162	116,303	112,963	651,550

(1) As of December 31, 2023, advances for construction were $146,582 of which $55,170 was related to non-refundable advances for construction and $30,437 was related to advances which are refundable based on service connections made.

(2) The timing of payments on the seller financing shown in the table above reflects management's current estimate. The actual timing of payments will be based upon the actual quantities of groundwater produced from the acquired wells.

With regard to uncertain tax positions, we are unable to predict the timing of tax settlements as tax audits can involve complex issues and the resolution of those issues may span multiple years, particularly if subject to negotiation or litigation. For further discussion on uncertain tax positions, please see Note 7 of "Notes to Consolidated Financial Statements."

Water Supply Agreements

SJWC purchases water from Valley Water under terms of a master contract expiring in 2051. Delivery schedules for purchased water are based on a contract year beginning July 1, and are negotiated every three years under terms of the master contract with Valley Water. For the years ended December 31, 2023, 2022 and 2021, SJWC purchased from Valley Water 18.3 billion gallons ($111,173), 18.2 billion gallons ($96,793) and 19.4 billion gallons ($91,938), respectively, of contract water. On June 16, 2022, Valley Water Board of Directors approved treated water deliveries reflecting the contractual delivery schedule reduced by 23% through June 30, 2024. Based on current prices and estimated deliveries, SJWC is committed to purchase from Valley Water a minimum of 90% of the reduced delivery schedule, or 18.9 billion gallons ($121,182) of water at the current contract water rate of $6.41 million per billion gallons in the year ending December 31, 2024. Additionally, SJWC purchases non-contract water from Valley Water on an "as needed" basis if the water supply is available. The contract water rates for SJWC are determined by Valley Water. These rates are adjusted periodically and coincide with Valley Water's fiscal year, which ends on June 30. The contract water rate for Valley Water's fiscal years 2024, 2023 and 2022 was $6.411 million, $5.644 million and $4.953 million per billion gallons, respectively. The contractual cost of the groundwater extraction charge for water pumped from the ground basin was $6.058 million, $5.290 million and $4.600 million per billion gallons for Valley Water's fiscal years 2024, 2023 and 2022, respectively.

SJWC also pumps water from the local groundwater basin. There are no delivery schedules or contractual obligations associated with the purchase of groundwater. Valley Water determines the groundwater extraction charge and it is applied on a per unit basis. In addition to the Valley Water groundwater extraction charge, SJWC also incurs power costs to pump the groundwater from the basin.

CWC has an agreement with the RWA to purchase water. The agreement was signed in April 2006 and became effective upon the receipt of all regulatory approvals in 2008 and will remain in effect for a minimum of fifty years upon becoming effective. CWC will pay RWA $75 per year as part of a capacity agreement, for a total of 14 years, starting on the effective date of the agreement. In addition, CWC has the option, but is under no obligation, to purchase up to one million gallons of water per day at the then current wholesale rates per the agreement ($3.1 million per billion gallons as of December 31, 2023). CWC has an agreement with the MDC to purchase water from MDC to serve the Unionville system. The agreement became effective on October 6, 2000 and has a term of fifty years beginning May 19, 2003, the date the water supply facilities related to the agreement were placed in service. CWC has agreed to purchase 0.28 billion gallons of water annually from MDC. The rate charged by the MDC at December 31, 2023 were three dollars and eighty cents per hundred cubic feet.

MWC has an agreement with the Kennebec Water District for potable water service. The agreement has been in place for 20 years and was extended on November 7, 2020 for a new term of up to 20 years. MWC guarantees a minimum consumption of 50 million gallons of water annually. Water sales to MWC are billed at a wholesale discount of twenty cents per hundred cubic feet of water below Kennebec Water District's tariffed rates. The current tariff rate was one dollar and fifty-one cents per hundred cubic feet as of December 31, 2023.

TWC has long-term contracts with the GBRA. The agreements expire in 2037, 2040, 2044 and 2050. The agreements, which are take-or-pay contracts, provide TWC with 7,650 acre-feet per year of water supply from Canyon Lake. The water rate may be adjusted by GBRA at any time, provided GBRA gives TWC a 60-day written notice on the proposed adjustment. TWC also has raw water supply agreements with the LCRA and WTPUA expiring in 2059 and 2046, respectively, for 350 acre-feet of water per each agreement per year from Lake Austin and the Colorado River, respectively, at prices that may be adjusted periodically by the agencies.

Employee Benefit Arrangements

SJWC and CTWS sponsor noncontributory defined benefit pension plans and provide health care and life insurance benefits for retired employees. In 2023, SJWC and CTWS contributed $11,145 and $920 to the pension plans and other postretirement benefit plans, respectively. In 2024, SJWC and CTWS expect to make required and discretionary cash contributions of up to $8,744 to the pension plans and other postretirement benefit plans. The amount of required contributions for years thereafter is not actuarially determinable.

SJWC's other benefit obligations include employees' and directors' postretirement benefits, an Executive Supplemental Retirement Plan, Cash Balance Executive Supplemental Retirement Plan, Special Deferral Election Plan and Deferral Election Program for non-employee directors. Under these benefit plans, SJWC is committed to pay approximately $1,909 annually to former officers and directors. Future payments may fluctuate depending on the life span of the retirees and as current officers and executives retire.

CTWS's other benefit obligations include employees' postretirement benefits, supplemental executive retirement agreements and deferred compensation agreements and plan. Future payments may fluctuate depending on the contribution rates of employees into the deferred compensation plan and the life span of the retirees and as current officers and executives retire. Under these benefit plans, CTWS is committed to pay approximately $1,678 annually to former officers and directors.

Recently Adopted Accounting Policies and New Accounting Pronouncements

See Note 2 of "Notes to Consolidated Financial Statements" for a discussion of recently adopted accounting policies and new accounting pronouncements for the year ended December 31, 2023.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

SJW Group is subject to market risks in the normal course of business, including changes in interest rates, pension plan asset values, and equity prices. The exposure to changes in interest rates can result from the issuance of debt and short-term funds obtained through the company's variable rate lines of credit. SJW Group's subsidiaries sponsor noncontributory pension and other postretirement plans for its employees. Pension and other postretirement costs and the funded status of the plans may be affected by a number of factors including the discount rate, mortality rates of plan participants, investment returns on plan assets, and pension reform legislation.

SJW Group has no derivative financial instruments, financial instruments with significant off-balance sheet risks, or financial instruments with concentrations of credit risk.

Item 8. ***Financial Statements and Supplementary Data***

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of SJW Group

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of SJW Group and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of comprehensive income, changes in stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2023, and the related notes and the schedules listed in the Index at Item 15 (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Impact of Rate Regulation on the Financial Statements — Refer to Note 3 to the financial statements

Critical Audit Matter Description

The Company is subject to rate regulation by state utility regulatory agencies (the "Commissions"), which have jurisdiction with respect to the rates of the Company's water and wastewater services. Management has determined it meets the requirements under accounting principles generally accepted in the United States of America to prepare its financial statements applying the specialized rules to account for the effects of cost-based rate regulation. Accounting for the economics of rate regulation impacts multiple financial statement line items and disclosures, such as depreciable utility plant; regulatory assets and liabilities; operating revenues; operation and maintenance expense; and depreciation expense.

The Commissions establish rates for the purpose of permitting the recovery of the cost of service and a return on investment. The Company's rates are subject to regulatory ratemaking processes. The Company records deferred costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that these costs and credits will be recognized in the ratemaking process in a period different from when the costs and credits are incurred. Accounting for such costs and credits is based on management's judgment and prior historical ratemaking practices, and it occurs when management determines that it is probable that these costs and credits will be recognized in the future revenue of the Company through the ratemaking process.

We identified the impact of rate regulation as a critical audit matter due to the significant judgments that underlie the Company's financial statement line items and disclosure impacted by rate regulation and the high degree of subjectivity involved in assessing the impact of regulatory decisions on the financial statements. Management judgments include assessing the probability of (1) recovery in future rates of incurred costs and (2) the requirement to refund amounts to customers. Given that management's accounting judgements are based on consideration of evidence, such as regulatory rules and decisions, past practice, and the uncertain outcomes of future regulatory decisions, auditing these judgements required specialized knowledge of accounting for rate regulation and the rate setting process due its inherent complexities and pervasive impact on the financial statements.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the impacts of rate regulation include the following, among others:

- We tested the effectiveness of management's controls over the initial recognition of amounts as utility plant and regulatory assets or liabilities and the evaluation of the probability of (1) the recovery in future rates of costs incurred as utility plant and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We also tested the effectiveness of management's controls over the monitoring and evaluation of regulatory developments that may affect the probability of recovering costs in future rates or of a future reduction in rates, and controls over relevant computations impacting certain regulatory asset or liability balances.
- We read regulatory orders issued by the Commissions to the Company, regulatory statutes, and other publicly available information to evaluate management's determination of the accounting impacts of any new or revised regulatory decisions and their impact on measurement of related regulatory assets and liabilities.
- We obtained supporting documentation from management regarding the evidence, such as regulatory rules and decisions, past practices, and other facts and circumstances, used in the measurement of regulatory assets and liabilities for compliance with the related orders. We reconciled the underlying data or inputs used in the measurement to rate decisions approved by the Commissions and tested the mathematical accuracy of the calculations.
- We obtained an analysis from management regarding probability of recovery for regulatory assets or refund or future reduction in rates for regulatory liabilities not yet addressed in a regulatory order to assess management's assertion that amounts are probable of recovery or a future reduction in rates.

- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded, and regulatory developments, were appropriate and consistent with the information obtained in our procedures.

KT Water Resources Acquisition — Refer to Note 14 to the financial statements

Critical Audit Matter Description

The Company completed the acquisition of KT Water Resources. The Company accounted for the transaction as an asset acquisition and allocated the purchase price paid for the assets acquired and liabilities assumed on a relative fair value basis. Given the significant amount of judgment required by management to estimate the relative fair value of the intangible assets, non-utility property and a production payment received as part of the acquisition, performing audit procedures to test the fair value allocation required a high degree of auditor judgment and increased effort, including involving valuation specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the relative fair value of assets acquired, liabilities assumed and the post-closing payment for KT Water Resources included the following, among others:

- We tested the effectiveness of controls over the allocation of the purchase price to assets acquired, liabilities assumed and the post-closing payment, and controls over the valuation methods used to value the assets and liabilities, including controls over management's evaluation of inputs and assumptions used in the valuation estimates.
- We obtained and evaluated the third-party valuation report and management's valuation, along with relevant supporting documentation, such as the executed purchase and sale agreement.
- With the assistance of our fair value specialists, we (1) evaluated the reasonableness of the valuation methodologies and significant assumptions used by management and their external valuation specialist, including comparing the key inputs to external market sources, (2) evaluated the reasonableness of the discount rates, including testing the source information underlying the determination of the discount rates, assessing the mathematical accuracy of the calculation, and developing a range of independent estimates and comparing those to the discount rates selected by management, and (3) assessed the mathematical accuracy of significant calculations in the valuation schedules.
- We evaluated the reasonableness of certain business assumptions used in the valuation, including the quantities of groundwater to be produced by the wells.

/s/ Deloitte & Touche LLP

San Jose, California

February 22, 2024

We have served as the Company's auditor since 2020.

SJW Group and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	December 31,	
	2023	2022
Assets		
Utility plant:		
Land	$ 41,415	39,982
Depreciable plant and equipment	3,967,911	3,661,285
Construction work in progress	106,980	116,851
Intangible assets	35,946	35,959
Total utility plant	4,152,252	3,854,077
Less accumulated depreciation and amortization	981,598	1,223,760
Net utility plant	3,170,654	2,630,317
Nonutility properties and real estate investments	13,350	58,033
Less accumulated depreciation and amortization	194	17,158
Net nonutility properties and real estate investments	13,156	40,875
Current assets:		
Cash and cash equivalents	9,723	12,344
Accounts receivable:		
Customers, net of allowances for uncollectible accounts of $6,551 and $5,753 in 2023 and 2022, respectively	67,870	59,172
Income tax	5,187	—
Other	3,684	5,560
Accrued unbilled revenue	49,543	45,722
Assets held for sale	40,850	—
Prepaid expenses	11,110	9,753
Current regulatory assets	4,276	19,740
Other current assets	6,146	6,095
Total current assets	198,389	158,386
Other assets:		
Regulatory assets, less current portion	235,910	246,035
Investments	16,411	14,819
Postretirement benefit plans	33,794	16,990
Other intangible asset	28,386	—
Goodwill	640,311	640,311
Other	8,056	7,323
Total other assets	962,868	925,478
Total assets	$ 4,345,067	3,755,056

See Accompanying Notes to Consolidated Financial Statements.

SJW Group and Subsidiaries
CONSOLIDATED BALANCE SHEETS (Continued)
(in thousands, except share and per share data)

	December 31,	
	2023	2022
Capitalization and Liabilities		
Capitalization:		
Stockholders' equity:		
Common stock, $0.001 par value; authorized 70,000,000 shares in 2023 and 2022; issued and outstanding 32,023,004 shares in 2023 and 30,801,912 shares in 2022	$ 32	31
Additional paid-in capital	736,191	651,004
Retained earnings	495,383	458,356
Accumulated other comprehensive income	1,791	1,477
Total stockholders' equity	1,233,397	1,110,868
Long-term debt, less current portion	1,526,699	1,491,965
Total capitalization	2,760,096	2,602,833
Current liabilities:		
Lines of credit	171,500	159,578
Current portion of long-term debt	48,975	4,360
Accrued groundwater extraction charges, purchased water and power	24,479	19,707
Accounts payable	46,121	29,581
Accrued interest	15,816	13,907
Accrued payroll	12,229	11,908
Income tax payable	—	2,696
Current regulatory liabilities	3,059	3,672
Other current liabilities	20,795	22,913
Total current liabilities	342,974	268,322
Deferred income taxes	238,528	218,155
Advances for construction	146,582	137,696
Contributions in aid of construction	326,451	323,668
Postretirement benefit plans	46,836	59,738
Regulatory liabilities, less current portion	461,108	118,760
Other noncurrent liabilities	22,492	25,884
Commitments and contingencies		
Total capitalization and liabilities	$ 4,345,067	3,755,056

See Accompanying Notes to Consolidated Financial Statements.

SJW Group and Subsidiaries
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
Years ended December 31 (in thousands, except share and per share data)

	2023	2022	2021
Operating revenue	$ 670,363	620,698	573,686
Operating expense:			
Production Expenses:			
Purchased water	135,982	122,334	98,231
Power	9,602	8,889	13,511
Groundwater extraction charges	62,980	56,158	75,866
Other production expenses	47,636	45,409	41,475
Total production expenses	256,200	232,790	229,083
Administrative and general	98,656	95,404	87,332
Maintenance	25,729	30,734	26,031
Property taxes and other non-income taxes	34,475	32,572	30,964
Depreciation and amortization	105,868	104,417	94,400
Gain on sale of nonutility properties	—	(6,197)	(7,494)
Impairment of long-lived asset	—	—	2,211
Total operating expense	520,928	489,720	462,527
Operating income	149,435	130,978	111,159
Other (expense) income:			
Interest on long-term debt and other interest expense	(66,144)	(58,062)	(54,339)
Pension non-service (cost) credit	(1,230)	5,023	1,330
Other, net	8,882	4,385	10,697
Income before income taxes	90,943	82,324	68,847
Provision for income taxes	5,956	8,496	8,369
Net income	84,987	73,828	60,478
Other comprehensive income:			
Unrealized gain (loss) on investment, net of taxes of $166 in 2023, $(188) in 2022 and $68 in 2021	530	(511)	185
Adjustment to pension benefit plans, net of taxes of $80 in 2023, $793 in 2022 and $264 in 2021	(216)	2,151	716
Comprehensive income	$ 85,301	75,468	61,379
Earnings per share			
—Basic	$ 2.69	2.44	2.04
—Diluted	$ 2.68	2.43	2.03
Weighted average shares outstanding			
—Basic	31,575,197	30,304,557	29,601,284
—Diluted	31,663,274	30,423,735	29,735,533

See Accompanying Notes to Consolidated Financial Statements.

SJW Group and Subsidiaries

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

(in thousands, except share and per share data)

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Number of Shares	Amount				
Balances, December 31, 2020	28,556,605	$ 29	510,158	408,037	(1,064)	917,160
Net income	—	—	—	60,478	—	60,478
Unrealized income on investment, net of tax effect of $68	—	—	—	—	185	185
Adjustment to pension benefit plans, net of taxes of $264	—	—	—	—	716	716
Share-based compensation	—	—	4,246	(118)	—	4,128
Issuance of restricted and deferred stock units	49,824	—	(1,066)	—	—	(1,066)
Employee stock purchase plan	35,304	—	2,026	—	—	2,026
Common stock issuance, net of costs	1,539,615	1	91,028			91,029
Dividends paid ($1.36 per share)	—	—	—	(40,137)	—	(40,137)
Balances, December 31, 2021	30,181,348	30	606,392	428,260	(163)	1,034,519
Net income	—	—	—	73,828	—	73,828
Unrealized loss on investment, net of tax effect of $(188)	—	—	—	—	(511)	(511)
Adjustment to pension benefit plans, net of taxes of $793	—	—	—	—	2,151	2,151
Share-based compensation	—	—	4,791	(150)	—	4,641
Issuance of restricted and deferred stock units	54,243	—	(1,354)	—	—	(1,354)
Employee stock purchase plan	36,585	—	2,091	—	—	2,091
Common stock issuance, net of costs	529,736	1	39,084	—	—	39,085
Dividends paid ($1.44 per share)	—	—	—	(43,582)	—	(43,582)
Balances, December 31, 2022	30,801,912	31	651,004	458,356	1,477	1,110,868
Net income	—	—	—	84,987	—	84,987
Unrealized gain on investment, net of tax effect of $166	—	—	—	—	530	530
Adjustment to pension benefit plans, net of taxes of $80	—	—	—	—	(216)	(216)
Share-based compensation	—	—	4,647	(55)	—	4,592
Issuance of restricted and deferred stock units	67,164	—	(2,259)	—	—	(2,259)
Employee stock purchase plan	34,122	—	2,141	—	—	2,141
Common stock issuance, net of costs	1,119,806	1	80,658	—	—	80,659
Dividends paid ($1.52 per share)	—	—	—	(47,905)	—	(47,905)
Balances, December 31, 2023	32,023,004	$ 32	736,191	495,383	1,791	1,233,397

See Accompanying Notes to Consolidated Financial Statements.

SJW Group and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
Years ended December 31 (in thousands)

	2023	2022	2021
Operating activities:			
Net income	$ 84,987	73,828	60,478
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	108,138	106,439	96,474
Deferred income taxes	(8,510)	(3,244)	(2,851)
Stock-based compensation	4,647	4,791	4,246
Allowance for equity funds used during construction	(2,114)	(1,551)	(1,926)
Impairment of long-lived asset	—	—	2,211
Gain on sale of nonutility properties and other assets	—	(6,197)	(11,421)
Changes in operating assets and liabilities, net of acquired assets and liabilities:			
Accounts receivable and accrued unbilled revenue	(10,869)	(8,222)	(5,931)
Accounts payable and other current liabilities	492	(1,388)	4,843
Accrued groundwater extraction charges, purchased water and power	4,772	2,507	(1,984)
Tax receivable and payable, and other accrued taxes	(22,415)	(11,954)	(6,416)
Postretirement benefits	(1,549)	(7,108)	(4,312)
Regulatory assets and liabilities excluding income tax temporary differences and postretirement benefits	12,278	1,714	(14,629)
Other noncurrent assets and liabilities	20,756	17,923	13,381
Other changes, net	218	(1,339)	(2,123)
Net cash provided by operating activities	190,831	166,199	130,040
Investing activities:			
Additions to utility plant:			
Company-funded	(271,772)	(218,784)	(233,933)
Contributions in aid of construction	(16,855)	(22,935)	(17,096)
Additions to nonutility assets and real estate investments	(24,244)	(631)	(826)
Payments for business acquisitions	(7,537)	(433)	(23,587)
Cost to retire utility plant, net of salvage	(2,097)	(2,520)	(2,781)
Proceeds from sale of assets	—	975	18,228
Other changes, net	233	—	—
Net cash used in investing activities	(322,272)	(244,328)	(259,995)
Financing activities:			
Borrowings from lines of credit	146,415	158,779	96,625
Repayments of lines of credit	(134,493)	(62,197)	(208,722)
Long-term borrowings	70,000	55,000	247,000
Repayments of long-term borrowings	(4,347)	(89,177)	(76,113)
Dividends paid	(47,905)	(43,582)	(40,137)
Receipts of advances and contributions in aid of construction	22,425	23,820	26,438
Refunds of advances for construction	(2,763)	(2,859)	(2,852)
Issuance of common stock, net of issuance costs	80,659	39,085	91,028
Other changes, net	(1,171)	(515)	(462)
Net cash provided by financing activities	128,820	78,354	132,805
Net change in cash, cash equivalents and restricted cash	(2,621)	225	2,850
Cash, cash equivalents and restricted cash, beginning of year	12,344	12,119	9,269
Cash, cash equivalents and restricted cash, end of year	9,723	12,344	12,119
Less restricted cash, end of year	—	—	1,211
Cash and cash equivalents, end of year	$ 9,723	12,344	10,908
Cash paid during the year for:			
Interest	$ 67,508	63,677	58,175
Income taxes	$ 23,020	6,853	8,466
Supplemental disclosure of non-cash activities:			
Accrued payables for additions to utility plant	$ 35,904	22,561	20,579
Utility property installed by developers	$ 3,341	2,433	2,659
Seller financing in asset acquisition, net of discount	$ 15,400	—	—

See Accompanying Notes to Consolidated Financial Statements.

SJW GROUP AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Years ended December 31, 2023, 2022 and 2021
(Dollars in thousands, except share and per share data and where otherwise noted)

Note 1. Organization and Operations

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of SJW Group, its wholly owned subsidiaries, and one variable interest entity in which one SJW Group subsidiary is the primary beneficiary. All intercompany transactions and balances have been eliminated in consolidation. The accounting policies of SJW Group's subsidiaries comply with the applicable uniform system of accounts prescribed by the respective regulators and conform to generally accepted accounting principles for rate-regulated public utilities.

SJW Group is a holding company of San Jose Water Company ("SJWC"), SJWTX Holdings, Inc., SJW Land Company, and SJWNE LLC. SJWNE LLC is a special purpose entity holding company for Connecticut Water Service, Inc. ("CTWS") (and its wholly owned subsidiaries, The Connecticut Water Company ("CWC"), The Maine Water Company ("MWC"), Chester Realty, Inc. and New England Water Utility Services, Inc. ("NEWUS"). SJW Group, through its wholly owned subsidiaries, primarily provides water utility and other related services in California, Connecticut, Maine and Texas. SJW Group has business in property management and real estate investment activity conducted by SJW Land Company and Chester Realty, Inc.

In the third quarter of 2023, the corporate reorganization of our water services organization in Texas was completed. SJWTX Holdings, Inc. is the holding company for SJWTX, Inc., doing business as The Texas Water Company ("TWC"), Texas Water Operation Services, LLC ("TWOS") and Texas Water Resources, LLC ("TWR"). TWC is a public utility in the business of providing water service in Bandera, Blanco, Comal, Hays, Kendall, Medina and Travis Counties in the growing region between San Antonio and Austin, Texas. TWC additionally provides wastewater service in Comal and Kendall counties. TWC also holds a 25% equity interest in Acequia Water Supply Corporation ("Acequia"). Acequia has been determined to be a variable interest entity within the scope of Accounting Standards Codification ("ASC") Topic 810—"Consolidation" with TWC as the primary beneficiary. As a result, Acequia has been consolidated with TWC. TWOS was created for non-tariffed service operations and TWR was formed to hold wholesale water supply assets.

Water sales are seasonal in nature and influenced by weather conditions. The timing of precipitation and climatic conditions can cause seasonal water consumption by customers to vary significantly. Revenue is generally higher in the warm, dry summer months when water usage and sales are greater and lower in the winter months when cooler temperatures and increased rainfall curtail water usage and sales.

Note 2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Depreciable Utility Plant and Equipment

The major components of depreciable plant and equipment as of December 31, 2023 and 2022 are as follows:

	2023	2022
Source of supply	$ 207,537	191,082
Pumping plant	284,308	269,246
Water treatment plant	354,617	327,492
Transmission and distribution plant	2,820,358	2,615,640
General plant	301,091	257,825
Total depreciable plant and equipment	$ 3,967,911	3,661,285

Depreciation is computed using the straight-line method over the estimated remaining service lives of groups of assets. The estimated service lives of depreciable plant and equipment are as follows:

	Useful Lives
Source of supply	20 to 100 years
Pumping plant	5 to 70 years
Water treatment plant	5 to 50 years
Transmission and distribution plant	10 to 100 years
General plant	4 to 61 years

For the years 2023, 2022 and 2021, depreciation expense as a percent of the beginning of the year balance of depreciable plant was 2.9%, 3.3% and 3.2%, respectively. Depreciation expense for utility plant for the years ended December 31, 2023, 2022 and 2021 was $104,325, $99,413 and $91,906, respectively. The cost of utility plant retired (less salvage) is charged to accumulated depreciation and no gain or loss is recognized. To the extent SJW Group recovers retirement costs through rates during the life of the associated asset and before the costs are incurred, these amounts result in a regulatory liability being reported based on the amounts previously recovered through customer rates until the costs to retire those assets are incurred.

Allowance For Funds Used During Construction ("AFUDC")

AFUDC represents the capitalized costs of borrowed funds or a return on equity funds used to finance utility plant under construction and is capitalized as part of construction work in progress. AFUDC is recorded to the extent approved by the respective states' utility regulators and is recovered through water rates as the utility plant depreciates. The amount of AFUDC debt capitalized in 2023, 2022 and 2021 was $2,900, $4,703 and $4,422, respectively. Interest on long-term debt is presented net of AFUDC debt capitalized on the Consolidated Statement of Comprehensive Income. The amount of AFUDC equity capitalized in 2023, 2022 and 2021 was $2,114, $1,551 and $1,926, respectively, reflected in "Other, net" on the Consolidated Statement of Comprehensive Income.

Intangible Assets

Finite-lived intangible assets are recorded at cost and are amortized using the straight-line method over the estimated useful life of the asset, ranging from 5 to 70 years. Indefinite-lived intangibles assets are not amortized, but instead are tested for impairment annually, or more frequently if events or changes in circumstances indicate that it is more likely than not that the asset is impaired. (see Note 8, "Intangible Assets").

Nonutility Properties and Real Estate Investments

Nonutility properties and real estate investments are recorded at cost and consist primarily of land and buildings. Net gains and losses from the sale of nonutility properties and real estate investments are recorded as a component of other (expense) income and operating expense, respectively, in the Consolidated Statements of Comprehensive Income. Nonutility property is property that is neither used nor useful in providing water utility services to customers and is excluded from rate base for rate-setting purposes. SJWC recognizes gain or loss on the disposition of nonutility property in accordance with California Public Utilities Commission ("CPUC") Code Section 790, whereby the net proceeds are reinvested back into property that is useful in providing water utility services to customers. CTWS and TWC do not have regulatory restrictions on the use of proceeds from the sale of nonutility property. There is no depreciation associated with Water Utility Services nonutility property as it is all undeveloped land.

The major components of nonutility properties and real estate investments are as follows as of December 31:

	2023	2022
Land	$ 4,137	12,615
Wholesale water supply assets	8,465	—
Buildings and improvements	748	45,418
Subtotal	13,350	58,033
Less: accumulated depreciation and amortization	194	17,158
Total	$ 13,156	40,875

Depreciation on buildings and improvements for real estate investments is computed using the straight-line method over the estimated useful lives of the assets, ranging from 7 to 39 years.

In March 2023, SJW Land Company entered into a broker agreement to sell its warehouse buildings and land property located in Knoxville, Tennessee. The company reclassified the Tennessee properties from held-and-used to held-for-sale at March 31, 2023. The Company's intention is to complete the sale of these assets within a twelve-month period. The company records the Tennessee properties at the lower of their carrying value or estimated fair value less cost to sell, and also stopped recording depreciation on assets held for sale. SJW Group's broker provides the estimated fair value of the Tennessee properties. No impairment has been recorded as the estimated fair value less cost to sell exceeds carrying value. The property is classified as part of the Real Estate Services reportable segment.

The sale of the Tennessee properties does not represent a strategic shift that has or will have a major effect on SJW Group; therefore, the sale does not qualify for treatment as a discontinued operation.

The following represents the major components of the Tennessee warehouse building and land property recorded in assets held-for-sale on the Consolidated Balance Sheets as of December 31, 2023:

	2023
Land	$ 13,170
Buildings and improvements	44,950
Subtotal	58,120
Less: accumulated depreciation and amortization	17,270
Total	$ 40,850

On October 29, 2021, SJWC sold two nonutility properties located in San Jose, California for $13,150. For the year ended December 31, 2022, SJW Group recognized the pre-tax gain on the sale of nonutility properties of $7,230, after selling expenses of $277 for one of the properties sold, and a gain of $5,442 which was deferred in 2021 pending the CPUC review. On February 15, 2022, the CPUC review was complete and SJWC recognized the deferred gain on sale of nonutility property in 2022.

A former wholly owned subsidiary of SJW Group, Texas Water Alliance, was sold to Guadalupe-Blanco River Authority ("GBRA") in 2017. The sales agreement with GBRA included a holdback amount of $3,000 to be paid to SJW Group on June 30, 2021, subject to reduction under certain conditions. SJW Group received the holdback amount without reduction from the GBRA on June 29, 2021 and recognized a pre-tax gain on sale of $3,000.

Also, on October 29, 2021, SJW Land sold undeveloped land located in San Jose, California for $2,600. SJW Group recognized a pre-tax gain on the sale of real estate investments of $927, after selling expenses of $121.

The following schedule shows the future minimum rental payments to be received from third parties under operating leases that have remaining noncancelable lease terms in excess of one year as of December 31, 2023:

Year ending December 31:	Rental Revenue
2024	$ 4,758
2025	5,063
2026	5,290
2027	3,990
2028	1,679
Thereafter	—

Business Combinations and Asset Acquisitions

SJW Group applies the provisions of Financial Accounting Standards Board ("FASB") ASC Topic 805— "Business Combinations" for the accounting related to business and asset acquisitions. First, SJW Group applies the guidance in Topic 805 to determine whether a transaction represents a business combination or an acquisition of assets. If the transaction is a business combination, Topic 805 requires SJW Group to recognize separately from goodwill the assets acquired and the liabilities assumed at the acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. If the transaction is an acquisition of assets, the cost of the transaction, including transaction costs, is allocated to the individual assets acquired and liabilities assumed on a relative fair value basis without recognition of goodwill. While SJW Group uses best available estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, such estimates are inherently uncertain and subject to refinement. For business combinations, Topic 805 provides for a measurement

period from the acquisition date of up to one year, during which we may record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to our Consolidated Statements of Comprehensive Income. Accounting for business combinations and asset acquisitions requires SJW Group to make significant estimates and assumptions, especially at the acquisition date, including estimates for intangible assets, contractual obligations assumed and pre-acquisition contingencies. Although SJW Group believes that the assumptions and estimates we make are reasonable and appropriate, they are based in part on historical experience and information obtained from the acquired company's management and are inherently uncertain. Events and circumstances may occur that may affect the accuracy or validity of such assumptions, estimates or actual results. Examples of critical estimates in valuing certain of the intangible assets we have acquired include, but are not limited to: future expected cash flows from services; historical and expected customer attrition rates and anticipated growth in revenue from acquired customers; the expected use of the acquired assets; and discount rates. See Note 14, "Acquisitions" for further information on business combinations and asset acquisitions.

Impairment of Long-Lived Assets and Goodwill

In accordance with the requirements of FASB ASC Topic 360—"Property, Plant and Equipment," the long-lived assets of SJW Group, including property, plant and equipment and finite-lived intangible assets, are reviewed for impairment when changes in circumstances or events indicate that the carrying amount of the assets may not be recoverable. In assessing qualitative factors, SJW Group considers the impact of these key factors: change in industry and competitive environment, financial performance, and other relevant company-specific events. When such changes in circumstances or events occur, the company assesses recoverability by determining whether the carrying value of such assets will be recovered through the undiscounted expected future cash flows. To the extent an impairment exists, the asset is written down to its estimated fair value with a corresponding charge to operations in the period in which the impairment is identified. No impairments occurred during 2023 and 2022. During the year ended December 31, 2021, SJW Group determined that an implementation project for a customer care billing system at TWC will no longer be pursued and accordingly wrote-off $2,211 of accumulated costs for the project that were previously recorded as construction work in progress on the Consolidated Balance Sheets.

Goodwill is not amortized but is tested for impairment annually on October 1st or more frequently if an event occurs or circumstances change that would more likely than not, reduce the fair value of a reporting unit below its carrying amount. Indefinite-lived intangible assets, other than goodwill, are not amortized but are tested for impairment annually on October 1st or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of indefinite-lived intangible assets below their carrying amount. In performing impairment tests of goodwill and indefinite-lived intangible assets, SJW Group first performs a qualitative assessment to determine whether it is necessary to perform the quantitative impairment test. In assessing the qualitative factors, SJW Group considers the impact of these key factors: change in industry and competitive environment, financial performance, macroeconomic conditions, and other relevant Company-specific events. If SJW Group determines that as a result of the qualitative assessment it is more likely than not (> 50% likelihood) that the fair value is less than carrying amount, then a quantitative test is performed. As of October 1, 2023, SJW Group performed qualitative assessments of both goodwill and indefinite-lived intangible assets and found no indicators of impairment and therefore did not perform quantitative impairment tests. No impairments of goodwill or indefinite-lived intangible assets occurred during 2023, 2022 or 2021.

Cash and Cash Equivalents

Cash and cash equivalents primarily consisted of cash on deposit with banks and short-term, highly liquid investments with original maturities of three months or less. Restricted funds consisted of proceeds from state revolving fund bond issuances to MWC of $4,000 on December 23, 2020, for capital expenditures. Proceeds were held by a trustee for the bonds and released when the funding conditions were met. As of December 31, 2021, $2,789 of the proceeds from the December 23, 2020, bond were released by the trustee, and the balance of $1,211 was released during the year ended December 31, 2022.

Accounts Receivable

Accounts receivable are recorded at the invoiced amounts. The allowance for uncollectible accounts is SJW Group's best estimate of credit losses in its existing accounts receivable and is determined based on current expected losses. The estimate is based on historical loss information adjusted for current conditions. Accounts balances are written off against the allowance when it is probable the receivable will not be recovered or is over a certain number of days outstanding.

Financial Instruments and Investments

The following instruments are not measured at fair value on the company's Consolidated Balance Sheets but require disclosure of fair values: cash and cash equivalents, accounts receivable, accounts payable, and lines of credit. The estimated fair value of such instruments approximates their carrying value as reported on the Consolidated Balance Sheets. The fair value of such

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financial instruments are determined using the income approach based on the present value of estimated future cash flows. The fair value of these instruments would be categorized as Level 2 in the fair value hierarchy, with the exception of cash and cash equivalents, which would be categorized as Level 1. The fair value of long-term debt is discussed in Note 6, "Long-Term Debt" and pension plan assets in Note 11, "Benefit Plans."

SJW Group has investments in company owned life insurance which are valued at cash surrender value of the policies as reported by the insurer. The value of these contracts is based principally on a referenced pool of investment funds that actively redeem shares, are observable and measurable, and are presented in "Investments" on SJW Group's Consolidated Balance Sheets. As of December 31, 2023 and 2022, the value of the company owned life insurance was $8,220 and $7,342, respectively, of which $3,937 and $3,420, respectively, was related to assets to fund CTWS' supplemental retirement plan agreements. See discussion on pension plans in Note 11, "Benefit Plans."

Income Taxes

Income taxes are accounted for using the asset and liability method. Deferred tax assets and liabilities are recognized for the effect of temporary differences between financial and tax reporting. Deferred tax assets and liabilities are measured using current tax rates in effect. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date.

To the extent permitted by the regulators, investment tax credits resulting from public utility plant additions are deferred and amortized over the estimated useful lives of the related property. In addition, investment tax credits resulting from other asset additions are recognized in the year the property is put in service.

Advances for Construction and Contributions in Aid of Construction

In California, advances for construction received after 1981 are primarily refunded ratably over 40 years. In Connecticut and Maine, advances for construction are refunded as services are connected to the main, over periods not exceeding 15 years and in Texas advances for construction are non-refundable. Estimated refunds for the next five years and thereafter are shown below:

	Estimated Refunds
2024	$ 3,034
2025	2,970
2026	2,878
2027	2,793
2028	2,726
Thereafter	46,574

As of December 31, 2023, advances for construction were $146,582 of which $55,170 was related to non-refundable advances for construction and $30,437 was related to advances which are refunded based on service connections made. As of December 31, 2023 and 2022, the fair value of the advances for construction refunded ratably over 40 years is $40,915 and $44,715, respectively.

Contributions in aid of construction represent funds or property received from developers that are not refundable under applicable regulations. Depreciation applicable to utility plant constructed with these contributions is charged to contributions in aid of construction.

Customer advances and contributions in aid of construction received subsequent to 1986 and prior to June 12, 1996, generally must be included in federal taxable income, except for CTWS. Taxes paid relating to advances and contributions are recorded as deferred tax assets for financial reporting purposes and are amortized over 40 years for advances and over the tax depreciable life of the related asset for contributions. Receipts subsequent to June 12, 1996, are generally exempt from federal taxable income, unless specifically prescribed under treasury regulations, including CTWS.

Advances and contributions received subsequent to 1991 and prior to 1997 are included in state taxable income, except for CTWS.

Asset Retirement Obligation

SJW Group's asset retirement obligation is recorded as a liability included in other non-current liabilities. It reflects principally the retirement costs of wells and other anticipated clean-up costs, which by law, must be remediated upon retirement.

As of December 31, 2023 and 2022, the asset retirement obligation is as follows:

	2023	2022
Estimated future retirement costs	$ 4,198	4,426
Discount rate	6 %	6 %
Retirement obligation, present value	$ 862	920

Revenue

SJW Group recognizes revenue under ASC Topic 606—"Revenue from Contracts with Customers" for metered revenue of Water Utility Services, which includes billings to customers based on meter readings plus an estimate of water used between the customers' last meter reading and the end of the accounting period. SJW Group satisfies its performance obligation upon delivery of water to the customer at which time the customer consumes the benefits provided by the company. The customer is generally billed on a quarterly, monthly, or bi-monthly basis after water delivery has occurred. The customer is charged both a service charge which is based upon meter size and covers a portion of the fixed costs of furnishing water to the customer and a consumption charge based on actual water usage. Unbilled revenue from the last meter reading date to the end of the accounting period is estimated based on the most recent usage patterns, production records and the effective tariff rates. As the company has the right to bill for services that it has provided, SJW Group estimates the dollar value of deliveries during the unbilled period and recognizes the associated revenue. Actual results could differ from those estimates, which may result in an adjustment to revenue when billed in a subsequent period.

SJW Group also recognizes revenue under ASC Topic 980-605-25—"Alternative Revenue Programs." Under programs established by the CPUC and Public Utilities Regulatory Authority of Connecticut ("PURA"), allowing for automatic adjustment of future rates, the company recognizes revenue when it is objectively determinable, probable of recovery and expected to be collected within 24 months of the year-end in which the revenue is recognized. A reserve, based on an estimate of actual usage over the recovery period, is recorded for any amounts SJW Group estimates will not be collected within the 24-month period. SJW Group's alternative revenue programs include SJWC's Water Conservation Memorandum Account ("WCMA") and CTWS's Water Rate Adjustment mechanism ("WRA"). See further discussion on WCMA and WRA in Note 3, "Regulatory Matters."

SJW Group's revenues also reflect the impact of other balancing and memorandum accounts and other regulatory mechanisms that are accounted for under FASB ASC Topic 980—"Regulated Operations." Balancing and memorandum accounts are recognized when it is probable that future recovery of previously incurred costs or future refunds that are to be credited to customers will occur through the ratemaking process. See further discussion in Note 3, "Regulatory Matters."

SJW Group also recognizes revenue from rental income, which represents lease rental income. Tenants pay monthly in accordance with lease agreements and SJW Group recognizes the income ratably over the lease term as this is the most representative of the pattern in which the benefit is expected to be derived from SJW Group's underlying asset.

Detail of SJW Group's revenue is as follows for the years ended December 31:

	2023	2022	2021
Revenue from contracts with customers	$ 678,168	586,918	559,568
Alternative revenue programs, net	3,634	(1,312)	5,304
Other balancing and memorandum accounts and regulatory mechanisms, net	(17,123)	29,487	3,435
Rental income	5,684	5,605	5,379
	$ 670,363	620,698	573,686

Revenue also includes a surcharge collected from regulated customers that is paid to the CPUC. This surcharge is recorded both in operating revenues and administrative and general expenses. For the years ended December 31, 2023, 2022 and 2021, the surcharge was $4,085, $6,121 and $5,691, respectively.

Share-Based Compensation

SJW Group calculates the fair value of service-based and performance-based restricted stock awards based on the grant date fair value of the company's stock price reduced by the present value of the dividends expected to be declared on outstanding shares.

SJW Group utilizes the Monte Carlo valuation model, which requires the use of subjective assumptions, to compute the fair value of market-vesting restricted stock units.

The compensation cost for service-based restricted stock awards are charged to income on a straight-line basis over the requisite service period, which is the vesting period. For performance-based stock awards, compensation expense is charged to income on a straight-line basis over the requisite service period based on expected attainment of performance targets. Changes in the estimates of the expected attainment of performance targets will result in a change in the number of shares that are expected to vest which may cause a cumulative catch up for the amount of share-based compensation expense during each reporting period in which such estimates are altered. Forfeitures are accounted for as they occur.

Earnings per Share

Basic earnings per share is calculated using income available to common stockholders, divided by the weighted average number of shares outstanding during the period. Diluted earnings per share is calculated using income available to common stockholders divided by the weighted average number of shares of common stock including both shares outstanding and shares potentially issuable in connection with restricted common stock awards under SJW Group's long-term incentive plans, shares potentially issuable under the performance stock plans assumed through the business combination with CTWS, and shares potentially issuable under SJW Group's employee stock purchase plans. Restricted common stock units of 14,193, 25,127 and 16,347 as of December 31, 2023, 2022 and 2021, respectively, were excluded from the dilutive earnings per share calculation as their effect would have been anti-dilutive.

Reclassifications

Certain reclassifications have been made to prior periods in the Consolidated Financial Statements and Notes to conform to the current presentation.

New Accounting Standards

In November 2023, the FASB issued Accounting Standards Update ("ASU") 2023-07, "Improvements to Reportable Segment Disclosures." ("ASU 2023-07"). Among other changes, the ASU requires disclosure of significant segment expenses and extends certain annual disclosures to interim periods. The ASU is effective for SJW Group beginning with its annual financial statements for the year ending December 31, 2024. Early adoption is permitted. SJW Group is currently evaluating the requirements of ASU 2023-07.

In December 2023, the FASB issued ASU 2023-09, "Improvements to Income Tax Disclosures." The ASU amends certain income tax disclosure requirements, including adding requirements to present the reconciliation of income tax expense computed at the statutory rate to actual income tax expense using both percentages and amounts and providing a disaggregation of income taxes paid. Further, certain disclosures are eliminated, including the current requirement to disclose information on changes in unrecognized tax benefits in the next 12 months. The ASU is effective for SJW Group beginning with its annual financial statements for the year ending December 31, 2025. Early adoption is permitted. SJW Group is currently evaluating the requirements of ASU 2023-09.

Note 3. Regulatory Matters

Regulation

Water Utility Services, excluding non-tariffed activities, are subject to rate regulation based on cost recovery and meets the criteria of accounting guidance for rate-regulated operations under ASC Topic 980, which affects the timing of the recognition of certain revenues and expenses. SJW Group's consolidated financial statements reflect the actions of regulators in the rate-making process. The rate-making process is intended to provide revenues sufficient to recover normal operating expenses, provide funds for replacement of water infrastructure and produce a fair and reasonable return on stockholder common equity.

Water Utility Services, excluding non-tariffed activities, recognizes regulatory assets for incurred costs that are deemed probable of recovery from customers. Also, Water Utility Services recognizes regulatory liabilities for amounts expected to be refunded to customers in the rate-making process and for amounts collected in advance of the related expenditures. Regulatory assets or liabilities are also recognized for special revenue programs such as WCMA and WRA in accordance with guidance on alternative revenue programs under ASC Topic 980. Application of ASC 980, including determining whether recovery is probable, requires significant judgment by management and includes assessing evidence that may exist prior to regulatory authorization, including regulatory rules and decisions, historical ratemaking practices, and other facts and circumstances that would indicate that recovery or refund is probable.

If the regulated utility determines that it is no longer probable that regulatory assets or liabilities would be recovered or refunded through the regulatory process, or if the utility ceased to be subject to rate regulation, the affected regulatory assets and liabilities would be derecognized with a corresponding adjustment to income in the period in which that determination was made.

SJWC has established balancing accounts for the purpose of tracking the under-collection or over-collection associated with expense changes and the revenue authorized by the CPUC to offset those expense changes. In 2022, SJWC's general rate case decision approved the use of the Full Cost Balancing Account to track the water supply costs and energy consumption. The Monterey Water Revenue Adjustment ("MWRAM") balancing account tracks the difference between the revenue received for actual metered sales through the tiered volumetric rate and the revenue that would have been received with the same actual metered sales if a uniform rate would have been in effect.

SJWC also maintains memorandum accounts to track impacts due to catastrophic events, certain unforeseen water quality expenses related to new federal and state water quality standards, energy efficiency, water conservation, water tariffs, and other approved activities or as directed by the CPUC. The WCMA allows SJWC to track lost revenue, net of related water costs, associated with reduced sales due to water conservation and associated calls for water use reduction. SJWC records the lost revenue captured in the WCMA balancing accounts. Applicable drought surcharges collected are used to offset the revenue losses tracked in the WCMA. Mandatory water conservation requirements from Santa Clara Valley Water District ("Valley Water") ended on April 11, 2023, which also ended SJWC's Mandatory Conservation Plan, that included drought allocations and surcharges. On October 2, 2023, the CPUC approved the continuation of WCMA and Water Conservation Expense Memorandum Account under the voluntary call for conservation effective April 20, 2023. All balancing accounts and memorandum accounts not included for recovery or refund in current customer rates will be reviewed by the CPUC in SJWC's next general rate case or at the time an individual account balance reaches a threshold of 2% of authorized revenue, whichever occurs first.

CWC has been authorized by PURA to utilize WRA, a decoupling mechanism, to mitigate risks associated with changes in demand. The WRA is used to reconcile actual water demands with the demands projected in the most recent general rate case and allows the company to implement a surcharge or sur-credit as necessary to recover or refund the revenues approved in the general rate case. The WRA allows the company to defer, as a regulatory asset or liability, the amount by which actual revenues deviate from the revenues allowed in the most recent general rate proceedings.

As of December 31, 2023 and 2022, SJW Group's regulatory assets not earning a return primarily included unrecognized pensions and other postretirement benefits and business combinations debt premium. The total amount of regulatory assets not earning a return at December 31, 2023 and 2022, either by interest on the regulatory asset or as a component of rate base at the allowed rate of return was $43,141 and $66,373, respectively.

Regulatory Assets and Liabilities

Regulatory assets and liabilities are comprised of the following as of December 31:

	2023	2022
Regulatory assets:		
Income tax temporary differences (a)	$ 157,669	137,860
Unrecognized pensions and other postretirement benefits (b)	24,593	45,799
Business combinations debt premium (c)	14,855	17,396
Employee benefit costs (d)	9,815	8,068
MWRAM (e)	9,361	10,864
Customer Assistance Program ("CAP") balancing account (f)	5,457	3,417
Catastrophic event memorandum accounts ("CEMA") (g)	4,819	3,485
2022 general rate case interim memorandum account (h)	4,571	20,650
Water supply costs (i)	583	9,873
Other (j)	8,463	8,363
Total regulatory assets	240,186	265,775
Less: current regulatory asset (k)	4,276	19,740
Total regulatory assets, less current portion	$ 235,910	246,035
Regulatory liabilities:		
Cost of removal (l)	$ 346,418	—
Future income tax benefits due to customers (m)	88,610	94,426
Unrecognized pensions and other postretirement benefits (b)	20,196	14,307
Revenue adjustment mechanisms (n)	5,536	9,528
Other (o)	3,407	4,171
Total regulatory liabilities	464,167	122,432
Less: current regulatory liabilities (p)	3,059	3,672
Total regulatory liabilities, less current portion	$ 461,108	118,760

(a) Consists primarily of temporary income tax differences that are flowed through to customers, which will be recovered in future rates as these temporary differences reverse. The company expects to recover regulatory assets related to plant depreciation income tax temporary differences over the lives of the plant assets, which are between 4 to 100 years.

(b) Represents actuarial losses and gains and prior service cost that have not yet been recognized as components of net periodic benefit cost for certain pension and other postretirement benefit plans.

(c) Consists of debt fair value adjustments recognized through purchase accounting for the completed merger with CTWS in 2019.

(d) Includes deferrals of pension and other postretirement benefit expense and cost of accrued benefits for vacation.

(e) MWRAM is described in the previous section.

(f) Represents costs associated with SJWC's CAP.

(g) Primarily related to increased bad debt expenses associated with SJWC's response to COVID-19. The CPUC has authorized water utilities to activate CEMA accounts in order to track savings and costs related to SJWC's response to catastrophic events, which includes external labor and materials, increases in bad debt from suspension of shutoffs for non-payment, waived deposits and reconnection fees, and divergence from actual versus authorized usage.

(h) Represents the difference between revenues collected in interim rates in effect as of January 1, 2022 and revenues that would result from rates authorized in SJWC's 2022 general rate case retroactive to January 1, 2022.

(i) Reflects differences in actual water supply costs compared to amounts assumed in setting rates, including applicable changes and variations in costs and quantities that affect the overall mix of the water supply.

(j) Other includes other balancing and memorandum accounts and regulatory mechanisms, deferred costs for certain information technology activities, asset retirement obligations and rate case expenses.

(k) As of December 31, 2023, primarily relates to MWRAM. As of December 31, 2022, primarily relates to the 2022 general rate case interim memorandum account.

(l) Represents amounts collected in rates from customers for estimated costs to retire assets at the end of their expected useful lives before the costs are incurred. During 2023, the Company completed a new depreciation study and as of December 31, 2023, recorded a classification adjustment of $346,418 as cost of removal regulatory liabilities. As of December 31, 2022, cost of removal regulatory liabilities of $316,647 are included in net utility plant - accumulated depreciation and amortization. Management has concluded a classification adjustment to the prior year balance sheet is not necessary because the impact is immaterial.

(m) On December 22, 2017 the Tax Act was signed into law. The Tax Act included a reduction in the federal income tax rate from 35% to 21%. The rate reduction was effective on January 1, 2018 and resulted in a regulatory liability for the excess deferred income taxes. The benefit of amortization of excess deferred income taxes flows back to the customers under current normalization rules and agreed upon methods with the commissions.

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(n) Consists of WRA and WCMA, which are described in the previous section.
(o) Other includes other balancing and memorandum accounts, other regulatory mechanisms and accrued tank painting costs.
(p) As of December 31, 2023 and 2022, primarily relates to WRA.

Note 4. Capitalization

SJW Group is authorized to issue 70,000,000 shares of common stock of $0.001 par value per share. At December 31, 2023 and 2022, 32,023,004 and 30,801,912, respectively, shares of common stock were issued and outstanding.

As of December 31, 2023 and 2022, 1,000,000 shares of preferred stock of $0.001 par value per share were authorized for SJW Group. At December 31, 2023 and 2022, no shares of preferred stock were issued or outstanding.

In March 2023, SJW Group entered into Amendment No. 1 to the equity distribution agreement (the "Equity Distribution Agreement"), dated November 17, 2021, between SJW Group and J.P. Morgan Securities LLC, Janney Montgomery Scott LLC, RBC Capital Markets, LLC and Wells Fargo Securities, LLC, pursuant to which the company may offer and sell shares of its common stock, $0.001 par value per share, from time to time in "at-the-market" offerings, having an aggregate gross sales price of up to $240,000. For the year ended December 31, 2023, SJW Group issued and sold a total of 1,119,806 shares of common stock with a weighted average price of $73.68 per share and received $80,659 in net proceeds under the Equity Distribution Agreement. Since the inception of the Equity Distribution Agreement, SJW Group has issued and sold 2,004,657 shares of common stock with a weighted average price of $73.57 for a total net proceeds of $143,998 and has a remaining $92,509 under the Equity Distribution Agreement to issue into shares.

On March 8, 2021, SJW Group entered into an underwriting agreement with J.P. Morgan Securities LLC, as the representative of the several underwriters named therein (the "Underwriters"), which provided for the issuance and sale by SJW Group to the Underwriters 1,030,000 shares of common stock, par value $0.001 per share, in an underwritten public offering (the "Offering"). The shares in the Offering were sold at a public offering price of $59.00 per share. SJW Group also granted the Underwriters an option to purchase up to 154,500 additional shares of common stock, which was exercised in full. The Offering closed on March 11, 2021, and the offering of option shares closed on March 16, 2021. SJW Group received net proceeds of $66,775 from the Offering and the sale of option shares, after deducting the underwriting discounts and commissions and offering expenses.

Note 5. Lines of Credit

SJW Group and its subsidiaries have unsecured line of credit agreements where borrowings are used to refinance existing debt, for working capital, and for general corporate purposes. A summary of the line of agreements as of December 31, 2023 and 2022 are as follows:

		2023			2022
	Maturity Date	Line Limit	Amounts Outstanding	Unused Portion	Amounts Outstanding
Syndicated credit agreement:	August 2, 2028				
SJW Group		$ 50,000	10,000	40,000	—
SJWC		140,000	56,000	84,000	95,000
CTWS		90,000	53,000	37,000	20,000
TWC		20,000	2,500	17,500	—
Total syndicated credit agreement		300,000	121,500	178,500	115,000
CTWS credit agreement	August 2, 2028	10,000	10,000	—	4,578
CTWS credit agreement	May 15, 2025	40,000	40,000	—	40,000
		$ 350,000	171,500	178,500	159,578

SJW Group, SJWC, TWC, and CTWS have entered into a $300,000 credit agreement (the "Credit Agreement") with JPMorgan Chase Bank, N.A., as Administrative Agent ("JP Morgan"), Wells Fargo Bank, National Association, as Documentation Agent, and a syndicate of banks dated August 2, 2022. Proceeds of borrowings under the Credit Agreement will be used for refinancing existing debt, working capital, and general corporate purposes. The Credit Agreement had a maturity date of August 2, 2027. On August 2, 2023, SJW Group, SJWC, TWC, and CTWS entered into the First Amendment to the Credit Agreement with JPMorgan Chase Bank which provided for, among other matters, an extension of the maturity date from August 2, 2027 to August 2, 2028.

Under the terms of the Credit Agreement, each of SJW Group, SJWC, TWC, and CTWS is a borrower with several and not joint liability. Each borrower has an initial borrowing entitlement, or sublimit, which can be periodically adjusted from time to time as set forth in the Credit Agreement. The initial sublimit of each borrower is as presented in the table above.

Borrowings under the Credit Agreement bear interest at either the Alternative Base Rate (as defined in the Credit Agreement and hereinafter referred to as "ABR") or the Adjusted Term Secured Overnight Financing Rate (as defined in the Credit Agreement and hereinafter referred to as "SOFR"). ABR borrowings (which are borrowings bearing interest at a rate determined by reference to ABR) will bear interest at a rate per annum equal to ABR plus the applicable rate. SOFR borrowings (which are borrowings bearing interest at a rate determined by reference to SOFR) will bear interest at a rate per annum equal to SOFR plus the applicable rate. The applicable rate and pricing is variable depending on credit ratings of the borrower.

The Credit Agreement includes a financial covenant that requires each of the borrowers to maintain its funded debt to capitalization ratio at or below 70%.

On October 31, 2022, CTWS and Citizens Bank, National Association, entered into a fifth modification to the amended and restated revolving credit facility of $10,000 to update the interest rate from London Interbank Offered Rate ("LIBOR") plus the applicable rate to SOFR plus the applicable rate. In August 2023, SJW Group, SJWC, TWC, and CTWS entered into the First Amendment to Credit Agreement with JPMorgan Chase Bank which provided for, among other matters, an extension of the maturity date from August 2, 2027 to August 2, 2028.

On February 6, 2023, CTWS modified its existing $40,000 credit agreement with CoBank to update the interest rate from LIBOR plus the applicable rate to SOFR plus the applicable rate.

On February 6, 2023, CTWS entered into a third amendment to the amended and restated promissory note and supplement with CoBank to update the one of the stated terms regarding one of interest rate options from LIBOR plus the applicable rate to SOFR plus the applicable rate. CTWS previously locked the interest rate under this agreement such that this amendment has no impact.

The weighted-average interest rate on short-term borrowings outstanding at December 31, 2023 was 6.48% compared to 5.40% at December 31, 2022.

All of SJW Group's and subsidiaries' lines of credit contain customary representations, warranties and events of default, as well as certain restrictive covenants customary for facilities of this type, including restrictions on indebtedness, liens, acquisitions and investments, restricted payments, asset sales, and fundamental changes. The lines of credit also include certain customary financial covenants such as a funded debt to capitalization ratio and a minimum interest coverage ratio. As of December 31, 2023, SJW Group and its subsidiaries were in compliance with all covenants on the lines of credit.

Note 6. Long-Term Debt

Long-term debt as of December 31 was as follows:

Description	Rate	Maturity	2023	2022
SJW Group Senior notes (a)	2.47% - 3.53%	2029 - 2039	560,000	560,000
SJWC:				
Senior notes (a)	3.00% - 7.37%	2024 - 2053	470,000	400,000
California Pollution Control Financing Authority Revenue Bond	4.75%	2046	70,000	70,000
Total SJWC			540,000	470,000
CTWS bank term loans	4.09%, 4.15%	2027, 2037	16,457	18,444
CWC:				
Connecticut Innovations Revenue Bonds, variable rate		2028 - 2029	22,050	22,050
Senior notes (a)	3.07% - 4.71%	2037 - 2052	195,000	195,000
Bank term loans	4.04% - 4.75%	2028 - 2036	96,295	96,295
Total CWC			313,345	313,345
TWC:				
Senior note (a)	6.27%	2036	15,000	15,000
Bank term loans	4.01% - 5.54%	2041, 2052	45,000	45,000
Total TWC			60,000	60,000
TWR seller financing debt	5.61%	2053	29,000	—
MWC:				
State revolving fund loans	0.00% - 2.23%	2023 - 2048	14,239	15,699
Other First Mortgage Bond	8.95%	2024	900	1,800
Bank term loans	3.89% - 5.51%	2024 - 2043	49,500	49,500
Total MWC			64,639	66,999
Total debt			1,583,441	1,488,788
Unamortized debt premium and discount, net			1,583	17,396
Unamortized debt issuance costs			(9,350)	(9,859)
Current portion			(48,975)	(4,360)
Total long-term debt, less current portion			$ 1,526,699	1,491,965

(a) Senior notes held by institutional investors are unsecured obligations of SJW Group, SJWC, CWC, TWC and MWC and require interest-only payments until maturity. To minimize issuance costs, the companies' debt has primarily been placed privately.

The following is a table of the consolidated company's schedule of principal payments:

Year	
2024	48,975
2025	3,648
2026	23,740
2027	2,995
2028	44,486
Thereafter	1,459,597

The estimated fair value of long-term debt as of December 31, 2023 and 2022 was $1,394,412 and $1,294,354, respectively, and was determined using a discounted cash flow analysis, based on the current rates for similar financial instruments of the same duration and creditworthiness of the company. Of the total fair value of long-term debt, $1,378,683 would be categorized as Level 2 in the fair value hierarchy and $15,729 would be categorized as Level 3 in the fair value hierarchy.

SJWC

On July 14, 2022, SJWC entered into a note purchase agreement with certain affiliates of New York Life Insurance, Metropolitan Life Insurance, Northwestern Mutual Life Insurance, and John Hancock Life Insurance (collectively the "Purchasers"), pursuant to which the company sold an aggregate principal amount of $70,000 of its 4.85% Senior Notes, Series P ("Series P Notes") to the Purchasers. The Series P Notes are unsecured obligations of SJWC and are due on February 1, 2053. Interest is payable semi-annually in arrears on February 1st and August 1st of each year. The note purchase agreement contains customary affirmative and negative covenants for as long as the Series P Notes are outstanding. The Series P Notes are also subject to customary events of default. The closing of the note purchase agreement occurred on January 25, 2023.

CWC

On June 28, 2022, CWC entered into a note purchase agreement with certain affiliates of New York Life Insurance Company, pursuant to which CWC sold an aggregate principal amount of $25,000 of its 4.71% Senior Notes, Series 2022, due 2052. The closing of the note purchase agreement occurred on December 14, 2022. The Series 2022 Notes are unsecured obligations of CWC. Interest is payable semi-annually in arrears on June 15th and December 15th of each year.

On November 15, 2023, CWC entered into a note purchase agreement with certain affiliates of American United Life Insurance, The State Life Insurance, Mutual of Omaha Insurance, and United of Omaha Life Insurance, pursuant to which the company sold an aggregate principal amount of $25,000 of its 6.46% Senior Notes, Series 2023 ("Series 2023 Notes"). The Series 2023 Notes are unsecured obligations of CWC and are due on January 1, 2054. Interest is payable semi-annually in arrears on January 15th and July 15th of each year. The closing of the notes purchase agreement occurred on January 22, 2024.

TWC

On October 31, 2022, TWC entered into a credit with a commercial bank, pursuant to an existing master loan agreement under which the commercial bank issued TWC a promissory note on the same date with an aggregate principal amount of $15,000 at a fixed interest rate of 5.54% due on May 30, 2052. The notes are unsecured obligations of TWC. Interest is payable quarterly in arrears on the 20th day of January, April, July and October of each year.

TWR

In August 2023, TWR closed on an asset acquisition that included an obligation for a post-closing production payment of $29,000 to the seller over a period of up to 29 years. The repayment schedule is based on the quantity of groundwater produced from the acquired wells, subject to certain provisions in the purchase agreement. The difference between the gross obligation of $29,000 and the fair value at the date of acquisition is reflected as a debt discount and is being amortized as interest expense using the effective interest method over the life of the obligation.

MWC

On April 6, 2022, MWC entered into a credit agreement with a commercial bank, pursuant to an existing master loan agreement under which the commercial bank issued MWC a promissory note on the same date with an aggregate principal amount of $15,000 at a fixed interest rate of 4.54%, due May 31, 2042. The notes are unsecured obligations of MWC. Interest is payable quarterly in arrears on the 20th day of January, April, July and October of each year. Proceeds from the borrowing were received on May 13, 2022.

Financial Covenants

The debt and credit agreements of SJW Group and its subsidiaries contain various financial and other covenants. Non-compliance with these covenants could result in accelerated due dates and termination of the agreements. In addition, the credit agreements contain customary representations and warranties and subject to customary events of default, which may result in outstanding notes becoming immediately due and payable. As of December 31, 2023, SJW Group and its subsidiaries were in compliance with all covenants related to its long-term debt agreements.

Note 7. Income Taxes

The components of income tax expense were:

	2023	2022	2021
Current:			
Federal	$ 10,185	8,570	8,587
State	4,281	3,170	2,633
Deferred:			
Federal	(8,871)	(3,223)	(3,811)
State	361	(21)	960
	$ 5,956	8,496	8,369

The following table reconciles income tax expense to the amount computed by applying the federal statutory rate to income before income taxes of $90,943, $82,324 and $68,847 in 2023, 2022 and 2021, respectively:

	2023	2022	2021
Income tax at federal statutory rate	$ 19,098	17,288	14,458
Increase (decrease) in taxes attributable to:			
State taxes, net of federal income tax benefit	6,001	5,328	4,572
Uncertain tax positions	(4,330)	1,483	1,678
Property flow-through	(9,045)	(13,091)	(8,573)
Reversal of excess deferred taxes recognized in regulatory liability	(3,625)	(3,885)	(3,295)
Pension flow-through	(597)	27	429
Stock-based compensation	(491)	(297)	(331)
Other items, net	(1,055)	1,643	(569)
	$ 5,956	8,496	8,369

The components of the net deferred tax liability as of December 31 was as follows:

	2023	2022
Deferred tax assets:		
Advances and contributions	$ 25,714	25,462
Unamortized investment tax credit	517	575
Pensions, postretirement benefits and stock-based compensation	17,844	23,161
Debt premium, net	4,157	4,868
California franchise tax	713	640
Deferred revenue	841	1,444
Tax related regulatory liability	24,358	25,750
Other	7,077	6,627
Total deferred tax assets	81,221	88,527
Deferred tax liabilities:		
Utility plant	243,786	229,500
Pension and postretirement	13,247	17,709
Deferred gain and other-property	6,456	5,982
Regulatory asset - business combinations debt premium, net	4,157	4,868
Intangibles	2,693	2,943
Tax related regulatory asset	44,155	38,599
Section 481(a) adjustments	—	1,573
Other	5,255	5,508
Total deferred tax liabilities	319,749	306,682
Net deferred tax liabilities	$ 238,528	218,155

Management evaluates the realizability of deferred tax assets based on all available evidence, both positive and negative. The realization of deferred tax assets is dependent on our ability to generate sufficient future taxable income during periods in which the deferred tax assets are expected to reverse. Based on all available evidence, management believes it is more likely than not that SJW Group will realize the benefits of its deferred tax assets. Net operating loss carryforwards expire beginning in 2032 and ending in 2039. As of December 31, 2023, the estimated amount of net operating loss carryforwards available to offset future taxable income for Connecticut purposes is $18,369. The estimated state tax credit carryforwards are $707 which will expire beginning in 2024 and ending in 2040.

The change in the net deferred tax liabilities of $20,373 in 2023 included other non-cash items primarily consisting of regulatory assets and liabilities relating to income tax temporary differences.

The total amount of unrecognized tax benefits, before the impact of deductions for state taxes, excluding interest and penalties was $4,511 and $9,004 as of December 31, 2023 and 2022, respectively. The amount of tax benefits, net of any federal benefits for state taxes that would impact the effective rate, if recognized, is approximately $4,048 and $8,262 as of December 31, 2023 and 2022, respectively.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2023	2022	2021
Balance at beginning of year	$ 9,004	7,961	6,468
Increase related to tax positions taken during the current year	231	1,549	1,376
Increase related to tax positions taken during a prior year	364	—	117
Reductions related to statute expiration	(1,191)	(284)	—
Reductions related to tax positions taken in a prior year	(3,897)	(222)	—
Balance at end of year	$ 4,511	9,004	7,961

The decrease in gross unrecognized tax benefits in 2023 was primarily due to the release of an uncertain tax position reserve relating to repairs tax deductions. In April 2023, the IRS issued additional tax guidance that has allowed the company to revisit

certain historical income tax reserves. Pursuant to the issuance of this guidance, which provided additional clarification regarding some of the uncertain tax areas, the company re-evaluated the risk relating to repair deductions. The result of the analysis led to a release of an uncertain tax position reserve. The release relates to repairs expenditures which are more likely than not to be sustained on audit. The release due to re-evaluation of the reserve was $3,125.

SJW Group's policy is to classify interest and penalties associated with unrecognized tax benefits, if any, in tax expense. Accrued interest expense, net of the benefit of tax deductions which would be available on the payment of such interest, is approximately $455 as of December 31, 2023. SJW Group has not accrued any penalties for unrecognized tax benefits. The amount of interest recognized in 2023 was a decrease to expense of $151.

SJW Group currently does not expect uncertain tax positions to change significantly over the next 12 months, except in the case of lapse of the statute of limitations.

SJW Group files U.S. federal income tax returns and income tax returns in various states and is subject to ordinary statute of limitation of three years for federal and three or four years for different state returns. However, due to tax attribute carryforwards, SJW Group is subject to examination for tax years 2012 forward for federal and state returns of CTWS and its subsidiaries. The statute of limitation for SJW Group returns is closed for these extended years and remains open for 2020 and forward for federal and 2019 or 2020 and forward for different states.

Note 8. Intangible Assets

Utility plant intangible assets consist of a concession fee paid to the City of Cupertino of $6,800 for operating the City of Cupertino municipal water system, $13,400 related to the purchase premium for customer relationships and other intangibles of $15,746 as of December 31, 2023. Other intangibles primarily consist of $5,984 for infrastructure related to the Cupertino service concession arrangement, $4,292 which was paid for service area and water rights by TWC, $1,400 for customer relationships and $1,040 incurred in conjunction with Valley Water water contracts related to the operation of SJWC. The nonutility other intangible asset represents water rights with an indefinite life.

Amortization expense for the intangible assets was $1,310, $3,869 and $1,553 for the years ended December 31, 2023, 2022 and 2021, respectively. Amortization expense for 2024 through 2028 and thereafter is anticipated to be approximately $1,310 per year.

The costs of intangible assets as of December 31, 2023 and 2022 are as follows:

	2023	2022
Utility Plant Intangible Assets:		
Concession fees	$ 6,800	6,800
Purchase premium customer relationships	13,400	13,400
Other intangibles	15,746	15,759
Utility plant intangible assets	35,946	35,959
Less: Accumulated amortization		
Concession fees	6,754	6,693
Purchase premium customer relationships	3,774	2,881
Other intangibles	10,361	10,018
Utility plant net intangible assets	$ 15,057	16,367
Other Intangible Asset:		
Water rights	$ 28,386	—

Note 9. Commitments

SJWC purchases water from Valley Water under terms of a master contract expiring in 2051. Delivery schedules for purchased water are based on a contract year beginning July 1, and are negotiated every three years under terms of the master contract with Valley Water. For the years ended December 31, 2023, 2022 and 2021, SJWC purchased from Valley Water 18.3 billion gallons ($111,173), 18.2 billion gallons ($96,793) and 19.4 billion gallons ($91,938), respectively, of contract water. On June 16, 2022, the Valley Water Board of Directors approved treated water deliveries reflecting the contractual delivery schedule reduced by 23% through June 30, 2024. Based on current prices and estimated deliveries, SJWC is committed to purchase from Valley Water a minimum of 90% of the reduced delivery schedule, or 18.9 billion gallons ($121,182) of water at the current

contract water rate of $6.411 million per billion gallons for the year ending December 31, 2024. Additionally, SJWC purchases non-contract water from Valley Water on an "as needed" basis if the water supply is available.

In 1997, SJWC entered into a 25-year contract agreement, as amended, with the City of Cupertino to operate the City's municipal water system. SJWC paid a one-time, upfront concession fee of $6,800 to the City of Cupertino and an incremental up-front payment of $5,000 to be used by the City of Cupertino for capital improvements. On February 25, 2022, SJWC received a letter from the City of Cupertino exercising their option to extend the term of the lease an additional two years through October, 1, 2024. SJWC paid an additional $1,600 concession fee for the extension period. The total fees paid for the agreement is being amortized over the contract term including the extension period.

CWC is able, but under no obligation, to purchase up to one million gallons of water per day, from the South Central Connecticut Regional Water Authority ("RWA"), at the then current wholesale rates per the agreement, $3.1 million per billion gallons as of December 31, 2023. CWC has an agreement with The Metropolitan District ("MDC") to purchase water from MDC to serve the Unionville system. The agreement became effective on October 6, 2000 and has a term of fifty years beginning May 19, 2003, the date the water supply facilities related to the agreement were placed in service. CWC agrees to purchase 0.28 billion gallons of water annually from MDC. The rate charged by the MDC at December 31, 2023 was three dollars and eighty cents per hundred cubic feet.

TWC has long-term contracts with the GBRA. The terms of the agreements expire in 2037, 2040, 2044 and 2050, respectively. The agreements, which are take-or-pay contracts, provide TWC with 7,650 acre-feet per year of water supply from Canyon Lake. The water rate may be adjusted by GBRA at any time, provided they give TWC a 60-day written notice on the proposed adjustment. TWC also has raw water supply agreements with the Lower Colorado River Authority and West Travis Public Utility Agency expiring in 2059 and 2046, respectively, to provide for 350 acre-feet of water per year from Lake Austin and the Colorado River, respectively, at prices that may be adjusted periodically by the agencies.

MWC has an agreement with the Kennebec Water District for potable water service. The agreement has been in place for 20 years and was extended on November 7, 2020 for a new term of up to 20 years. MWC guarantees a minimum consumption of 0.05 billion gallons of water annually. Water sales to MWC are billed at a wholesale discount of twenty cents per hundred cubic feet of water below Kennebec Water District's tariffed rates. The current tariff rate was one dollar and fifty-one cents per hundred cubic feet as of December 31, 2023.

As of December 31, 2023, SJWC had 387 employees, of whom 240 were members of unions. In the first quarter of 2023, SJWC executed three-year bargaining agreements with the International Union of Operating Engineers ("OE"), representing certain employees in the engineering department, and the Utility Workers of America ("UWUA"), representing the majority of all nonadministrative employees at SJWC covering the period from January 1, 2023 through December 31, 2025. The agreements include a 6% wage increase provided in 2023, 3.5% in 2024 and 5.5% in 2025 for union employees.

Note 10. Contingencies

SJW Group and its subsidiaries are subject to ordinary routine litigation incidental to its business. There are no pending legal proceedings to which SJW Group or any of its subsidiaries is a party, or to which any of its properties is the subject, that are expected to have a material effect on SJW Group's business, financial position, results of operations or cash flows.

Note 11. Benefit Plans

Pension Plans

SJW Group maintains noncontributory defined benefit pension plans for its eligible employees. SJWC employees hired before March 31, 2008 and CWC and MWC employees hired before January 1, 2009 are entitled to benefits under the pension plans based on the employee's years of service and compensation. For SJWC employees hired on or after March 31, 2008, benefits are determined using a cash balance formula based upon compensation credits and interest credits for each employee. Effective January 1, 2023, TWC employees became eligible to participate under SJWC's cash balance plan. Interest is credited based on the annual yield on 30-year Treasury bonds as of October for the preceding plan year with a minimum annual rate of 3.25% and a maximum annual rate of 6.00%. For the year ended December 31, 2023, interest credits assumption was 4.00%. Certain employees hired before March 1, 2012, and covered by a plan merged into the CWC plan in 2013 are also entitled to benefits based on the employee's years of service and compensation. CTWS employees hired on or after January 1, 2009 are entitled to an additional 1.5% of eligible compensation to their company sponsored savings plan. SJW Group does not have multi-employer plans.

The pension plans are administered by their respective committees where the investment strategy of the investments of the various pension and postretirement benefit plans are reviewed and approved to achieve the goals of income generation and long-term capital preservation. SJW Group engages third-party investment consultants and managers to assist with, among

other things, asset allocation strategy, investment policy advice, performance monitoring, and investment manager due diligence. Individual investment decisions have been delegated by the pension plan committees to the investment managers who are also monitored by an investment consultant. Investment managers are not permitted to invest outside of the asset class or strategy under the pension plans' investment guidelines. The committees ensure that the plans establish a target mix that is expected to achieve its investment objectives, by assuring a broad diversification of investment assets among investment types, while minimizing volatility of the target asset mix, unless market conditions make such a change appropriate to reduce risk. The pension plans require a minimum portion of plan assets to be allocated to fixed income securities and provide guidelines and restrictions on equity investments for the assets.

Plan assets are marked to market at each measurement date, resulting in unrealized actuarial gains or losses. Unrealized actuarial gains and losses on pension assets are amortized over the expected future working lifetime of participants for actuarial expense calculation purposes.

Generally, it is expected of the investment managers that the performance of the assets held in the pension plans, computed on a total annual rate of return basis, should meet or exceed specific performance standards over a three-to-five-year period and/or full market cycle. These standards include specific absolute and risk-adjusted performance standards over a three-to-five-year period and/or full market cycle. The expected long-term rate of return on the pension plan assets is between 6.00% and 6.75% for the year ended December 31, 2023.

SJW Group calculates the market-related value of defined benefit pension plan assets, which is defined under FASB ASC Topic 715 —"Compensation—Retirement Benefits" as a balance used to calculate the expected return on plan assets, using fair value. The fair value is based on quoted prices in active markets for identical assets and significant observable inputs.

Certain senior management hired before March 31, 2008 for SJWC and January 1, 2009 for CWC are eligible to receive additional retirement benefits under the supplemental executive retirement plans and retirement contracts (collectively, "SERP"). SJWC's senior management hired on or after March 31, 2008 are eligible to receive additional retirement benefits under SJWC's Cash Balance Executive Supplemental Retirement Plan ("Cash Balance Executive Supplemental Retirement Plan"). Both of the plans are non-qualified plans in which only senior management and other designated members of management may participate. The annual cost of the plans has been included in the determination of the net periodic benefit cost shown below. The SERP and Cash Balance Executive Supplemental Retirement Plan had a projected benefit obligation of $43,001 and $39,455 as of December 31, 2023 and 2022, respectively, and net periodic pension cost of $3,257, $4,400 and $4,456 for 2023, 2022 and 2021, respectively. For the years ended December 31, 2023, 2022 and 2021, the amounts not recognized as a component of net periodic benefit cost was $314, $1,640, and $901, respectively, recorded as other comprehensive income on the consolidated financial statements. SJWC's non-qualified plans are unfunded while CTWS's SERP is funded through investments consisting primarily of life insurance contracts and assets in a Rabbi Trust. As of December 31, 2023 and 2022, total investments made to fund CWC's SERP was $6,843 and $6,395, respectively, which is included in "Investments" in SJW Group's Consolidated Balance Sheets. The life insurance contracts are valued at cash surrender value of the policies as reported by the insurer. As of December 31, 2023 and 2022, the value of the life insurance contracts was $3,937 and $3,420, respectively.

The following tables summarize the fair values of the Rabbi Trust investment assets to fund CWC's SERP by major categories as of December 31, 2023 and 2022:

		Fair Value Measurements at December 31, 2023		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds	$ 71	71	—	—
Mutual funds	2,053	2,053	—	—
Fixed income	709	709	—	—
Total	$ 2,833	2,833	—	—

	Fair Value Measurements at December 31, 2022			
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds	$ 49	49	—	—
Mutual funds	2,032	2,032	—	—
Fixed income	728	728	—	—
Total	$ 2,809	2,809	—	—

Other Postretirement Benefits

In addition to providing pension and savings benefits, the company also provides health care and life insurance benefits for eligible retired employees under the respective employer-sponsored postretirement benefits other than pension plans. The benefits are paid by the company and not from plan assets due to limitations imposed by Internal Revenue Service.

Flexible Spending Plan

SJW Group sponsors flexible spending account plans for its employees for the purpose of providing eligible employees with the opportunity to choose from among the fringe benefits available under the plans. The flexible spending plan is intended to qualify as a cafeteria plan under the provisions of the Internal Revenue Code Section 125. The flexible spending plan allows employees to save pre-tax income in a Health Care Spending Account ("HCSA") and/or a Dependent Care Spending Account ("DCSA") to help defray the cost of out-of-pocket medical and dependent care expenses. The annual maximum limit under the HCSA and DCSA plans is $3.1 and $5, respectively.

Savings Plans for Employees

SJW Group also sponsors salary deferral plans which are defined contribution plans that allow employees to defer and contribute a portion of their earnings to the plan. Contributions, not to exceed set limits, are matched by the company. SJW Group contributions were $3,902, $3,003 and $2,822 in 2023, 2022 and 2021, respectively. All of the company's contributions are invested at the direction of the employees in funds offered under the plans.

Special Deferral Election Plans and Deferral Election Program

SJW Group maintains a special deferral election plan and a deferred compensation plan and agreements for senior management and a deferral election program for non-employee directors allowing for the deferral of a portion of their earnings each year and to realize an investment return on those funds during the deferral period. Senior management and non-employee directors have to make an election on the deferral and distribution method of the deferrals before services are rendered. CWC's deferred compensation plan allows the company to make discretionary contributions. Senior management and non-employee directors had deferred $8,148 and $6,197 under the plans as of December 31, 2023 and 2022, respectively. As of December 31, 2023 and 2022, $6,223 and $4,508, respectively, of the total amount deferred is related to CWC agreements.

Assumptions Utilized on Actuarial Calculations

Net periodic cost for the defined benefit plans and other postretirement benefits was calculated using the following assumptions:

	Pension Benefits			Other Postretirement Benefits		
	2023	2022	2021	2023	2022	2021
	%	%	%	%	%	%
Discount rate	4.95 - 5.24	2.65 - 2.82	2.29 - 2.48	4.96 - 5.21	2.61 - 2.76	2.18 - 2.41
Expected return on plan assets	6.00, 6.75	6.50, 6.75	6.50, 6.75	4.20, 6.00	4.20, 6.00	4.20, 6.50
Rate of compensation increase	4.50, 5.00	4.00, 4.50	4.00	N/A	N/A	N/A

The expected rate of return on plan assets was determined based on a review of historical returns, for the pension plans and for medium- to large-sized defined benefit pension funds with similar asset allocations. This review generated separate expected returns for each asset class. These expected future returns were then blended based on the pension plans' target asset allocations.

Benefit obligations for the defined benefit plans and other postretirement benefits were calculated using the following weighted-average assumptions as of December 31:

	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
	%	%	%	%
Discount rate	4.99 - 5.03	4.95 - 5.24	4.95 - 5.01	4.96 - 5.21
Rate of compensation increase	4.50, 5.00	4.50 - 5.00	N/A	N/A

SJW Group utilized each plan's projected benefit stream in conjunction with the FTSE Pension Discount Curve in determining the discount rate used in calculating the pension and other postretirement benefits liabilities at the measurement date.

SJW Group has adopted MP-2021, Mortality Improvement Scales to determine mortality assumptions. The tables and scales reflect increasing life expectancies of participants in the United States. See also "Reconciliation of Funded Status" below.

For other postretirement benefits, the assumed healthcare cost trend rate for 2024 is 8.00%, grading down gradually to 4.50% by 2030.

Net Periodic Pension Costs

Net periodic costs for the defined benefit plans and other postretirement benefits for the years ended December 31 was as follows:

	Pension Benefits			Other Postretirement Benefits		
	2023	2022	2021	2023	2022	2021
Components of net periodic benefit cost						
Service cost	$ 7,569	9,359	9,730	$ 638	1,032	1,115
Interest cost	14,234	10,708	9,415	1,268	883	806
Expected return on assets	(15,440)	(18,841)	(18,019)	(860)	(1,047)	(970)
Amortization of prior service cost	15	17	41	—	—	—
Amortization of actuarial loss (gain)	2,210	4,620	6,901	(350)	(115)	257
Recognition of significant event	—	(1,595)	—	—	—	—
Net periodic benefit cost	$ 8,588	4,268	8,068	$ 696	753	1,208

Reconciliation of Funded Status

For the defined benefit plans and other postretirement benefits, the benefit obligation is the projected benefit obligation and the accumulated benefit obligation, respectively. The projected benefit obligations and the funded status of the defined benefit pension and other postretirement plans as of December 31 were as follows:

	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Change in benefit obligation				
Benefit obligation at beginning of year	$ 289,123	383,838	$ 25,830	34,412
Service cost	7,569	9,359	638	1,032
Interest cost	14,234	10,708	1,268	883
Actuarial loss/(gain)	5,794	(94,793)	(2,645)	(9,360)
Implicit rate subsidy	—	—	(237)	(236)
Plan participants contributions	—	—	179	207
Administrative expenses paid	(137)	(136)	—	—
Benefits paid and settlements	(18,749)	(19,853)	(769)	(1,108)
Benefit obligation at end of year	$ 297,834	289,123	$ 24,264	25,830
Change in plan assets				
Fair value of assets at beginning of year	$ 251,960	310,176	$ 17,952	21,767
Actual return on plan assets	41,285	(49,939)	3,136	(3,606)
Employer contributions	11,145	11,712	920	626
Plan participants contributions	—	—	179	207
Administrative expenses paid	(137)	(136)	(67)	(65)
Benefits paid and settlements	(18,749)	(19,853)	(913)	(977)
Fair value of plan assets at end of year	285,504	251,960	21,207	17,952
Funded status at end of year	$ (12,330)	(37,163)	$ (3,057)	(7,878)

For the year ended December 31, 2023, the net actuarial loss on the benefit obligation was related primarily to a loss from changes in the discount rate of $1,188, a $1,993 loss from pension data changes, and a loss from mortality changes of $168. For the year ended December 31, 2022, the net actuarial gain of the benefit obligation was related primarily to a gain from changes of discount rate of $116,372, a $12,422 loss from pension data changes, and a gain from mortality changes of $4.

The amounts recognized on the balance sheet as of December 31 were as follows:

	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Noncurrent assets	$ 30,671	16,005	$ 3,123	679
Current liabilities	(2,365)	(2,089)	(113)	(139)
Noncurrent liabilities	(40,636)	(51,079)	(6,067)	(8,418)
	$ (12,330)	(37,163)	$ (3,057)	(7,878)

As of December 31, 2023 and 2022, the accumulated benefit obligation of the defined benefit pension plans was $270,209 and $259,838, respectively.

The following table provides selected information about plans with projected benefit obligation and accumulated benefit obligation in excess of plan assets as of December 31:

	2023	2022
Pension Benefits:		
Plans with projected benefit obligation in excess of plan assets:		
Projected benefit obligation	$ 43,001	217,358
Fair value of plan assets	—	169,077
Plans with accumulated benefit obligation in excess of plan assets:		
Accumulated benefit obligation	39,652	35,813
Fair value of plan assets	—	—
Other Postretirement Benefits:		
Plans with accumulated benefit obligation in excess of plan assets:		
Accumulated benefit obligation	15,580	16,411
Fair value of plan assets	9,401	7,853

SJW Group recognizes regulatory assets and liabilities that represent actuarial losses and gains and prior service cost that have not yet been recognized as components of net periodic benefit cost for certain of its pension and other postretirement benefit plans. In accordance with ASC 980. SJW Group recorded regulatory assets of $24,593 and $45,799 as of December 31, 2023 and 2022, respectively and regulatory liabilities of $20,196 and $14,307 as of December 31, 2023 and 2022, respectively. As of December 31, 2023 and 2022, the amounts deferred in regulatory assets that have not yet been recognized as components of net periodic benefit cost include net loss of $24,552 and $45,743, respectively, and prior service cost of $41 and $56, respectively. As of December 31, 2023 and 2022, the amounts deferred in regulatory liabilities that have not yet been recognized as components of net periodic benefit cost include net gain of $20,196 and $14,307, respectively.

Plan Assets

Plan assets as of December 31 were as follows:

	Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022
Fair value of assets at end of year:				
Debt securities	$ 101,498	90,914	$ 5,596	5,330
	36 %	36 %	26 %	30 %
Equity securities	174,155	147,864	14,424	11,711
	61 %	59 %	68 %	65 %
Cash and equivalents	9,851	13,182	1,187	911
	3 %	5 %	6 %	5 %
Total	$ 285,504	251,960	$ 21,207	17,952

The following tables summarize the fair values of plan assets by major categories as of December 31, 2023 and 2022:

		Fair Value Measurements at December 31, 2023		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	$ 11,038	11,038	—	—
Equity securities (a)	188,579	188,579	—	—
Fixed Income (b)	107,094	39,048	68,046	—
Total	$ 306,711	238,665	68,046	—

(a) Actively managed portfolio of equity securities with the goal to exceed the benchmark performance.
(b) Actively managed portfolio of fixed income securities with the goal to exceed the benchmark performance

		Fair Value Measurements at December 31, 2022		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	$ 14,093	14,093	—	—
Equity securities	159,575	159,575	—	—
Fixed Income	96,244	30,863	65,381	—
Total	$ 269,912	204,531	65,381	—

In 2024, SJW Group expects to make required and discretionary cash contributions of up to $8,744 to the pension plans and other postretirement benefit plans.

Benefits expected to be paid in the next five years and in the aggregate for the five years thereafter are:

	Pension Plans	Other Postretirement Benefit Plans
2024	$ 16,727	$ 1,461
2025	17,455	1,549
2026	22,753	1,619
2027	18,977	1,691
2028	19,121	1,647
2029 - 2033	104,931	8,580

Note 12. Equity Plans

Common Stock

SJW Group's long-term incentive plans provide employees, non-employee board members or the board of directors of any parent or subsidiary, consultants, and other independent advisors who provide services to the company or subsidiary the opportunity to acquire an equity interest in SJW Group. SJW Group also maintains stock plans in connection with its acquisition of CTWS which are no longer granting new stock awards. In addition, shares are issued to employees under SJW Group's employee stock purchase plan.

On April 26, 2023, SJW Group adopted the successor plans, the 2023 Long-Term Incentive Plan and the 2023 Employee Stock Purchase Plan, to replace the Amended and Restated Long-Term Incentive Plan (the, "Predecessor Incentive Plan") and the 2014 Employee Stock Purchase Plan (the, "Predecessor ESPP"), respectively. The Predecessor Incentive Plan terminated on April 23, 2023 and the Predecessor ESPP terminated on July 31, 2023. Each outstanding award under the Predecessor Incentive Plan will remain outstanding under the Predecessor Incentive Plan and shall be governed solely by the terms of the documents evidencing such awards. The 2023 Long-Term Incentive Plan reserves a total of 1,142,000 shares of SJW Group's common stock for issuance to employees, non-employee board members or the board of directors of any parent or subsidiary,

consultants, and other independent advisors who provide services to the SJW Group and its subsidiaries. The 2023 Employee Stock Purchase Plan reserves for a total of 500,000 shares of SJW Group's common stock for issuance for eligible employees to purchase common stock at a discount through accumulated payroll deductions. Remaining reserves for both of the predecessor plans were terminated with the adoption of the successor plans.

The plans allow SJW Group to provide employees, non-employee Board members or the board of directors of any parent or subsidiary, consultants, and other independent advisors who provide services to the company or any parent or subsidiary the opportunity to acquire an equity interest in SJW Group.

A participant in the plans generally may not receive plan awards covering an aggregate of more than 600,000 shares of common stock in any calendar year. Additionally, awards granted under the plans may be conditioned upon the attainment of specified Company performance goals. The types of awards included in the plans are restricted stock awards, restricted stock units, performance shares, or other share-based awards. In addition, shares are issued to employees under the employee stock purchase plan ("ESPP") that was approved by SJW Group stockholders.

As of December 31, 2023, 2022 and 2021, 1,080,759, 1,013,782 and 946,086 shares have been issued pursuant to the plans, and 150,704, 162,502 and 168,721 shares are issuable upon the vesting of outstanding restricted stock units, performance-based stock units, and deferred restricted stock units for the years ended 2023, 2022 and 2021, respectively. The remaining shares available for issuance under the plans are 1,136,979 as of December 31, 2023. The compensation costs charged to income is recognized on a straight-line basis over the requisite service period.

A summary of compensation costs charged to income and proceeds from share-based compensation, which are recorded to additional paid-in capital and common stock, by award type, are presented below for the years ended December 31:

	2023	2022	2021
Compensation costs charged to income:			
ESPP	$ 378	369	357
Restricted stock and deferred restricted stock	4,269	4,422	3,889
Total compensation costs charged to income	$ 4,647	4,791	4,246
ESPP proceeds	$ 2,141	2,091	2,026

Restricted Stock and Deferred Restricted Stock

A summary of SJW Group's outstanding restricted and deferred restricted stock awards under the Plan as of December 31, 2023, and changes during the year ended December 31, 2023, are presented below:

	Units	Weighted-Average Grant-Date Fair Value
Outstanding as of January 1, 2023	162,502	$ 63.77
Granted	69,655	$ 78.30
Issued	(66,977)	$ 57.05
Forfeited	(14,476)	$ 72.43
Outstanding as of December 31, 2023	150,704	$ 72.64
Shares vested as of December 31, 2023	27,159	$ 66.81

A summary of the status of SJW Group's nonvested restricted and deferred restricted stock awards under the plans as of December 31, 2023, and changes during the year ended December 31, 2023, are presented below:

	Units	Weighted-Average Grant-Date Fair Value
Nonvested as of January 1, 2023	125,459	$ 66.71
Granted	69,655	$ 78.30
Vested	(63,755)	$ 64.62
Forfeited	(7,814)	$ 72.98
Nonvested as of December 31, 2023	123,545	$ 73.93

Total fair value of restricted stock awards for all plans that were vested for the years ended 2023, 2022 and 2021 were $4,170, $4,369 and $3,332, respectively. As of December 31, 2023, the total unrecognized compensation costs related to restricted and deferred restricted stock plans amounted to $4,587. This cost is expected to be recognized over a weighted-average period of 1.67 years.

For the years ended December 31, 2023, 2022 and 2021, 15,955, 11,551 and 7,327, respectively, of performance-based and market-based restricted stock awards were issued upon the attainment of certain performance metrics and service-based vesting under the Plan. Based upon actual attainment relative to the target performance metric, the number of shares issuable can range between 0% to 150% of the target number of shares for performance-based restricted stock awards, or between 0% and 200% of the target number of shares for market-based restricted stock awards. As of December 31, 2023, 24,726 performance-based and market-based restricted stock awards vested and 61,763 remained outstanding.

Employee Stock Purchase Plan

The ESPP allows eligible employees to purchase shares of SJW Group's common stock at 85% of the fair value of shares on the purchase date. Under the ESPP, employees can designate up to a maximum of 10% of their base compensation for the purchase of shares of common stock, subject to certain restrictions. A total of 500,000 shares of SJW Group's common stock have been reserved for issuance under the ESPP. The remaining shares available for issuance under the ESPP are 500,000 as of December 31, 2023.

For the year ended December 31, 2023, 2022 and 2021, a total of 34,122, 36,585 and 35,304 shares, respectively, were issued under the ESPP. The plan has no look-back provisions.

For the years ended December 31, 2023, 2022 and 2021, SJW Group's recorded expenses were $380, $377 and $361, respectively, related to the ESPP. The total unrecognized compensation costs related to the semi-annual offering period that ended January 31, 2024, for the ESPP is approximately $27.

Note 13. Segment and Non-Tariffed Businesses Reporting

SJW Group is a holding company with four subsidiaries: (i) SJWC, (ii) SJWTX Holdings, Inc., a holding company for TWC, its consolidated variable interest entity, Acequia Water Supply Corporation, TWOS and TWR, (iii) SJW Land Company, and (iv) SJWNE LLC, a holding company for CTWS and its subsidiaries, CWC, MWC, NEWUS and Chester Realty, Inc. The first segment provides water utility and utility-related services to its customers through SJW Group's subsidiaries, SJWC, CWC, TWC, MWC, and NEWUS together referred to as "Water Utility Services." Water Utility Services' activities are water utility operations with both regulated and non-tariffed businesses. The second segment consists of property management and investment activity conducted by SJW Land Company and Chester Realty, Inc., referred to as "Real Estate Services."

SJW Group's reportable segments have been determined based on information used by the chief operating decision maker. SJW Group's chief operating decision maker includes the Chairman, President and Chief Executive Officer, and his executive staff. The executive staff reviews financial information presented on a consolidated basis that is accompanied by disaggregated information about operating revenue, net income and total assets, by subsidiary.

The following tables set forth information relating to SJW Group's reportable segments and distribution of regulated and non-tariffed business activities within the reportable segments. Certain allocated assets, such as goodwill, revenue and expenses have been included in the reportable segment amounts. Other business activity of SJW Group not included in the reportable segments is included in the "All Other" category.

	For the year ended December 31, 2023						
	Water Utility Services		Real Estate Services	All Other (1)	SJW Group		
	Regulated (2)	Non-tariffed	Non-tariffed	Non-tariffed	Regulated	Non-tariffed	Total
Operating revenue	652,045	12,634	5,684	—	652,045	18,318	670,363
Operating expense	506,923	7,452	2,956	3,597	506,923	14,005	520,928
Operating income (loss)	145,122	5,182	2,728	(3,597)	145,122	4,313	149,435
Net income (loss)	94,343	4,452	2,059	(15,867)	94,343	(9,356)	84,987
Depreciation and amortization	104,329	340	306	893	104,329	1,539	105,868
Senior note and other interest expense	42,743	329	—	23,072	42,743	23,401	66,144
Income tax expense (benefit) in net income	11,293	1,458	755	(7,550)	11,293	(5,337)	5,956

	For the year ended December 31, 2022						
	Water Utility Services		Real Estate Services	All Other (1)	SJW Group		
	Regulated	Non-tariffed	Non-tariffed	Non-tariffed	Regulated	Non-tariffed	Total
Operating revenue	603,000	12,093	5,605	—	603,000	17,698	620,698
Operating expense	473,141	9,538	3,719	3,322	473,141	16,579	489,720
Operating income (loss)	129,859	2,555	1,886	(3,322)	129,859	1,119	130,978
Net income (loss)	86,500	1,060	1,442	(15,174)	86,500	(12,672)	73,828
Depreciation and amortization	99,412	2,906	1,206	893	99,412	5,005	104,417
Senior note and other interest expense	37,958	—	—	20,104	37,958	20,104	58,062
Income tax expense (benefit) in net income	12,756	708	453	(5,421)	12,756	(4,260)	8,496

	For the year ended December 31, 2021						
	Water Utility Services		Real Estate Services	All Other (1)	SJW Group		
	Regulated	Non-tariffed	Non-tariffed	Non-tariffed	Regulated	Non-tariffed	Total
Operating revenue	558,154	10,153	5,379	—	558,154	15,532	573,686
Operating expense	449,401	7,138	3,585	2,403	449,401	13,126	462,527
Operating income (loss)	108,753	3,015	1,794	(2,403)	108,753	2,406	111,159
Net income (loss)	67,530	3,309	1,950	(12,311)	67,530	(7,052)	60,478
Depreciation and amortization	91,896	443	1,168	893	91,896	2,504	94,400
Senior note and other interest expense	34,308	—	—	20,031	34,308	20,031	54,339
Income tax expense (benefit) in net income	10,327	369	619	(2,946)	10,327	(1,958)	8,369

(1) The "All Other" category for the years ended December 31, 2023, 2022 and 2021, includes the accounts of SJW Group, SJWNE LLC, CTWS, and SJWTX Holdings, Inc. on a stand-alone basis.

(2) As of December 31, 2023, the company has performed an allocation of goodwill associated with the acquisition of CTWS to two reporting units, Connecticut and Maine, which are both aggregated within the Regulated Water Utility Services reportable segment.

SJW Group's assets by segment are as follows as of December 31:

	2023	2022
Water Utility Services:		
Regulated	$ 4,199,172	3,643,916
Non-tariffed	43,532	4,832
Total water utility services	4,242,704	3,648,748
Real Estate Services	44,222	42,801
All Other	58,141	63,507
Total assets	$ 4,345,067	3,755,056
Regulated	$ 4,199,172	3,643,916
Non-tariffed	145,895	111,140
Total assets	$ 4,345,067	3,755,056

Note 14. Acquisitions

KT Water

On January 13, 2023, TWC reached an agreement to acquire KT Water Development Ltd. ("KT Water Development") and SJWTX Holdings, Inc. reached an agreement to acquire KT Water Resources L.P. ("KT Water Resources"). The agreement between SJWTX Holdings, Inc. and KT Water Resources, LP, was assigned to TWR prior to closing. KT Water Development was an investor-owned water utility providing water to approximately 1,725 people through over 570 service connections in the Rockwall Ranch subdivision in southern Comal County, Texas. KT Water Resources was a wholesale groundwater resource supplier to KT Water Development formed to develop wholesale water supplies for the fast-growing utilities of Comal County, Texas. The Public Utility Commission of Texas ("PUCT") approved the proposed KT Water Development acquisition on July 24, 2023. The acquisition of KT Water Resources did not require PUCT approval. Both transactions closed on August 14, 2023. Further information regarding each of the acquisitions is set forth below.

KT Water Development

The purchase price of KT Water Development was $7,338, all of which was cash, and was determined in accordance with a fair market value process defined under the Texas Water Code. The transaction was accounted for as a business combination in accordance with ASC Topic 805. Based on the preliminary purchase price allocation, the transaction consideration was allocated to utility plant. The final allocation will be completed within one year from the acquisition date. Transaction costs were not material. The results of KT Water Development are included in SJW Group's consolidated statements of comprehensive income since the acquisition date and were not material. Pro forma financial information has not been presented because the acquisition was not material to SJW Group's consolidated financial statements.

KT Water Resources

The total purchase price of KT Water Resources of $39,891 consisted of a $24,491 up-front cash payment and an obligation for a post-closing production payment with an acquisition date fair value of $15,400. Considering transaction costs of $170, the total cost of the acquisition was $40,061. The KT Water Resources acquisition was accounted for as an asset acquisition in accordance with ASC Topic 805.

The total cost was allocated as follows based on the fair values of the assets acquired: $28,386 to other intangible asset, $11,684 to nonutility property, and $9 to other current liabilities. The other intangible asset represents indefinite-life water rights. The nonutility property consists of wells, land, easements, and construction work in progress.

The post-closing production payment represents an obligation to pay a total amount of $29,000 to the seller over a period up to 29 years. The repayment schedule is based on the quantity of groundwater produced from the acquired wells, subject to certain provisions in the purchase agreement. The fair value of the post-closing payment as of the acquisition date was determined by discounting forecasted repayments based on management's estimates of future groundwater production. The difference between the fair value of $15,400 and the gross obligation of $29,000 was recorded as a debt discount and is being amortized as interest expense using the effective interest method over the life of the obligation. The post-closing production payment obligation is classified as long-term debt in the Consolidated Balance Sheets.

Kendall West Utility and Bandera East Utility

On December 17, 2021, TWC completed its acquisition of Kendall West Utility and Bandera East Utility, companies that provide water services, including wastewater and recycled water services, in Kendall, Bandera and Medina counties which are located in south central Texas. Kendall West Utility and Bandera East Utility, together, added approximately 5,000 people through 1,600 service connections in a service area approximately 19 square miles to TWC's operations. The total net cash price was $23,587. The preliminary purchase price allocation for these acquisitions primarily consisted of acquired utility plant of approximately $9,400 and goodwill of approximately $12,300. The results of Kendall West Utility and Bandera East Utility are included in SJW Group's Consolidated Statements of Comprehensive Income since the acquisition date, including revenues and net loss, and were not material. During the measurement period in 2022, TWC reduced goodwill previously recognized by $161 primarily related to additional regulatory assets recognized. The final purchase price allocation resulted in goodwill of $12,167 for the transaction. Pro forma financial information has not been presented because the acquisition was not material to SJW Group's consolidated financial statements.

FINANCIAL STATEMENT SCHEDULE

Schedule I

SJW Group (Parent Only)
CONDENSED BALANCE SHEETS
(in thousands, except share and per share data)

	December 31,	
	2023	2022
Assets		
Investments in subsidiaries	$ 1,753,250	1,675,545
Current assets:		
Cash and cash equivalents	868	5,142
Intercompany receivables	2,239	—
Intercompany notes receivable	69,746	13,094
Other current assets	243	193
Total current assets	73,096	18,429
Other assets		
Other	193	183
Total other assets	193	183
Total assets	$ 1,826,539	1,694,157
Capitalization and Liabilities		
Capitalization:		
Stockholders' equity:		
Common stock, $0.001 par value; authorized 70,000,000 shares in 2023 and 2022; issued and outstanding 32,023,004 shares in 2023 and 30,801,912 shares in 2022	$ 32	31
Additional paid-in capital	736,191	651,004
Retained earnings	495,383	458,356
Accumulated other comprehensive income	1,791	1,477
Total stockholders' equity	1,233,397	1,110,868
Long-term debt, less current portion	557,028	556,627
Total capitalization	1,790,425	1,667,495
Current liabilities:		
Line of credit	10,000	—
Intercompany payables	—	789
Intercompany notes payable	1,726	4,166
Accrued interest	3,255	3,208
Income tax payable	16,427	14,736
Other current liabilities	629	398
Total current liabilities	32,037	23,297
Deferred income taxes	3,099	2,373
Other noncurrent liabilities	978	992
Total capitalization and liabilities	$ 1,826,539	1,694,157

See Accompanying Notes to Schedule I

FINANCIAL STATEMENT SCHEDULE

Schedule I

SJW Group (Parent Only)
CONDENSED STATEMENTS OF COMPREHENSIVE INCOME
Years ended December 31 (in thousands)

	2023	2022	2021
Operating revenue	$ —	—	—
Operating expense:			
Administrative and general	2,239	1,977	2,050
Property taxes and other non-income taxes	80	93	(38)
Total operating expense	2,319	2,070	2,012
Operating loss	(2,319)	(2,070)	(2,012)
Other (expense) income:			
Interest on long-term debt and other interest expense	(17,692)	(17,795)	(18,673)
Gain on sale of asset	—	—	3,000
Interest income on intercompany notes receivable	3,862	81	313
Other, net	1,034	(421)	(473)
Loss before income taxes and equity earnings from subsidiaries	(15,115)	(20,205)	(17,845)
Income tax benefit	(4,294)	(5,523)	(4,660)
Equity earnings from subsidiaries, net of taxes	95,808	88,510	73,663
SJW Group net income	84,987	73,828	60,478
Other comprehensive income, net	314	1,640	901
SJW Group comprehensive income	$ 85,301	75,468	61,379

See Accompanying Notes to Schedule I

FINANCIAL STATEMENT SCHEDULE

Schedule I

SJW Group (Parent Only)
CONDENSED STATEMENTS OF CASH FLOWS
Years ended December 31 (in thousands)

	2023	2022	2021
Operating activities:			
Net income	$ 84,987	73,828	60,478
Adjustments to reconcile net income to net cash used in operating activities:			
Earnings from investment in subsidiaries	(95,808)	(88,510)	(73,663)
Deferred income taxes	718	(163)	(185)
Stock-based compensation	696	779	679
Gain on sale of asset	—	—	(3,000)
Changes in operating assets and liabilities, net of acquired assets and liabilities:			
Accounts payable and other current liabilities	281	185	(226)
Intercompany receivables	(6,018)	(3,916)	(1,586)
Tax payable and other accrued taxes	1,550	6,883	4,782
Accrued interest	47	(15)	28
Return on capital from investments in subsidiaries	50,550	55,950	45,900
Other changes, net	607	500	605
Net cash provided by operating activities	37,610	45,521	33,812
Investing activities:			
Proceeds to subsidiaries for notes receivable	(148,392)	(27,713)	(75,986)
Repayments from subsidiaries for notes receivable	91,740	20,634	85,651
Investments in subsidiaries	(25,500)	(25,892)	(35,118)
Proceeds from sale of asset	—	—	3,000
Net cash used in investing activities	(82,152)	(32,971)	(22,453)
Financing activities:			
Borrowings from subsidiaries for notes payable	700	15,355	34,317
Repayments to subsidiaries for notes payable	(3,140)	(20,901)	(44,145)
Borrowings from lines of credit	10,000	—	—
Repayments of long-term borrowings	—	—	(50,000)
Issuance of common stock, net of issuance costs	80,659	39,085	91,029
Debt issuance costs	(46)	(224)	—
Dividends paid	(47,905)	(43,582)	(40,137)
Net cash provided (used in) by financing activities	40,268	(10,267)	(8,936)
Net change in cash and cash equivalents	(4,274)	2,283	2,423
Cash and cash equivalents, beginning of year	5,142	2,859	436
Cash and cash equivalents, end of year	$ 868	5,142	2,859
Cash paid (refunded) during the year for:			
Interest	$ 17,465	17,512	18,518
Income taxes	$ (4,870)	(5,483)	(4,998)
Supplemental disclosure of non-cash activities:			
Share-based compensation from investment in subsidiaries	$ 3,778	4,656	4,413

See Accompanying Notes to Schedule I

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FINANCIAL STATEMENT SCHEDULE

Schedule I

SJW Group (Parent Only)
NOTES TO CONDENSED FINANCIAL STATEMENTS
Years ended December 31, 2023, 2022 and 2021
(Dollars in thousands, except share and per share data)

Restrictions on Dividends and Other Distributions

SJW Group is a legal entity separate and distinct from its various subsidiaries. As a holding company with no significant operations of its own, SJW Group's principal sources of funds are dividends or other distributions from its operating subsidiaries, borrowings and the issuance of equity. The rights of SJW Group and, consequently, its creditors and shareholders, to participate in any distribution of assets of any of its subsidiaries are subject to certain prior claims of creditors of such subsidiary.

The abilities of certain of SJW Group's subsidiaries to transfer funds to SJW Group in the form of cash dividends, loans or advances are subject to certain contractual and regulatory restrictions. SJW Group and its subsidiaries are subject to debt covenants that could limit their respective abilities to pay dividends. For a discussion on these covenants, see Note 6, "Long-term Debt" to SJW Group and Subsidiaries Notes to Consolidated Financial Statements. In addition, CTWS and its regulated subsidiaries are prohibited from paying dividends if not in compliance with minimum equity requirements under commitments made by SJW Group as part of the approval granted by the PURA and the Maine Public Utilities Commission in connection with the acquisition of CTWS.

As of December 31, 2023, the restricted net assets of SJW Group's subsidiaries were approximately $408,244 or 33% of consolidated net assets of SJW Group.

SJW Group and Subsidiaries
FINANCIAL STATEMENT SCHEDULE

Schedule II

VALUATION AND QUALIFYING ACCOUNTS AND RESERVES
Years ended December 31, 2023, 2022 and 2021
(in thousands)

Description		2023	2022	2021
Allowance for doubtful accounts:				
Balance, beginning of period	$	5,753	4,600	3,891
Charged to expense		3,594	1,195	932
Charged to regulatory asset		1,628	265	1,610
Accounts written off		(5,479)	(2,248)	(2,394)
Recoveries of accounts written off		1,055	1,941	561
Balance, end of period	$	6,551	5,753	4,600
Reserve for litigation and claims:				
Balance, beginning of period	$	1,768	607	684
Charged to expense		971	1,583	916
Revision to accrual, due to settlements		(166)	(62)	(50)
Payments		(685)	(360)	(943)
Balance, end of period	$	1,888	1,768	607

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Evaluation of Disclosure Control and Procedures

SJW Group's management, with the participation of its Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of SJW Group's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, the "Exchange Act"), as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that SJW Group's disclosure controls and procedures as of the end of the period covered by this report have been designed and are functioning effectively to provide reasonable assurance that the information required to be disclosed by SJW Group in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. SJW Group believes that a control system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the control system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Report on Internal Control over Financial Reporting

SJW Group's management is responsible for establishing and maintaining an adequate internal control structure over financial reporting and for an assessment of the effectiveness of internal control over financial reporting, as such items are defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act.

Management has utilized the criteria established in "Internal Control-Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission to evaluate the effectiveness of internal control over financial reporting.

SJW Group's management has performed an assessment of the effectiveness of internal control over financial reporting as of December 31, 2023. Based on this assessment, management has concluded SJW Group's internal control over financial reporting as of December 31, 2023 was effective.

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Our independent registered public accounting firm, DELOITTE & TOUCHE LLP (PCAOB ID No. 34), has issued an auditors' report on the effectiveness of our internal control over financial reporting, which is included in Item 8 of this report.

Changes in Internal Controls

There has been no change in internal control over financial reporting during the fourth fiscal quarter of 2023 that has materially affected, or is reasonably likely to materially affect, the internal controls over financial reporting of SJW Group.

Item 9B. ***Other Information***

SJW Group intends to post information about the operating and financial performance of SJW Group and its subsidiaries on its website *http://www.sjwgroup.com* from time to time. The content of SJW Group's website is not incorporated by reference to or part of this report.

a. There is no information that was required to be disclosed in a report on Form 8-K during the fourth quarter of 2023 but was not reported.

b. In the quarter ended December 31, 2023, none of our directors or officers (as defined in Rule 16a-1(f) of the Exchange Act) adopted or terminated a plan for the purchase or sale of our securities intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or a non-Rule 10b5-1 trading arrangement for the purchase or sale of our securities, within the meaning of Item 408 of Regulation S-K.

Item 9C. ***Disclosure Regarding Foreign Jurisdictions that Prevent Inspection***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required by this item is contained in part under the caption "Executive Officers of the Registrant" in Part I, Item 1, of this report, and in SJW Group's Proxy Statement for its 2024 Annual Meeting of Stockholders (the "2024 Proxy Statement") under the captions "PROPOSAL 1 ELECTION OF DIRECTORS" and "Delinquent Section 16(a) Reports," and is incorporated herein by reference.

Item 11. ***Executive Compensation***

The information required by this item is contained in the 2024 Proxy Statement under the captions "Compensation of Directors," "Executive Compensation and Related Information," "Compensation Committee Interlocks and Insider Participation," and "Committee Reports" and is incorporated herein by reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information required by this item is contained in the 2024 Proxy Statement under the captions "Security Ownership of Certain Beneficial Owners and Management" and "Securities Authorized for Issuance under Equity Compensation Plans" and is incorporated herein by reference.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

The information required by this item is contained in the 2024 Proxy Statement under the caption "Certain Relationships and Related Transactions" and "Director Independence" and is incorporated herein by reference.

Item 14. ***Principal Accountant Fees and Services***

The information required by this item is contained in the 2024 Proxy Statement under the caption "Principal Independent Accountants' Fees and Services" and is incorporated herein by reference.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

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All other schedules are omitted as the required information is inapplicable or the information is presented in the consolidated financial statements or related notes.

(a)(3) Exhibits required to be filed by Item 601 of Regulation S-K.

See Exhibit Index located immediately following this Item 15.

The exhibits filed herewith are attached hereto (except as noted) and those indicated on the Exhibit Index, which are not filed herewith, were previously filed with the Securities and Exchange Commission as indicated.

EXHIBIT INDEX

Exhibit No.	Description
1.1	Equity Distribution Agreement, dated November 17, 2021, by and among the Company, J.P. Morgan Securities LLC, Janney Montgomery Scott LLC, RBC Capital Markets, LLC and Wells Fargo Securities, LLC. Incorporated by reference to Exhibit 1.1 to the Form 8-K filed on November 17, 2021. (2)
1.2	Amendment 1, dated March 1, 2023, to the Equity Distribution Agreement, dated November 17, 2021, by and among the Company, J.P. Morgan Securities LLC, Janney Montgomery Scott LLC, RBC Capital Markets, LLC and Wells Fargo Securities, LLC. Incorporated by reference to Exhibit 10.1 to the Form 10-Q filed on May 1, 2023. (2)
3.1	Certificate of Incorporation of SJW Group. Incorporated by reference to Exhibit 3.1 to Form 8-K filed on November 15, 2016.
3.2	Certificate of Amendment of the Certificate of Incorporation of SJW Group. Incorporated by reference to Exhibit 3.3 to Form 8-K filed on November 15, 2016.
3.3	Certificate of Amendment of Certificate of Incorporation of SJW Group dated April 24, 2019. Incorporated by reference to Exhibit 3.1 to Form 8-K filed on April 25, 2019.
3.4	This Composite Amended and Restated Certificate of Incorporation of SJW Group reflects the provisions of the Corporation's Amended and Restated Certificate of Incorporation, as amended and restated on April 24, 2019 and all amendments thereto filed with the Delaware Secretary of State thereafter on or prior to February 22, 2024, but is not an amendment or restatement thereof. (1)
3.5	Amended and Restated Bylaws of SJW Group, effective as of December 11, 2023. Incorporated by reference to Exhibit 3.1 to the Form 8-K filed on December 15, 2023.
4.1	Instruments Defining the Rights of Security Holders, including Indentures: SJW Group hereby agrees to furnish upon request to the Commission a copy of each such instrument defining the rights of holders of unregistered senior and subordinated debt of the Company.
4.2	Form of Common Stock Certificate of SJW Group. Incorporated by reference to Exhibit 4.1 to Form 8-K filed on November 15, 2016.
4.3	Indenture dated as of June 1, 2010 between San Jose Water Company and Wells Fargo Bank, National Association. Incorporated by reference to Exhibit 4.1 to Form 10-Q for the quarter ended June 30, 2010.
4.4	Indenture dated as of December 1, 2016, by and between California Pollution Control Financing Authority and The Bank of New York Mellon Trust Company, N.A. relating to the Bond. SJW Group agrees to furnish to the Commission upon request a copy of such agreement which it has elected not to file under the provisions of Regulation S-K 601(b)(4)(iii).
4.5	Description of SJW Group's capital stock registered under section 12 of the Securities Exchange Act of 1934 Incorporated by reference to Exhibit 4.6 to form 10-K for the year ended December 31, 2019.
10.1	Water Supply Contract dated January 27, 1981, between San Jose Water Works and the Santa Clara Valley Water District, as amended. Incorporated by reference to Exhibit 10.1 to Form 10-K for the year ended December 31, 2001.
10.2	Grantor Trust Agreement by and between San Jose Water Company and Wells Fargo Bank, National Association dated November 2, 2012. Incorporated by reference as Exhibit 10.4 to Form 10-K for the year ended December 31, 2012.
10.3	Credit Agreement among SJW Group, San Jose Water Company, SJWTX, Inc., Connecticut Water Service, Inc., JPMorgan Chase Bank, N.A., and Wells Fargo Bank, National Association, dated August 2, 2022. Incorporated by reference to Exhibit 10.1 to Form 8-K filed on August 5, 2022.

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10.4	Credit Agreement, dated April 23, 2021, between San Jose Water Company and JPMorgan Chase Bank, N.A. Incorporated by reference to Exhibit 10.1 to Form 8-K filed on April 27, 2021.
10.5	Loan Agreement dated as of June 1, 2010 between the California Pollution Control Financing Authority and San Jose Water Company. Incorporated by reference to Exhibit 10.3 to Form 10-Q for the quarter ended June 30, 2010.
10.6	Loan Agreement dated as of December 1, 2016 between the California Pollution Control Financing Authority and San Jose Water Company. Incorporated by reference to Exhibit 10.7 to Form 10-K for the year ended December 31, 2016.
10.7	Bond Purchase Contract dated June 9, 2010 among Goldman, Sachs & Co., the Honorable Bill Lockyer, Treasurer of the State of California, the California Pollution Control Financing Authority and San Jose Water Company. Incorporated by reference to Exhibit 10.4 to Form 10-Q for the quarter ended June 30, 2010.
10.8	Bond Purchase Contract dated December 15, 2016 among Morgan Stanley & Co. LLC, RBC Capital Markets, LLC, the Honorable John Chiang, Treasurer of the State of California, the California Pollution Control Financing Authority and San Jose Water Company. Incorporated by reference to Exhibit 10.9 to Form 10-K for the year ended December 31, 2016.
10.9	Note Agreement between SJW Corp. and the Prudential Insurance Company of America, dated June 30, 2011. Incorporated by reference as Exhibit 10.3 to Form 8-K filed on July 7, 2011.
10.10	Note Agreement between San Jose Water Company and John Hancock Life Insurance Company (U.S.A.) and John Hancock Life Insurance Company of New York, dated January 24, 2014. Incorporated by reference as Exhibit 10.1 to Form 8-K filed on January 29, 2014.
10.11	Note Purchase Agreement among San Jose Water Company and certain affiliates of MetLife, Inc., Brighthouse Financial, Inc. and New York Life Insurance Company, dated March 28, 2019. Incorporated by reference to Exhibit 10.1 to Form 8-K filed on March 28, 2019.
10.12	Note Purchase Agreement among SJW Group and Purchasers listed therein, dated October 8, 2019, along with the forms of senior notes. Incorporated by reference to Exhibit 10.1 to the Form 8-K filed on October 9, 2019.
10.13	San Jose Water Company Executive Supplemental Retirement Plan, as Amended and Restated on January 25, 2012, effective January 1, 2012. Incorporated by reference as Exhibit 10.20 to Form 10-K for the year ended December 31, 2011. (2)
10.14	First Amendment to the San Jose Water Company Executive Supplemental Retirement Plan effective November 15, 2016. Incorporated by reference to Exhibit 10.14 to the Form 10-K for the year ended December 31, 2016. (2)
10.15	Second Amendment to the San Jose Water Company Executive Supplemental Retirement Plan effective October 9, 2019. Incorporated by reference to Exhibit 10.5 to the Form 8-K filed on October 9, 2019. (2)
10.16	San Jose Water Company Cash Balance Executive Supplemental Retirement Plan, as Amended and Restated on January 25, 2012, effective January 1, 2012. Incorporated by reference as Exhibit 10.23 to Form 10-K for the year ended December 31, 2011. (2)
10.17	First Amendment to the San Jose Water Company Cash Balance Executive Supplemental Retirement Plan effective as of October 30, 2013. Incorporated by reference as Exhibit 10.15 to Form 10-K for the year ended December 31, 2013. (2)
10.18	Second Amendment to the San Jose Water Company Cash Balance Executive Supplemental Retirement Plan effective as of January 31, 2014. Incorporated by reference as Exhibit 10.2 to Form 8-K filed on January 30, 2014. (2)
10.19	Third Amendment to the San Jose Water Company Cash Balance Executive Supplemental Retirement Plan effective November 15, 2016. Incorporated by reference to Exhibit 10.18 to Form 10-K for the year ended December 31, 2016. (2)
10.20	Fourth Amendment to the San Jose Water Company Cash Balance Executive Supplemental Retirement Plan effective November 6, 2017. Incorporated by reference to Exhibit 10.5 to the Form 10-Q for the quarter ended September 30, 2017. (2)

10.21	Fifth Amendment to the San Jose Water Company Cash Balance Executive Supplemental Retirement Plan effective October 24, 2018. Incorporated by reference as Exhibit 10.21 to Form 10-K for the year ended December 31, 2018. (2)
10.22	Sixth Amendment to the San Jose Water Company Cash Balance Executive Supplemental Retirement Plan effective October 9, 2019. Incorporated by reference as Exhibit 10.4 to Form 8-K filed on October 9, 2019. (2)
10.23	SJW Corp. Long-Term Incentive Plan, as amended and restated on July 29, 2015. Incorporated by reference as Exhibit 10.1 to Form 10-Q filed for the quarter ended September 30, 2015. (2)
10.24	First Amendment to the SJW Group Long-Term Incentive Plan dated November 15, 2016. Incorporated by reference to Exhibit 10.21 to Form 10-K for the year ended December 31, 2016. (2)
10.25	Second Amendment to the SJW Group Long-Term Incentive Plan dated October 28, 2020. Incorporated by reference as Exhibit 10.1 to Form 10-Q filed for the quarter ended September 30, 2020. (2)
10.26	Third Amendment to the SJW Group Long-Term Incentive Plan dated January 28, 2021. Incorporated by reference to Exhibit 10.31 to Form 10-K for the year ended December 31, 2020. (2)
10.27	Employment Agreement of Mr. Eric W. Thornburg dated September 26, 2017, together with Exhibit A (Form of Restricted Stock Unit Issuance Agreement - Initial Time-Based Grant), Exhibit B (Form of Restricted Stock Issuance Agreement - Special Time-Based Grant), and Exhibit C (Form of Confidential Settlement Agreement and Release). Incorporated by reference to Exhibit 10.3 to Form 10-Q for the quarter ended September 30, 2017. (2)
10.28	First Amendment dated December 31, 2019, to the Employment Agreement of Eric W. Thornburg dated September 26, 2017. Incorporated by reference to Exhibit 10.1 to the Form 8-K filed on January 7, 2020. (2)
10.29	SJW Group Amended and Restated Executive Officer Short-Term Incentive Plan dated October 28, 2020. Incorporated by reference as Exhibit 10.2 to Form 10-Q for the quarter ended September 30, 2020. (2)
10.30	First Amendment to the Executive Officer Short-Term Incentive Plan dated January 28, 2021. Incorporated by reference to Exhibit 10.39 to Form 10-K for the year ended December 31, 2020. (2)
10.31	Amended and Restated Executive Severance Plan, dated October 26, 2022. Incorporated by reference as Exhibit 10.1 to Form 8-K filed on October 28, 2022. (2)
10.32	San Jose Water Company Special Deferral Election Plan, as amended and restated, effective January 1, 2013. Incorporated by reference as Exhibit 10.36 to Form 10-K for the year ended December 31, 2012. (2)
10.33	First Amendment to the Special Deferral Election Plan effective November 15, 2016. Incorporated by reference as Exhibit 10.37 to Form 10-K for the year ended December 31, 2016. (2)
10.34	SJW Corp. Amended and Restated Deferred Restricted Stock Program, effective January 1, 2008. Incorporated by reference as Exhibit 10.1 to Form 10-Q for the quarter ended March 31, 2008. (2)
10.35	First Amendment to the Amended and Restated Deferred Restricted Stock Program dated November 15, 2016. Incorporated by reference as Exhibit 10.39 to Form 10-K for the year ended December 31, 2016. (2)
10.36	SJW Corp. Deferral Election Program for Non-Employee Board Members, as amended and restated effective October 30, 2013. Incorporated by reference as Exhibit 10.32 to Form 10-K for the year ended December 31, 2013. (2)
10.37	First Amendment to the Deferral Election Program for Non-Employee Board Members dated November 15, 2016. Incorporated by reference as Exhibit 10.41 to Form 10-K for the year ended December 31, 2016. (2)
10.38	Form of SJW Group Restricted Stock Unit Award Agreement for Non-Employee Board Members. Incorporated by reference as Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2017. (2)
10.39	Second Amendment to the Formulaic Equity Award Program for Non-Employee Board Members dated November 15, 2016. Incorporated by reference as Exhibit 10.45 to Form 10-K for the year ended December 31, 2016. (2)

10.40	Third Amendment to the Formulaic Equity Award Program for Non-employee Board members dated October 24, 2018. Incorporated by reference as Exhibit 10.48 to Form 10-K for the year ended December 31, 2018. (2)
10.41	Fourth Amendment to the Formulaic Equity Award Program for Non-Employee Board Members dated September 8, 2021. Incorporated by reference to Exhibit 10.1 to Form 8-K filed on September 14, 2021. (2)
10.42	Form of SJW Group Restricted Stock Unit Issuance Agreement (TSR Goals). Incorporated by reference to Exhibit 10.55 to Form 10-K for the year ended December 31, 2017. (2)
10.43	Form of SJW Group Restricted Stock Unit Issuance Agreement. Incorporated by reference as Exhibit 10.52 to Form 10-K for the year ended December 31, 2016. (2)
10.44	Form of SJW Group Restricted Stock Unit Issuance Agreement (ROE Goal). Incorporated by reference as Exhibit 10.54 to Form 10-K for the year ended December 31, 2016. (2)
10.45	Form of SJW Group Restricted Stock Unit Issuance Agreement (EPS Goal). Incorporated by reference as Exhibit 10.55 to Form 10-K for the year ended December 31, 2016. (2)
10.46	Form of Director and Officer Indemnification Agreement between SJW Group and its officers and Board members. Incorporated by reference to Exhibit 10.1 to Form 8-K filed on November 15, 2016. (2)
10.47	Trust Agreement for The Connecticut Water Company Welfare Benefits Plan (VEBA) dated January 1, 1989. Incorporated by reference to Exhibit 10.21 to Connecticut Water Service, Inc.'s Form 10-K for the year ended December 31, 1989. (2)
10.48	Amended and Restated Supplemental Executive Retirement Agreement dated January 24, 2008 between The Connecticut Water Company and Eric W. Thornburg. Incorporated by reference to Exhibit 10.73 to Form 10-K for the year ended December 31, 2020 (2)
10.49	Amended and Restated Supplemental Executive Retirement Agreement dated November 15, 2017 between The Connecticut Water Company and Kristen A. Johnson. Incorporated by reference to Exhibit 10.75 to Form 10-K for the year ended December 31, 2019. (2)
10.50	Amendment to the Amended and Restated Supplemental Executive Retirement Agreement effective as of November 1, 2019 between Kristen A. Johnson and The Connecticut Water Company. Incorporated by reference to Exhibit 10.77 to Form 10-K for the year ended December 31, 2019. (2)
10.51	Grantor Trust Agreement dated May 1, 2017, between Connecticut Water Service, Inc. and Matrix Trust Company. Incorporated by reference to Exhibit 10.78 to Form 10-K for the year ended December 31, 2019. (2)
10.52	Deferred Compensation Agreement dated December 8, 2011 between The Connecticut Water Company and Eric W. Thornburg. Incorporated by reference to Exhibit 10.78 to Form 10-K for the year ended December 31, 2020. (2)
10.53	Amended and Restated Deferred Compensation Agreement, effective January 1, 2011, between The Connecticut Water Company and Kristen A. Johnson. Incorporated by reference to Exhibit 10.80 to Form 10-K for the year ended December 31, 2019. (2)
10.54	First Amendment to the Amended and Restated Deferred Compensation Agreement, dated as of December 1, 2011, among Kristen A. Johnson and The Connecticut Water Company. Incorporated by reference to Exhibit 10.82 to Form 10-K for the year ended December 31, 2019. (2)
10.55	Second Amendment to the Amended and Restated Deferred Compensation Agreement, dated as of December 20, 2016, between the Connecticut Water Company and Kristen A. Johnson. Incorporated by reference to Exhibit 10.86 to Form 10-K for the year ended December 31, 2019. (2)
10.56	Connecticut Water Company Deferred Compensation Plan, effective January 1, 2017. Incorporated by reference to Exhibit 10.1 to Connecticut Water Service, Inc.'s Form 8-K filed on December 16, 2016. (2)
10.57	First Amendment, effective October 9, 2019, to the Connecticut Water Company Deferred Compensation Plan, dated January 1, 2017. Incorporated by reference to Exhibit 10.89 to Form 10-K for the year ended December 31, 2019. (2)

10.58	Second Amendment, effective October 9, 2019, to the Connecticut Water Company Deferred Compensation Plan, dated January 1, 2017. Incorporated by reference to Exhibit 10.90 to Form 10-K for the year ended December 31, 2019. (2)
10.59	Third Amendment, effective July 28, 2021, to the Connecticut Water Company Deferred Compensation Plan, dated January 1, 2017. Incorporated by reference as Exhibit 10.2 to Form 10-Q for the quarter ended June 30, 2021. (2)
10.60	Amended and Restated Employment Agreement, dated December 30, 2008, among The Connecticut Water Company, Connecticut Water Service, Inc., and Kristen A. Johnson. Incorporated by reference to Exhibit 10.94 to Form 10-K for the year ended December 31, 2019. (2)
10.61	First Amendment to Amended and Restated Employment Agreement, dated March 8, 2013, among The Connecticut Water Company, Connecticut Water Service, Inc. and Kristen A. Johnson. Incorporated by reference to Exhibit 10.17 to Connecticut Water Service, Inc.'s Form 10-K for the year ended December 31, 2012. (2)
10.62	Form of Second Amendment to Employment Agreement, dated April 2014, among The Connecticut Water Company, Connecticut Water Service, Inc. and Kristen A. Johnson. Incorporated by reference to Exhibit 10.2 to Connecticut Water Service, Inc.'s Form 8-K filed on April 3, 2014. (2)
10.63	Third Amendment to the Amended and Restated Employment Agreement, effective as of November 1, 2019, among The Connecticut Water Company, Connecticut Water Service, Inc. and Kristen A. Johnson. Incorporated by reference to Exhibit 10.97 to Form 10-K for the year ended December 31, 2019. (2)
10.64	Amended and Restated Director Compensation and Expense Reimbursement Policies effective as of January 1, 2023. Incorporated by reference as Exhibit 10.3 to Form 10-Q for the quarter ended September 30, 2022. (2)
10.65	Amended and Restated Formulaic Equity Award Program for Non-Employee Board Members effective as of January 1, 2023. Incorporated by reference as Exhibit 10.4 to Form 10-Q for the quarter ended September 30, 2022. (2)
10.66	Employment Agreement, dated April 1, 2014, among The Connecticut Water Company, Connecticut Water Service, Inc. and Craig J. Patla. Incorporated by reference to Exhibit 10.85 to the Form 10-K filed on February 24, 2023. (2)
10.67	First Amendment to Employment Agreement, effective as of January 18, 2020, among The Connecticut Water Company, Connecticut Water Service, Inc. and Craig J. Patla. Incorporated by reference to Exhibit 10.86 to the Form 10-K filed on February 24, 2023. (2)
10.68	Second Amendment to Employment Agreement, effective as of January 1, 2023, among The Connecticut Water Company, Connecticut Water Service, Inc. and Craig J. Patla. Incorporated by reference to Exhibit 10.87 to the Form 10-K filed on February 24, 2023. (2)
10.69	SJW Group 2023 Long-Term Incentive Plan. Incorporated by reference to Appendix I to the Proxy Statement filed on March 9, 2023. (2)
10.70	SJW Group 2023 Employee Stock Purchase Plan. Incorporated by reference to Appendix II to the Proxy Statement filed on March 9, 2023. (2)
10.71	Transition and Separation Agreement and Release, dated July 6, 2023, by Andrew R. Gere and San Jose Water Company. Incorporated by reference to Exhibit 10.1 to the Form 8-K filed on July 7, 2023. (2)
10.72	First Amendment to Credit Agreement, dated August 2, 2023, between SJW Group, San Jose Water Company, SJWTX, Inc., Connecticut Water Service, Inc., JPMorgan Chase Bank, N.A., as administrative agent and a lender, and the other lenders party thereto. Incorporated by reference to Exhibit 10.1 to Form 8-K filed on August 2, 2023.
21.1	Subsidiaries of SJW Group. (1)
23.1	Consent of Deloitte & Touche LLP. (1)

31.1	Certification Pursuant to Rule 13a-14(a)/15d-14(a) by President and Chief Executive Officer. (1)
31.2	Certification Pursuant to Rule 13a-14(a)/15d-14(a) by Chief Financial Officer and Treasurer. (1)
32.1	Certification Pursuant to 18 U.S.C. Section 1350 by President and Chief Executive Officer, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (1)
32.2	Certification Pursuant to 18 U.S.C. Section 1350 by Chief Financial Officer and Treasurer, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (1)
97.1	SJW Group Clawback Policy. (1)
101.INS	XBRL Instance Document - the instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document

(1) Filed currently herewith.

(2) Management contract or compensatory plan or agreement.

(3) Pursuant to Item 601(b)(2) of Regulation S-K, certain exhibits and schedules have been omitted. The registrant hereby agrees to furnish supplementally a copy of any omitted exhibit or schedule to the SEC upon request.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SJW Group

Date: February 22, 2024 By /s/ Eric W. Thornburg

ERIC W. THORNBURG,
President, Chief Executive Officer and
Chair of the Board
(Principal executive officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date: February 22, 2024 By /s/ Eric W. Thornburg

ERIC W. THORNBURG,
President, Chief Executive Officer and
Chair of the Board
(Principal executive officer)

Date: February 22, 2024 By /s/ Andrew F. Walters

ANDREW F. WALTERS,
Chief Financial Officer and Treasurer
(Principal financial officer)

Date: February 22, 2024 By /s/ Mohammed G. Zerhouni

MOHAMMED G. ZERHOUNI,
Senior Vice President of Finance
(Principal accounting officer)

Date: February 22, 2024 By /s/ Carl Guardino

CARL GUARDINO,
Member, Board of Directors

Date: February 22, 2024 By /s/ Mary Ann Hanley

MARY ANN HANLEY,
Member, Board of Directors

Date: February 22, 2024 By /s/ Heather Hunt

HEATHER HUNT,
Member, Board of Directors

Date: February 22, 2024 By /s/ Rebecca A. Klein

REBECCA A. KLEIN,
Member, Board of Directors

Date: February 22, 2024	By	/s/ Denise L. Kruger
		DENISE L. KRUGER, Member, Board of Directors
Date: February 22, 2024	By	/s/ Gregory P. Landis
		GREGORY P. LANDIS, Member, Board of Directors
Date: February 22, 2024	By	/s/ Daniel B. More
		DANIEL B. MORE, Member, Board of Directors
Date: February 22, 2024	By	/s/ Carol P. Wallace
		CAROL P. WALLACE, Member, Board of Directors

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)
☑ ANNUAL REPORT PURSUANT TO SECTION 13 or 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2023

Or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File number 1-6659

ESSENTIAL UTILITIES, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania	23-1702594
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
762 W Lancaster Avenue, Bryn Mawr, Pennsylvania	19010-3489
(Address of principal executive offices)	(Zip Code)

(610) 527-8000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value $0.50 per share	**WTRG**	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☑ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes ☑ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☑ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☑ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "small reporting company," and "emerging growth company" in Rule 12(b)-2 of the Exchange Act.:

Large accelerated filer ☑
Accelerated filer ☐
Non-accelerated filer ☐
Small reporting company ☐
Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D.1(b) . ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ Yes ☑ No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2023: $10,535,546,923

The number of shares outstanding of the registrant's common stock as of February 23, 2024: 273,298,409

DOCUMENTS INCORPORATED BY REFERENCE

(1) Portions of the definitive Proxy Statement, relating to the 2024 annual meeting of shareholders of registrant, to be filed within 120 days after the end of the fiscal year covered by this Form 10-K, have been incorporated by reference into Part III of this Form 10-K

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report on Form 10-K, or this Annual Report, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "estimates", "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions. Please refer to the Summary in Item 1A – Risk Factors in this Annual Report for a description of the types of forward-looking statements in this Annual Report. These factors are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in any of our forward-looking statements. Other unknown or unpredictable factors could also have material adverse effects on future results.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this Annual Report completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this Annual Report. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. For further information or other factors which could affect our financial results and such forward-looking statements, see Item 1A – Risk Factors. We qualify all of our forward-looking statements by these cautionary statements.

PART I

Item 1. *Business*

The Company

Essential Utilities, Inc., referred to as "Essential Utilities", "Essential", the "Company", "we", "us", or "our", a Pennsylvania corporation, is the holding company for regulated utilities providing water, wastewater, or natural gas services to an estimated 5.5 million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, Virginia, and Kentucky under the Aqua and Peoples brands. One of our largest operating subsidiaries, Aqua Pennsylvania, Inc., or Aqua Pennsylvania, accounted for approximately 56% of operating revenues and approximately 68% of income for our Regulated Water segment in 2023. As of December 31, 2023, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of water and wastewater customers we serve. Aqua Pennsylvania's service territory is located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated water or wastewater utility subsidiaries provide similar services in seven additional states. Our Peoples subsidiaries provide natural gas service to approximately 744,000 customers in western Pennsylvania and Kentucky. Approximately 95% of the total number of natural gas utility customers we serve are in western Pennsylvania. The Company also operates market-based activities, conducted through its non-regulated subsidiaries, that provide utility service line protection solutions and repair services to households and gas marketing and production activities. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, focusing on water and wastewater utilities and to opportunistically pursue growth ventures in select market-based activities, such as infrastructure opportunities that are supplementary and complementary to our regulated water utility businesses.

In December 2022, the Company signed an agreement to sell its regulated natural gas utility assets in West Virginia, which represented approximately two percent of the Company's regulated natural gas customers. The sale closed on October 1, 2023, and the Company received net cash proceeds of $39,965,000, subject to working capital and other adjustments. The sale concluded the Company's regulated utility operations in West Virginia. In October 2023, the Company entered into an agreement to sell its interest in three non-utility local microgrid and distributed energy projects for $165,000,000. The sale was completed in January 2024. These transactions are consistent with the Company's long-term strategy of focusing on its core business and will allow the Company to prioritize the growth of its utilities in states where it has scale. The Company intends to use the proceeds from these transactions to finance its capital expenditures and water and wastewater acquisitions, in place of external funding from equity and debt issuances. See Note 3 – *Assets Held for Sale and Dispositions* in the Notes to Consolidated Financial Statements for additional information.

The following table reports our operating revenues, by principal state, for our Regulated Water segment, which includes both water and wastewater utility services, Regulated Natural Gas segment, and Other and eliminations for the year ended December 31, 2023:

	Operating Revenues (000's)	Operating Revenues (%)
Pennsylvania	$ 643,604	31.3%
Ohio	125,574	6.1%
Texas	98,441	4.8%
Illinois	96,833	4.7%
North Carolina	82,065	4.0%
Other states (1)	106,859	5.2%
Regulated Water segment total	1,153,376	56.1%
Pennsylvania	798,831	38.9%
Other states (2)	64,928	3.2%
Regulated Natural Gas segment total	863,759	42.1%
Other and eliminations	36,689	1.8%
Consolidated	$ 2,053,824	100.0%

(1) Includes our water operating subsidiaries in the following states: New Jersey, Indiana, and Virginia.
(2) Includes our natural gas operating subsidiaries in West Virginia (up through September 2023) and Kentucky.

The Company has identified eleven operating segments and has two reportable segments, the Regulated Water segment and the Regulated Natural Gas segment. The Regulated Water segment is comprised of eight operating segments for the Company's water and wastewater regulated utility companies, aligned with the states where we provide these services. These operating segments are aggregated into one reportable segment since each of the Company's operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. The Regulated Natural Gas segment is comprised of one operating segment representing natural gas utility companies, for which the Company provides natural gas distribution services. In addition to the Company's two reportable segments, the Company includes two of its operating segments in "Other". These businesses represent its non-regulated water, wastewater, and natural gas operations, which are not quantitatively significant to be reportable and therefore are included as a component of "Other". In addition, "Other" and eliminations include corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, because they would not be recoverable as a cost of utility service, and intersegment eliminations. Information concerning revenues, net income, identifiable assets and related financial information for the Regulated Water and Regulated Natural Gas segments and Other and eliminations for 2023, 2022, and 2021, is set forth in *Management's Discussion and Analysis of Financial Condition and Results of Operations* and in Note 18 – *Segment Information* in the Notes to Consolidated Financial Statements which is contained in Item 8 of this Annual Report.

The following table summarizes our operating revenues, by utility customer class, for the Regulated Water and Regulated Natural Gas segments and Other and eliminations for the year ended December 31, 2023:

	Operating Revenues (000's)	Operating Revenues (%)
Residential water	$ 641,351	31.2%
Commercial water	180,731	8.8%
Fire protection	41,257	2.0%
Industrial water	33,949	1.7%
Other water	51,527	2.5%
Total water	948,815	46.2%
Wastewater	187,394	9.0%
Other utility	17,167	0.8%
Regulated Water segment total	1,153,376	56.0%
Residential gas	519,406	25.3%
Commercial gas	111,272	5.5%
Industrial gas	3,232	0.2%
Gas transportation	184,598	9.0%
Other utility	45,251	2.2%
Regulated Natural Gas segment total	863,759	42.2%
Other and eliminations	36,689	1.8%
Consolidated	$ 2,053,824	100.0%

Customers

Our water utility customer base is diversified among residential water, commercial water, fire protection, industrial water, other water, wastewater customers, and other utility customers (consisting of contracted services that are associated with the utility operations). Residential water and wastewater customers make up the largest component of our water utility customer base, with these customers representing approximately 69%, 68%, and 69%, of our water and wastewater revenues for 2023, 2022, and 2021, respectively. Substantially all of our water utility customers are metered, which allows us to measure and bill for our customers' water consumption. Water consumption per customer is affected by local weather conditions during the year, especially during late spring, summer, and early fall. In general, during these seasons, an extended period of dry weather increases consumption, while above-average rainfall decreases consumption. Also, an increase in the average temperature generally causes an increase in water consumption. On occasion, abnormally dry weather in our service areas can result in governmental authorities declaring drought warnings and imposing water use restrictions in the affected areas, which could reduce water consumption. See "Business – *Water Utility Supplies, and Facilities and Wastewater Utility Facilities*" for a discussion of water use restrictions that may impact water consumption during abnormally dry weather. The geographic diversity of our water utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of our service territories. Water usage is also affected by changing consumption patterns by our customers, resulting from such causes as increased water conservation and the installation of water saving devices and appliances that can result in decreased water usage. It is estimated that, in the event we experience a 0.50% decrease in residential water consumption, it would result in a decrease in annual residential water revenue of approximately $3,000,000, which would likely be partially offset by a reduction in incremental water production expenses such as chemicals and power.

Our natural gas utility customer base is diversified among residential gas, commercial gas, industrial gas, gas transportation, and other utility. Substantially all of our natural gas utility customers are metered, which allows us to measure and bill for our customers' natural gas usage. Natural gas usage per customer is affected by local weather conditions during the year, especially during the fall, winter, and early spring. These patterns reflect the higher demand for natural gas for heating purposes during the colder months. Our regulated natural gas revenues and expenses are also affected by the cost of gas. We are generally able to pass the cost of gas through to our customers using a purchased gas adjustment clause; therefore, fluctuations in the cost of purchased gas impact revenues on a dollar-for-dollar basis. Since

regulated natural gas revenues are affected by the cost of gas, higher gas costs, as well as general economic conditions, may cause customers to conserve usage, or seek alternative energy sources. In addition, higher gas costs result in an increase to our purchased gas inventory, which requires additional borrowings under credit facilities, resulting in higher interest expense.

The Company's growth in revenues over the past five years is primarily a result of its acquisition in 2020 of Peoples Natural Gas Company LLC and its affiliated companies, or the Peoples Gas Acquisition, increases in water and wastewater rates, increase in the cost of natural gas in 2021 and 2022, and customer growth. See *Economic Regulation* for a discussion of water, wastewater, and natural gas rates. The increase in our utility customer base has been due to customers added through acquisitions, partnerships with developers, and organic growth (excluding dispositions) as shown below:

Year	Utility Customer Growth Rate
2023	1.0%
2022	1.7%
2021	1.2%
2020	42.9%
2019	2.1%

In 2023, 2022, 2021, 2020, and 2019, our customer count increased by 5,875, 31,537, 21,246, 772,099 and 21,108 customers, respectively, primarily due to the water and wastewater utility systems that we acquired, organic growth, and in 2020, due to the Peoples Gas Acquisition that resulted to the addition of approximately 750,000 natural gas utility customers. Overall, for the five year period of 2019 through 2023, our utility customer base, adjusted to exclude customers associated with utility system dispositions, increased at an annual compound rate of 13.2%. During the five year period ended December 31, 2023, our utility customer base including customers associated with utility system acquisitions and dispositions increased from 1,005,590 at January 1, 2019 to 1,857,461 at December 31, 2023.

Acquisitions and Other Growth Ventures

We believe that acquisitions will continue to be an important source of customer growth for us. We intend to continue to pursue acquisitions of government-owned and regulated water and wastewater systems that provide services in areas near our existing service territories or in new service areas. We engage in continuing activities with respect to potential acquisitions, including calling on prospective sellers, performing analyses of and due diligence on acquisition candidates, making preliminary acquisition proposals, and negotiating the terms of potential acquisitions. Further, we are also seeking other potential business opportunities, including but not limited to, partnering with public and regulated utilities to invest in infrastructure projects, growing our market-based activities by acquiring businesses that provide water and wastewater or other utility-related services, and investing in infrastructure projects.

Based on the 2021 U.S. Census American Housing Survey, approximately 89% of the U.S. population obtain their water from public or private water utility systems, and 11% of the U.S. population obtain their water from individual wells. With approximately 50,000 community water systems in the U.S. (approximately 81% of which serve less than 3,300 customers), the water industry is the most fragmented of the major utility industries (telephone, natural gas, electric, water and wastewater). The majority of these community water systems are government-owned. The nation's water systems range in size from large government-owned systems, such as the New York City water system, which serves approximately 8.5 million people, to small systems, where a few customers share a common well. In the states where we operate regulated water utilities, we believe there are over 14,000 community water systems of widely-varying size, with the majority of the population being served by government-owned water systems.

Although not as fragmented as the water industry, the wastewater industry in the U.S. also presents opportunities for consolidation. Based on the 2021 U.S. Census American Housing Survey, approximately 84% of the U.S. population relies on public or private sewer systems, and 16% of the U.S. population relies on septic tank, cesspool, or other sewer options. A majority of wastewater facilities are government-owned rather than regulated utilities. In the states where we operate regulated water utilities, we believe there are approximately 4,000 wastewater facilities in operation, with the majority of the population being served by government-owned wastewater systems.

Because of the fragmented nature of the water and wastewater utility industries, we believe there are many potential water and wastewater system acquisition candidates throughout the U.S. We believe the factors driving consolidation of these systems are:

- the benefits of economies of scale;
- the increasing cost and complexity of environmental regulations;
- the need for substantial capital investment;
- the need for technical and managerial expertise;
- the desire to improve water quality and service;
- limited access to cost-effective financing;
- the monetizing of public assets to support, in some cases, the declining financial condition of municipalities; and
- the use of system sale proceeds by a municipality to accomplish other public purposes.

We are actively exploring opportunities to expand our water and wastewater utility operations through acquisitions or other growth ventures. During the three-year period ended December 31, 2023, we expanded our utility operations by completing 12 acquisitions of water or wastewater utilities or other similar assets.

Capital Investment

The Company expects to invest approximately $7.2 billion from 2024 through 2028 to meet compliance requirements, improve water and natural gas systems, and better serve customers through improved information technology. These investments include replacing and expanding its water and wastewater utility infrastructure and replacing and upgrading its natural gas utility infrastructure, with the latter leading to significant reductions in methane emissions that occur in aged gas pipes. The capital investments made to rehabilitate and expand the infrastructure of the communities we serve is critical to our mission of safely and reliably delivering Earth's most essential resources.

Supply and Facilities

Water Utility Supplies and Facilities and Wastewater Utility Facilities - Our water utility operations obtain their water supplies from surface water sources, underground aquifers, and water purchased from other water suppliers. Our water supplies are primarily self-supplied and processed at twenty-four surface water treatment plants located in five states, and numerous well stations located in the states in which we conduct business. Approximately 5.9% of our water supplies are provided through water purchased from other water suppliers. It is our policy to obtain and maintain the permits necessary to obtain and treat the water we distribute.

We believe that the capacities of our sources of supply, and our water treatment, pumping and distribution facilities, are generally sufficient to meet the present requirements of our customers under normal conditions. We plan system improvements and additions to capacity in response to normal replacement and renewal needs, changing regulatory standards, changing patterns of consumption, and increased demand from customer growth. The various state utility commissions have generally recognized the operating and capital costs associated with these improvements in setting water and wastewater rates.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions. The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income. In general, water consumption in the summer months is more affected by drought warnings and restrictions because discretionary and recreational use of water is at its highest during the summer months. At other times of the year, warnings and restrictions generally have less of an effect on water consumption. Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

We believe that our wastewater treatment facilities are generally adequate to meet the present requirements of our customers under normal conditions. Additionally, we own several wastewater collection systems that convey the wastewater to municipally-owned facilities for treatment. Changes in regulatory requirements can be reflected in revised permit limits and conditions when permits are renewed, typically on a five year cycle, or when treatment capacity is

expanded. Capital improvements are planned and budgeted to meet normal replacement and renewal needs, anticipated changes in regulations, needs for increased capacity related to projected growth, and to reduce inflow and infiltration to collection systems. The various state utility commissions have generally recognized the operating and capital costs associated with these improvements in setting wastewater rates for current and new customers. It is our policy to obtain and maintain the permits necessary for the treatment of the wastewater that we return to the environment.

Natural Gas Supply and Transportation Facilities - Our natural gas supply strategy is to ensure a dependable gas supply that is economically priced and which is available for delivery when needed. We purchase natural gas from intrastate, interstate and local sources, and transport natural gas supplies through various intrastate and interstate pipelines under contracts with remaining terms, including extensions, varying from one month to 10 years. We anticipate that these gas supply and transportation contracts will be renewed or replaced prior to their expiration.

The regulations of the states in which we operate natural gas utilities allow us to pass through changes in the cost of natural gas to our customers under purchased gas adjustment provisions in our tariffs. Depending upon the jurisdiction, the purchased gas adjustment factors are updated periodically, ranging from quarterly to annually. The changes in the cost of gas billed to customers are subject to review by the applicable regulatory bodies.

We use various third-party storage services or owned natural gas storage facilities to meet peak-day requirements and to manage the daily changes in demand due to changes in weather.

We own and operate underground natural gas storage facilities with capacity of 10.5 billion cubic feet (Bcf). Total working capacity is 5.3 Bcf for use during the heating season with a maximum daily withdrawal rate of 115.5 million cubic feet (MMcf). Additionally, we have contracted for off-system storage from interstate pipelines. The total amount of off-system storage under contract is 34.9 Bcf with a maximum daily withdrawal rate of 588.9 MMcf.

On an ongoing basis, we enter into contracts to provide sufficient supplies and pipeline capacity to meet our customers' natural gas requirements. However, it is possible for limited service disruptions to occur from time to time due to weather conditions, transportation constraints, and other events. As a result of these factors, supplies of natural gas may become unavailable from time to time, or prices may increase rapidly in response to temporary supply constraints or other factors. We enter into firm agreements with suppliers, including major producers and marketers, intended to provide flexibility to meet the temperature-sensitive needs of its customers. In Pennsylvania, our distribution system is connected to six interstate pipelines, where we maintain capacity we believe is sufficient to meet our customers' gas requirements. In Kentucky, our distribution system is connected to four interstate pipelines, where we maintain capacity we believe is sufficient to meet our customers' gas requirements.

Natural Gas Gathering - Our Pennsylvania Regulated Natural Gas service territory is situated in the Marcellus Shale production region. Approximately 27% of the natural gas supply on the system is from locally produced gas, which we gather and transport into our distribution system. Our gathering system is regulated by the Pennsylvania Public Utility Commission which includes various safety, environmental and, in some circumstances, anti-discrimination requirements, and in some instances complaint-based rate regulation. Our gathering operations may be subject to ratable take and common purchaser statutes in the states in which we operate.

Our Regulated Natural Gas gathering operations could be adversely affected should they be subject in the future to the application of state or federal regulation of rates and services. Our gathering operations could also be subject to additional safety and operational regulations relating to the design, construction, testing, operation, replacement, and maintenance of gathering facilities. We cannot predict what effect, if any, such changes might have on our operations, but our Regulated Natural Gas segment could be required to incur additional capital expenditures and increased costs depending on future legislative and regulatory changes. Refer to further discussion below in the *Environmental, Health and Safety Regulation and Compliance* section.

Economic Regulation

Most of our utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions, and authorize the issuance of securities. The utility commissions also establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state and may change over time. A small number of our water and wastewater utility operations are subject to rate regulation by county or city governments. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances we are granted by the respective utility commissions or authorities in the various states in which we operate.

Rate Case Management Capability – We maintain a rate case management capability, the objective of which is to provide that the tariffs of our utility operations reflect, to the extent practicable, the timely recovery of increases in costs of operations, capital expenditures, interest expense, taxes, energy, materials, and compliance with environmental regulations as well as a return on equity. We file rate increase requests to recover and earn a fair return on the infrastructure investments that we make in improving or replacing our facilities and to recover expense increases. In the states in which we operate, we are primarily subject to economic regulation by the following state utility commissions:

State	Utility Commission
Pennsylvania	Pennsylvania Public Utility Commission
Ohio	Public Utilities Commission of Ohio
North Carolina	North Carolina Utilities Commission
Texas	Public Utility Commission of Texas
Illinois	Illinois Commerce Commission
New Jersey	New Jersey Board of Public Utilities
Kentucky	Public Service Commission of Kentucky
Virginia	Virginia State Corporation Commission
Indiana	Indiana Utility Regulatory Commission

Our water and wastewater operations are comprised of 57 rate divisions, and our natural gas operations are comprised of three rate divisions. Each of our utility rate divisions require a separate rate filing for the evaluation of the cost of service, including the recovery of investments, in connection with the establishment of rates for that rate division. When feasible and beneficial to our utility customers, we will seek approval from the applicable state regulatory commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the states in which we operate permit us to file a revenue requirement for some form of consolidated rates for all, or some, of the rate divisions in that state.

In Ohio, Virginia, North Carolina, and Kentucky, we may bill our utility customers, in certain circumstances, in accordance with a rate filing that is pending before the respective regulatory commission, which would allow for interim rates. As of December 31, 2023, we have no billings under interim rate arrangements for rate case filings in progress. Furthermore, some utility commissions authorize the use of expense deferrals and amortization to provide for an impact on our operating income by an amount that approximates the requested amount in a rate request. In these states, the additional revenue billed and collected prior to the final regulatory commission ruling is subject to refund to customers based on the outcome of the ruling. The revenue recognized and the expenses deferred by us reflect an estimate as to the final outcome of the ruling. If the request is denied completely or in part, we could be required to refund to customers some or all of the revenue billed to date and write-off some or all of the deferred expenses.

Revenue Surcharges – Eight states in which we operate water and wastewater utilities, and both states, Pennsylvania and Kentucky, in which we operate natural gas utilities, permit us to add an infrastructure rehabilitation surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. Without this surcharge, a utility absorbs all of the depreciation and capital costs of these projects between base rate increases. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which could act as a disincentive for utilities to rehabilitate their infrastructure. In addition, our

subsidiaries in some states use a surcharge or credit on their bills to reflect changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new cost levels are incorporated into base rates.

The infrastructure rehabilitation surcharge typically adjusts periodically based on additional qualified capital expenditures completed or anticipated in a future period, and is capped at a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. These surcharges provided revenues of $20,260,881 in 2023, $26,902,294 in 2022, and $33,771,486 in 2021.

In the majority of our natural gas service territories, the public utility commissions have authorized bare steel and cast-iron replacement programs. In Pennsylvania, we filed a Long-Term Infrastructure Replacement program with the Pennsylvania Public Utility Commission where we have committed to the replacement of bare steel and cast-iron pipe. On February 14, 2012, the Governor of Pennsylvania signed into law Act 11 of 2012, which provided a Distribution System Improvement Charge (DSIC) mechanism for certain utilities to recover costs related to repair, replacement or improvement of eligible distribution property that has not previously been reflected in rates or rate base. Through this Pennsylvania DSIC, subject to an earnings test, a utility may recover the fixed costs of eligible infrastructure incurred during the three months ended one month prior to the effective date of the charge, thereby reducing the historical regulatory lag associated with cost recovery through the traditional rate-making process. In Kentucky, we have a pipe replacement program tariff, which allows adjustment of regulated rates annually to earn a return on capital expenditures incurred subsequent to our last rate case which were associated with the replacement of bare steel and vintage plastic pipe.

Gas costs incurred to serve our natural gas customers represent a significant operating expense. Our regulated natural gas rates, in all jurisdictions, contain a Purchased Gas Adjustment (PGA), which is reflected in our tariffs. The PGA allows us to timely charge for changes in the cost of purchased gas, inclusive of unaccounted for gas expense based on actual experience. PGA procedures involve periodic filings and hearings before the state regulatory commissions to establish price adjustments for a designated future period. The procedures also provide for inclusion in later periods of any variances between actual recoveries representing the estimated costs and actual costs incurred. The PGA is subject to periodic review and audit by the state regulatory commissions who also have the authority to disallow previously incurred costs.

In Pennsylvania, the gas cost component of uncollectible accounts expense, gas procurement costs, and certain costs to maintain a supplier choice program, where customers can elect their natural gas supplier, are recovered by mechanisms outside of typical base rate recovery. Additionally, in Pennsylvania, we recover the costs related to universal service programs, whereby customers who meet certain income guidelines receive assistance toward paying their monthly bill, weatherization services, and other programs. In Kentucky, the gas cost component of uncollectible accounts expense is recovered by a recovery mechanism outside of base rate recovery.

Income Tax Accounting Method Change – In 2012, in response to a rate order, Aqua Pennsylvania adopted an income tax accounting method change, implemented on Essential Utilities' 2012 federal income tax return. This accounting method change resulted in a tax deduction for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. The rate order requires the flow-through of income tax benefits which results in a reduction to current income tax expense through the recognition of income tax benefits resulting from the accounting method change. In May 2022, as a result of its most recent rate case, Aqua Pennsylvania received a rate case order that provided for $159,000,000 of income tax deductions, for its water customers, annually, from the flow-through recognition, subject to a collar mechanism of $4,000,000.

In March 2020 and June 2022, the Company changed the method of tax accounting for certain qualifying infrastructure investments at its Peoples Natural Gas and Peoples Gas subsidiaries, respectively. In the fourth quarter of 2022, the Company made a similar change for its Aqua New Jersey subsidiary. These changes result in a tax deduction for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. Consistent with the Company's accounting for differences between book and tax expenditures for its Aqua Pennsylvania subsidiary, the Company is utilizing the flow-through method to account for this timing difference. For Peoples Natural Gas, the Company calculated the income tax benefits for qualifying capital expenditures made prior to March 16, 2020 (catch-up adjustment) and recorded a regulatory liability for $160,655,000 for these income tax benefits. In May 2021, the Pennsylvania Public Utility Commission approved a settlement petition that allows Peoples Natural Gas to continue to use flow-through

accounting for the current tax repair benefit and allows for the catch-up adjustment to be given to its customers. These benefits are being provided back to customers over a five-year period through a credit on customer bills which commenced in August 2021. For Peoples Gas, another company acquired in the Peoples Gas Acquisition, the Company calculated the catch-up adjustment from the periods prior to the 2021 tax year and recognized a regulatory liability of $13,808,000 for these income tax benefits.

In April 2023, the Internal Revenue Service issued Revenue Procedure 2023-15 which provides a safe harbor method of accounting that taxpayers can adopt to determine whether expenses to repair, maintain, replace, or improve natural gas transmission and distribution property must be capitalized for tax purposes. The Company evaluated the safe harbor and intends to adopt the methodology on its 2023 tax return. Upon completion of its 2023 tax return analyses, the Company will update the regulatory liabilities recorded with the recalculated amounts for the catch-up periods for its Peoples Natural Gas and Peoples Gas subsidiaries, and file a petition to update its Tax Repair Surcredit rider to address the benefits due to customers.

In the second quarter of 2023, based on the tax legislative guidance that was issued, the Company reevaluated the uncertain tax positions related to the Regulated Water Segment and ultimately released a portion of its historical income tax reserves. Concurrently, the Company deferred this tax benefit from the reserve release as a regulatory liability, as the accounting treatment is expected to be determined in a future regulatory filing.

Fair Market Value Legislation – In April 2016, Pennsylvania enacted legislation allowing the public utility commission to utilize fair market value to set ratemaking rate base instead of the depreciated original cost of water or wastewater assets for certain qualifying municipal acquisitions. The legislation includes a process for engaging two independent utility valuation experts to perform appraisals that are filed with the public utility commission and then averaged and compared to the purchase price. The ratemaking rate base is the lower of the average of the appraisals or the purchase price and is subject to regulatory approval. In February 2024, the public utility commission issued a draft revision to the current procedures and guidelines that had been implemented, that bolsters requirements for public notice and meetings, requires a rate impact notice, and provides other measures to improve the fair market value process when investor-owned utilities acquire water and wastewater utilities in Pennsylvania. The proposal is currently open for public comment and recommendations to provide feedback for consideration by the commission before finalizing these proposed revisions. Illinois, Indiana, New Jersey, North Carolina, Ohio, Virginia, and Texas also have legislation that allows the use of fair market value under varying rules and circumstances. We believe that this legislation encourages consolidation in the water and wastewater industry, providing municipalities with an option for exiting the business if they are dealing with challenges associated with their aging, deteriorating water and wastewater assets, do not have the expertise or technical capabilities to continue to comply with ever-increasing environmental regulations, or simply want to focus on other community priorities.

Revenue Stability Mechanisms – Revenue stability mechanisms separate the volume of water sold from our ability to meet our cost of service and infrastructure costs. These mechanisms allow us to recognize revenue based on a target amount established in the last rate case, and then record either a regulatory asset or liability based on the cumulative difference over time, which results in either a refund due to customers or a payment from customers. In Illinois, our operating subsidiary utilizes a revenue stability mechanism. Additionally, a weather-normalization adjustment (WNA) mechanism is in place for our natural gas customers served in Kentucky. The WNA serves to minimize the effects of weather on the Company's results for its residential and small commercial natural gas customers. This regulatory mechanism adjusts revenues earned for the variance between actual and normal weather and can have either positive (warmer than normal) or negative (colder than normal) effects on revenues. Customer bills are adjusted in the December through April billing months, with rates adjusted for the difference between actual revenues and revenues calculated under this mechanism billed to the customers.

Competition

In general, we believe that Essential Utilities and its water, wastewater, and natural gas subsidiaries have valid authority, free from unduly burdensome restrictions, to enable us to carry on our business as presently conducted in the franchised or contracted areas we now serve. The rights to provide water, wastewater, or natural gas service to customers in a particular franchised service territory are generally non-exclusive, although the applicable utility commissions usually allow only one regulated utility to provide service to customers in a given area. In some instances, another water utility provides service to a separate area within the same political subdivision served by one of our subsidiaries. Additionally, our larger natural gas customers may bypass gas distribution services by gaining distribution directly from interstate pipelines, other gas distributors, or other energy sources. As a regulated utility, we believe there is little competition for the daily water, wastewater, and natural gas service we provide to our customers.

Although our natural gas subsidiaries are not currently in significant direct competition with any other distributors of natural gas in its service areas, we do compete with suppliers of other forms of energy such as fuel oil, electricity, propane, coal, wind, and solar. Competition can be intense among the energy sources with price being the primary consideration. This is particularly true for industrial customers who have the ability to switch to alternative fuels. Natural gas generally benefits from a competitive price advantage over oil, electricity, and propane. Competition from renewable energy sources such as solar and wind is likely to increase as the political environment currently favors these energy sources through incentives or by placing restrictions on emissions from the burning of fossil fuels.

Water and wastewater utilities may compete for the acquisition of other water and wastewater utilities or for acquiring new customers in new service territories. Competition for these acquisitions generally comes from nearby utilities, either other regulated utilities or municipal-owned utilities, and sometimes from strategic or financial purchasers seeking to enter or expand in the water and wastewater industry. We compete for new service territories and the acquisition of other utilities on the following bases:

- economic value;
- economies of scale;
- our ability to provide quality water, wastewater, and natural gas service;
- our existing infrastructure network;
- our ability to perform infrastructure improvements;
- our ability to comply with environmental, health, and safety regulations;
- our technical, regulatory, and operational expertise;
- our ability to access capital markets; and
- our cost of capital.

The addition of new service territories and the acquisition of other utilities by regulated utilities such as the Company are generally subject to review and approval by the applicable state utility commissions.

In a very small number of instances in one of our southern states, where there are municipally-owned water or wastewater systems near our operating divisions, the municipally-owned system may either have water distribution or wastewater collection mains that are located adjacent to our division's mains or may construct new mains that parallel our mains. In these rare circumstances, the municipally-owned system may attempt to voluntarily offer service to customers who are connected to our mains, resulting in our mains becoming surplus or underutilized without compensation.

In the states where our water subsidiaries operate, it is possible that portions of our subsidiaries' operations could be acquired by municipal governments by one or more of the following methods:

- eminent domain;
- the right of purchase given to or reserved by a municipality or political subdivision when the original franchise was granted; and,
- the right of purchase given or reserved under the law of the state in which the subsidiary was incorporated or from which it received its permit.

The price to be paid upon such an acquisition by the municipal government is usually determined in accordance with applicable law under eminent domain. In other instances, the price may be negotiated, fixed by appraisers selected by the parties, or computed in accordance with a formula prescribed in the law of the state or in the particular franchise or charter. We believe that our operating subsidiaries would be entitled to fair market value for any assets that are condemned, and we believe the fair market value would be in excess of the book value for such assets.

Despite maintaining a program to monitor condemnation interests and activities that may affect us over time, one of our primary strategies continues to be to acquire additional water and wastewater systems, to maintain our existing systems where there is a business or a strategic benefit, and to actively oppose unilateral efforts by municipal governments to acquire any of our operations, particularly for less than the fair market value of our operations or where the municipal government seeks to acquire more than it is entitled to under the applicable law or agreement. On occasion, we may voluntarily agree to sell systems or portions of systems in order to help focus our efforts in areas where we have more critical mass and economies of scale or for other strategic reasons.

Environmental, Health and Safety Regulation and Compliance

The Company's mission is "to sustain life and improve economic prosperity by safely and reliably delivering Earth's most essential resources to customers and communities". We are committed to protecting the environment and the health and safety of our employees, customers, and the public and continue to adhere to applicable regulatory standards. We integrate environmental, health, and safety requirements into planning, decision-making, construction, operations, and maintenance activities that we perform.

Provision of water and wastewater services is subject to regulation under the federal Safe Drinking Water Act, the Clean Water Act, and related state laws, and under federal and state regulations issued under these laws. These laws and regulations establish criteria and standards for drinking water and for wastewater discharges. Environmental, health and safety, and water quality regulations are complex and may vary from state to state. In some instances, a state has adopted a standard that is more stringent than the federal standard. For example, in advance of proposed federal EPA regulations, the New Jersey Department of Environmental Protection has already established enforceable drinking water standards for three per- and polyfluoroalkyl substances, or PFAS, including perfluorooctanoic acid, or PFOA; perfluorooctane sulfonic acid, or PFOS; and perfluorononanoic acid, or PFNA, and the Pennsylvania Department of Environmental Protection also recently enacted enforceable drinking water standards for PFOA and PFOS. In addition, we are subject to federal and state laws and other regulations relating to solid waste disposal, dam safety, and other aspects of our operations.

From time to time, Essential Utilities has acquired, and may acquire, systems that have environmental compliance issues. Environmental compliance issues also arise in the course of normal operations or as a result of regulatory changes. Essential Utilities attempts to align capital budgeting and expenditures to address these issues in due course. We believe that the capital expenditures required to address outstanding environmental compliance issues in our water and wastewater systems have been budgeted in our capital program and represent approximately $187,000,000, or less than 5% of our expected total water and wastewater capital expenditures over the next five years (2024-2028). These capital expenditures do not include the amounts discussed below in connection with the National Primary Drinking Water Regulation as that regulation is not yet finalized. We are parties to agreements with regulatory agencies in Pennsylvania, Texas, and Illinois under which we have committed to make improvements for environmental compliance. These agreements are intended to provide the regulators with assurance that problems covered by these agreements will be addressed, and the agreements generally provide protection from fines, penalties, and other actions while corrective measures are being implemented. We are working with state environmental officials in Pennsylvania, Texas, and Illinois to implement or amend regulatory agreements as necessary.

Our Regulated Natural Gas utility operations are subject to stringent and complex laws and regulations pertaining to the environment. Legislative and regulatory actions to address climate change are in various phases of review or implementation in the United States. These measures could include emissions limits, reporting requirements, carbon taxes, and incentives or mandates to conserve energy or use renewable energy sources. As an owner or operator of natural gas pipelines, distribution systems and storage, and the facilities that support these systems, we must comply with these laws and regulations at the federal, state, and local levels. Failure to comply with these laws and regulations may trigger a variety of administrative, civil, and criminal enforcement measures, including the assessment of monetary penalties, the

imposition of remedial actions, and the issuance of orders enjoining future operations. Certain environmental statutes impose strict, joint and several liability for costs required to assess, clean up, and restore sites where hazardous substances have been stored, disposed or released.

Safe Drinking Water Act - The Safe Drinking Water Act establishes criteria and procedures for the U.S. Environmental Protection Agency (EPA) to develop national quality standards for drinking water. Regulations issued pursuant to the Safe Drinking Water Act set standards regarding the amount of microbial and chemical contaminants and radionuclides in drinking water. Current requirements under the Safe Drinking Water Act are not expected to have a material impact on our business, financial condition, or results of operations as we have made and are making investments to meet existing water quality standards. We may, in the future, be required to change our method of treating drinking water at some sources of supply and make additional capital investments if additional regulations become effective.

On March 14, 2023, the EPA announced the proposed National Primary Drinking Water Regulation, or NPDWR, for the treatment of six PFAS. The Company submitted comments on the NPDWR, which would establish legally enforceable levels for PFAS in drinking water. It is expected that the EPA will finalize the regulation in 2024. The Company will be provided a three-year window to comply with the NPDWR, and the Safe Drinking Water Act allows for an additional potential for a two-year extension at the state level, or the Compliance Period. We expect that the regulation, once finalized, will result in changes to or addition of certain treatment processes that will require increased capital expenditures and operating expenses. The Company performed its initial analysis of the NPDWR and estimates an investment of at least $450,000,000 of capital expenditures to install additional treatment facilities over the Compliance Period in order to comply with the proposed NPDWR. This figure could increase as plans for construction execution are refined or if additional sites require treatment in the future. Additionally, the Company estimates annual operating expenses of approximately five percent of the installed capital expenditures, in today's dollars, related to testing, treatment, and disposal. These are preliminary estimates and actual capital expenditures and expenses may differ based upon a variety of factors, including supply chain issues and site-by-site requirements. The Company continues to advocate for actions to hold polluters accountable and is part of the Multi-District Litigation and other legal actions against multiple PFAS manufacturers and polluters to attempt to ensure that the ultimate responsibility for the cleanup of these contaminants is attributed to the polluters and is seeking damages and other costs to address the contamination of its public water supply systems by PFAS. Capital expenditures and operating costs required as a result of water quality standards have been traditionally recognized by state utility commissions as appropriate for inclusion in establishing rates; however, we are also actively applying for grants and low interest loans, whenever possible, to reduce the overall cost to customers. The Company is also monitoring ongoing litigation and settlement activity with manufacturers of PFAS in these proceedings. For more information, see Item 3 - Legal Proceedings.

Clean Water Act - The Clean Water Act regulates discharges from drinking water and wastewater treatment facilities into lakes, rivers, streams, and groundwater. It is our policy to obtain and maintain all required permits and approvals for the discharges from our water and wastewater facilities, and to comply with all conditions of those permits and other regulatory requirements. A program is in place to monitor facilities for compliance with permitting, monitoring and reporting for wastewater discharges. We are continuously modernizing wastewater treatment methods, ensuring our systems protect the surrounding environment and adhere to current standards. From time to time, discharge violations may occur which may result in fines. These fines and penalties, if any, are not expected to have a material impact on our business, financial condition, or results of operations. We are also parties to agreements with regulatory agencies in several states where we operate while improvements are being made to address wastewater discharge issues. The EPA has identified leveraging wastewater discharge permitting and application of biosolids, or sewage sludge, containing PFAS as areas of focus in its PFAS Strategic Roadmap.

Solid Waste Disposal - The handling and disposal of waste generated from water and wastewater treatment facilities is governed by federal and state laws and regulations. A program is in place to monitor our facilities for compliance with regulatory requirements, and we are not aware of any significant environmental remediation costs necessary from our handling and disposal of waste material from our water and wastewater operations.

Dam Safety - Our subsidiaries own 34 dams, of which 18 are classified as high hazard dams that are subject to the requirements of the federal and state regulations related to dam safety, which undergo regular inspections and an annual engineering inspection. After a thorough review and inspection of our dams by professional outside engineering firms, we

believe that all 18 dams are structurally sound and well-maintained, except as described below. These inspections provide recommendations for ongoing rehabilitation which we include in our capital improvement program. The Company has approximately $34,000,000 in capital improvements budgeted between 2024 and 2028 for dam improvements.

We performed studies of our dams that identified five high hazard dams in Pennsylvania and one high hazard dam in Ohio requiring capital improvements. These capital improvements result from the adoption by state regulatory agencies of revised formulas for calculating the magnitude of a possible maximum flood event. The most significant capital improvement remaining to be performed in our dam improvement program is on one dam in Pennsylvania at a total estimated cost of $15,400,000. Design for this dam commenced in 2013 and construction is expected to be completed in 2027. An additional four high hazard dams in Pennsylvania were recently added due to an acquisition in 2023. These dams are undergoing additional evaluations but have capital improvements budgeted for currently identified needs in the 2024 to 2028 period.

Lead and Copper Rule –Since the Lead and Copper Rule (LCR) was issued in 1992, we have been working to prevent lead leaching from home plumbing sources by reducing water corrosivity and adding chemicals that can prevent leaching of lead in pipes and homes. We have a program to evaluate all changes in water sources and/or treatment prior to initiating a change in water supply. We also focus on identifying and removing lead service lines and encouraging customers to replace the customer-owned portion of the service line if it is lead as they are identified during our main replacement program or during other maintenance activities. We support the recommendations of The Lead Service Line Replacement Collaborative, a collaborative of leading water industry, housing, and health organizations that has recommended full replacement of lead service lines as a “best practice” to reduce lead in drinking water, but we generally only have control over the company-owned portion of each service line. In cases where we are replacing a company-owned lead service line, our standard approach is to replace the company-owned portion and advise and encourage the customer to replace the customer-owned portion of the service line, all the way to the customer’s home. In Pennsylvania, we have the legal and regulatory authority to replace the customer-owned portion of the service line and will attempt to obtain customer permission to do so. In New Jersey, we are also complying with the state mandate to replace lead and galvanized service lines on both the company and customer sides with a 10-year deadline. We also advise customers of the potential health impacts of lead in drinking water, and conduct lead testing at homes following replacement of a lead service line.

On January 15, 2021, the EPA published the Lead and Copper Rule Revisions (LCRR) which detail additional measures to better protect communities from exposure to lead in drinking water. Under the LCRR and subsequent rulings, water utilities are required to submit a lead service line inventory and a lead service line replacement plan to the respective states or agencies by October 16, 2024. We are continuing to enhance our lead service line inventory and refine our lead service line replacement plans, which we expect to complete by the deadline. On November 30, 2023, the EPA announced a proposed Lead and Copper Rule Improvements (LCRI) to further strengthen the key elements of the LCRR. The proposed LCRI includes, among others, a requirement to replace lead service lines within 10 years, lower lead action levels, changes to tap sampling protocol, and enhancements to public notification and customer communication. We are still in the process of reviewing the overall impact of the proposed LCRI. Capital expenditures and operating costs associated with compliance with any of these rule revisions will be determined once the EPA finalizes the rule.

Partnership for Safe Water Program – Essential Utilities is a proud participant in the American Water Works Association’s (AWWA) Partnership for Safe Water Program. This voluntary program is a commitment to excellence within the drinking water community above and beyond EPA’s stringent treatment goals. All of our active surface water treatment plants (within Pennsylvania, Ohio, and Illinois) maintain good standing in the program which includes many awards of achievement. The honors include the “Director’s Award” (achieved at eight systems) which recognizes plants that have: 1) completed a comprehensive self-assessment report, 2) created an action plan for continuous improvement, and 3) provided several evaluations of performance demonstrating operational excellence. Several of our systems have met these criteria annually and have received 5-, 10-, 15-, and 20-year subscriber awards. Furthermore, our Roaring Creek Pennsylvania treatment plant has received the Phase IV Excellence Award, the highest honor achieved in the Partnership Program.

Safety Standards - Our facilities and operations may be subject to inspections by representatives of the Occupational Safety and Health Administration from time to time. We maintain safety policies and procedures to comply with the Occupational Safety and Health Administration’s rules and regulations, but violations may occur from time to time, which

may result in fines and penalties, which are not expected to have a material impact on our business, financial condition, or results of operations. We endeavor to correct such violations promptly when they come to our attention.

Pipeline Safety Improvement Act- In December 2006, Congress enacted the Pipeline, Inspection, Protection, Enforcement and Safety Act of 2006 (2006 Act), which reauthorized the programs adopted under the Pipeline Safety Improvement Act of 2002 (2002 Act). These programs included several requirements related to ensuring pipeline safety, and a requirement to assess the integrity of pipeline transmission facilities in areas of high population concentration.

Pursuant to the 2006 Act, the Pipeline and Hazardous Materials Safety Administration (PHMSA), an agency of the US Department of Transportation (DOT), issued regulations, effective February 12, 2010, requiring operators of gas distribution pipelines to develop and implement integrity management programs similar to those required for gas transmission pipelines, but tailored to reflect the differences in distribution pipelines. Operators of natural gas distribution systems were required to write and implement integrity management programs by August 2, 2011. Peoples' natural gas distribution systems met this deadline.

Pursuant to the 2002 Act and the 2006 Act, PHMSA has adopted a number of rules concerning, among other things, distinguishing between gathering lines and transmission facilities, requiring certain design and construction features in new and replaced lines to reduce corrosion, and requiring pipeline operators to amend existing written operations and maintenance procedures and operator qualification programs. PHMSA also updated its reporting requirements for natural gas pipelines effective January 1, 2011.

In December 2011, Congress passed the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (2011 Act). This act increased the maximum civil penalties for pipeline safety administrative enforcement actions; required the DOT to study and report on the expansion of integrity management requirements and the sufficiency of existing gathering line regulations to ensure safety; required pipeline operators to verify their records on maximum allowable operating pressure; and imposed new emergency response and incident notification requirements. In 2016, the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016 (2016 Act) reauthorized PHMSA's pipeline safety programs through 2019 and provided limited new authority, including the ability to issue emergency orders, to set inspection requirements for certain underwater pipelines and to promulgate minimum safety standards for natural gas storage facilities, as well as to provide increased transparency into the status of as-yet-incomplete PHMSA actions required by the 2011 Act.

In 2020, the Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2020 (2020 Act) reauthorized PHMSA through fiscal year 2023 and directed the agency to move forward with several regulatory initiatives, including obligating operators of non-rural gas gathering lines and new and existing transmission and distribution pipeline facilities to conduct certain leak detection and repair programs and to require facility inspection and maintenance plans to align with those regulations.

In June 2021, PHMSA issued an advisory bulletin to address a self-executing mandate as part of the 2016 Act. This Leak Detection and Reduction (LDAR) bulletin requires operators to update standard operating procedures to address leaks and gas releases which may be hazardous to public safety and the environment. In November 2021, PHMSA published the final gathering line rule. This rule requires preventative and mitigative measures on gathering lines of certain diameters and operating pressures. Further, on August 24, 2022, PHMSA published a final rule strengthening integrity management requirements for onshore gas transmission lines, bolstering corrosion control standards and repair criteria, and imposing new requirements for inspections after extreme weather events. Certain portions of this August 2022 ruling went into effect in May 2023, with the remaining portions taking effect in February 2024.

Compliance with PHMSA's regulations, performance of the remediation activities by our natural gas distribution companies and intrastate pipelines and verification of records on maximum allowable operating pressure will continue to require increases in both capital expenditures and operating costs. The level of expenditures will depend upon several factors, including age, location and operating pressures of the facilities. In particular, the cost of compliance with the DOT's integrity management rules will depend on integrity testing and the repairs found to be necessary by such testing. Changes to the amount of pipe subject to integrity management, whether by expansion of the definition of the type of areas subject to integrity management procedures or of the applicability of such procedures outside of those defined areas, may also affect incurred costs. Implementation of the 2011, 2016 and 2020 Acts by PHMSA may result in other

regulations or the reinterpretation of existing regulations that could impact compliance costs. In addition, we may be subject to the DOT's enforcement actions and penalties if the Company fails to comply with pipeline regulations.

Inflation Reduction Act - On August 16, 2022, the Inflation Reduction Act of 2022 (IRA) was enacted into law, which among other things, includes a provision to implement an annual waste emissions charge beginning with calendar year 2024 (to be paid in 2025) on applicable oil and gas facilities that exceed certain methane emission thresholds. Currently, the Company has gathering facility assets that could exceed the applicable emissions thresholds and potentially be subject to the waste emissions charge. On January 12, 2024, the EPA released a proposed rule addressing how the charge will be implemented, including the calculation of the charge and potential exemptions from the charge. We are continuing to assess the future impact of the provisions of the IRA on our consolidated financial statements and on the Company's gathering facility assets. We have estimated that the waste emissions charge beginning in 2024 could approximate $1,000,000 to $2,000,000 annually, with the potential to change over time as the Company's gathering facility assets are replaced or retired. We have proposed recovery of these estimated costs in the pending Peoples Natural Gas rate filing. As a regulated utility, required capital expenditures and operating costs, including taxes, have been traditionally recognized by state utility commissions as appropriate for inclusion in establishing rates.

Physical Security

We maintain security measures at our facilities, and collaborate with federal, state and local authorities and industry trade associations regarding information on possible threats and physical security measures for water, wastewater, and natural gas utility operations. The costs incurred are expected to be recoverable in customer rates and are not expected to have a material impact on our business, financial condition, or results of operations.

Environmental Stewardship

The way we do business at Essential reflects our commitment to a sustainable, safe, and healthy environment for all our stakeholders. Sustainability is deeply engrained in our business strategy. We ensure environmental stewardship remains a priority for management by factoring several benchmarks into executive compensation.

We understand the urgency of the Paris Agreement and the United Nations Intergovernmental Panel on Climate Change's science-based target of limiting the global temperature increase to well below 2 degrees Celsius. Of our Scope 1 and 2 GHG emissions, 79% are driven by our gas distribution business. Early in 2021, we announced that by 2035, we will reduce our Scope 1 and 2 GHG emissions by 60% from our 2019 baseline. This is consistent with the rate of reduction necessary through 2035 to keep on track with the Paris Agreement. This will be achieved by extensive gas pipeline replacement, renewable energy purchasing, accelerated methane leak detection and repair, and various other currently planned initiatives that are highly feasible with proven technology. In 2022, we have achieved 25% emissions reduction from our 2019 baseline. We also began procuring nearly 100% renewable electricity for our water and wastewater operations in Illinois, New Jersey, Ohio, and Pennsylvania in 2022.

The Company manages climate-change matters through significant board-level oversight. At the management level, the Environmental, Social and Governance, or ESG, Oversight Committee, which is a group of about a dozen of the Company' senior leaders across the organization and the Chief Executive Officer, meet at least once each quarter to discuss these topics. The Company's environmental sustainability initiatives and strategy are discussed further in our environmental, social, and governance reporting, which can be found on our website at https://esg.essential.co. Such reports are not incorporated by reference and should not be considered part of this Annual Report.

Human Capital Management

The Company values its workforce as one of its most important assets. The Company is dedicated to creating a sustainable working atmosphere for its employees to attract and retain the best employees. Human capital measures and objectives that the Company focuses on in managing its business include the health and safety of its employees, succession planning, voluntary attrition rate, and diversity, equity and inclusion initiatives.

As of December 31, 2023, we employed a total of 3,258 full-time employees. Our subsidiaries are parties to 22 labor agreements with labor unions covering 1,643 employees. The labor agreements expire at various times up until 2028.

Health and Safety - Safety is the foundation of our business and guides all our employees' actions. The Company continues to invest in safety improvements, implement policies and procedures, develop technical training and guidelines for our employees, and leverage new tools and technology to improve our maps, records and infrastructure performance. The Company's Senior Leadership Safety Council leads our safety efforts and is supported by the Safety Steering Committee, state and facility committees and leaders that operate at the local site level. Hazards in the workplace are actively identified, and management tracks incidents so remedial actions can be taken to improve workplace safety. To encourage managers to promote a safe environment, related metrics are incorporated in management's incentive compensation plans.

The Company provides free access to Health Advocate, which offers a variety of innovative, flexible, and convenient employee health and wellness programs. Through our partnership with Health Advocate, personalized mental health assistance is available to all employees and their family members; support is available 24/7 via in-person, phone or virtual visits with a licensed counselor.

Employee Development and Training - The Company continues to invest in training and development programs for employees so that they may evolve and enhance their skills in their areas of expertise. The Company offers several learning opportunities through partnerships with one of the leading online learning providers, business school certificate programs, tuition reimbursement for post-secondary degree granting programs, and individual career coaching. At Essential, we believe in an integrated talent development approach. We utilize the "70/20/10 model" for development, which holds that 70% of learning happens on the job through stretch goals and critical assignments, 20% of learning occurs through mentoring and coaching and involvement in professional and industry related activities, and 10% of learning occurs within a virtual or live learning environment. We align our development model to support our vision, mission, and competencies, with a balanced approach to developing our workforce that leads us to the development of a confident, committed, and high-performance culture.

Succession Planning – Essential has organizational workforce analysis and planning programs to ensure the Company has the talent it needs for the future. By conducting stay interviews with key performers, the Company learns where talent risks may arise. Under the Company's Corporate Governance Guidelines, the Board of Directors is responsible for the development and periodic review of a management succession plan for the Chief Executive Officer and other executives. Annually, the Board of Directors reviews the Company's succession planning process for the Chief Executive Officer and the named executive officers. During this review, the directors review succession candidates on an immediate basis and more developmental candidates to ensure that the Company is well-prepared for the future.

Voluntary Attrition and Turnover - The Company measures turnover rates of its employees in assessing the Company's overall human capital. The Company's voluntary attrition rate (not including retirements) for 2023 was 0% at the executive and senior management level, 6.3% at the mid-level manager level, 11.7% at the professional level, and 7.4% across all other employees. These voluntary attrition rates decreased from 2022 as the Company focused on measures to increase retention and the labor market improved. We are continuing to develop programs focused on retaining our workforce.

Diversity, Equity and Inclusion - Diversity of backgrounds, ideas, thoughts, and experiences is essential to our culture and the way we do business. Creating an environment where our differences are valued and where every person feels a sense of belonging and engagement supports a thriving organization that cares about our customers and ensures our continued long-term success. In order to promote a culture of diversity and inclusion, we have conducted educational workshops to foster better understanding of different points of view and how pre-conceived notions impact relationships at work. We also support diverse segments of our workforce through employee resource groups, such as the Black Resource Group, LGBTQ+ Pride Resource Group, and Women's Resource Group. These groups welcome participation from all employees in order to learn from a cultural perspective and support each other through allyship.

From 2021 to 2023, we added an employee diversity component (5% weighting) to our short-term incentive plan. Our focus on attracting and retaining diverse talent has resulted in growth in the number of our diverse employees. Diversity at the management level has also remained steady in 2023. We have achieved our multiyear plan of reaching 16.5% employees of color.

We also believe diversity in our Board of Directors is critical for effective governance. Candidates for nomination to the Board are considered by the Corporate Governance Committee based on their personal abilities, qualifications, independence, knowledge, judgment, character, leadership skills, education, background (including, but not limited to race, gender, and national origin), and their expertise and experience in fields and disciplines relevant to the Company. In October 2023, we were recognized as a Champion of Board Diversity by The Forum of Executive Women for having one-third of our board comprised of women for the fifth year since 2016.

Total Rewards - We invest in our workforce by offering a total rewards package that is targeted to be competitive with the market in which we compete for talent, while allowing individual pay to vary equitably based on performance, skills and experience. Our total rewards package includes a combination of salaries, short and long-term incentives, health and wellness benefits, retirement benefits, and other benefits which we regularly assess against the current business environment and labor market to ensure they are competitive.

Communication and Engagement –We believe that our employees are critical to our business, and it is essential to have an environment of high engagement and inclusivity in which employees thrive. We use a variety of communication channels to help employees stay informed and to facilitate direct dialogue, including open forums with our executives, town halls, regular engagement surveys, employee resource groups, and regular performance feedback sessions between employees and their supervisors. We value feedback from our employees, as it helps us gain a deeper understanding of areas where we are doing well and where we need improvement. Employees are requested to participate in a bi-annual culture assessment by completing an anonymous survey. We have worked with various functional areas to create and implement action plans to address areas of employee concern. Executive management also regularly conducts town hall-style meetings with employees, where they have the opportunity to ask questions, voice opinions, and share feedback.

Citizenship – As a mission-based organization, we are driven to improve the quality of life and livelihood of our customers and the communities we serve. Through our charitable giving program, employees are encouraged to engage in philanthropy through the United Way campaign and matching gift program. Essential matches 100%, up to a maximum of $500 per calendar year per employee, for personal contributions made by an employee or their spouse or domestic partner to qualifying nonprofit organizations. At various times throughout the year, the Company supports its employees in volunteering their time and talents to give back to their communities.

Supplier Diversity

We acknowledge that supplier diversity is critical for our communities as well as for our business. We are committed to increasing our work with qualified and certified diverse suppliers from the communities and neighborhoods where we live, work, and operate each day and suppliers that use reasonable efforts to minimize pollution and improve environmental protection and sustainability. As such, we announced a multi-year plan to increase diverse supplier spend to 15% of controllable spend, which excludes spend where there is no opportunity to include diverse suppliers or spend that cannot be sourced from a diverse supplier due to a policy or law (items like power, purchased water and some one-time payments). From 2021 to 2023, we added a supplier diversity component (5% weighting) to our short-term incentive plan to focus on identifying and supporting diverse vendors. We also have a Supplier Code of Conduct that defines the basic requirements for suppliers of goods and services and their responsibilities to the environment and their stakeholders. We also expect our suppliers to subscribe to the principles of nondiscrimination, follow high standards of business ethics and professional conduct and adhere to our Human Rights Policy.

Management and Board Oversight

Our Board of Directors has various committees including an audit committee, an executive compensation committee, a corporate governance committee, and a risk mitigation and investment policy committee. Each of these committees has a formal charter. We also have Corporate Governance Guidelines and a Code of Ethical Business Conduct. Copies of these charters, guidelines, and codes can be obtained free of charge from our *Investor Relations* page on our web site, www.essential.co. In the event we amend or waive any portion of the Code of Ethical Business Conduct that applies to any of our directors, executive officers, or senior financial officers, we will post that information on our web site.

Available Information

We file annual, quarterly, current reports, proxy statements, and other information with the Securities and Exchange Commission (SEC). You may obtain our SEC filings from the SEC's web site at www.sec.gov.

Our internet web site address is www.essential.co. We make available free of charge through our web site's *Investor Relations* page all of our filings with the SEC, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and other information. These reports and information are available as soon as reasonably practicable after such material is electronically filed with the SEC.

In addition, you may request a copy of the foregoing filings, at no cost by writing or telephoning us at the following address or telephone number:

Investor Relations Department
Essential Utilities, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010-3489
Telephone: 610-527-8000

The references to our web site and the SEC's web site are intended to be inactive textual references only, and the contents of those web sites are not incorporated by reference herein and should not be considered part of this or any other report that we file with or furnish to the SEC.

Item 1A. *Risk Factors*

In addition to the other information included in this Annual Report, the following factors should be considered in evaluating our business and future prospects. Any of the following risks, either alone or taken together, could materially harm our business, financial condition, and results of operations. If one or more of these or other risks or uncertainties materialize, or if our underlying assumptions prove to be incorrect, our business, financial condition, and results of operations could be materially harmed.

Risk Factor Summary

Our business is subject to many risks and uncertainties. The following are the types of forward-looking statements we make throughout this Annual Report, including in these Risk Factors, and a summary of the types of risks that could impact us and cause actual results to differ from those described in such forward-looking statements:

- opportunities for future acquisitions, both within and outside the water and wastewater industries, the success of pending acquisitions and the impact of future acquisitions;
- acquisition-related costs and synergies;
- the impact of decisions of governmental and regulatory bodies, including decisions to raise or lower rates and decisions regarding potential acquisitions;
- the sale of water, wastewater, and gas subsidiaries;
- the impact of conservation awareness of customers and more efficient fixtures and appliances on water and natural gas usage per customer;
- the impact of our business on the environment, and our ability to meet our environmental, social, and governance goals;
- our authority to carry on our business without unduly burdensome restrictions;
- our capability to pursue timely rate increase requests;
- the capacity of our water supplies, water facilities, wastewater facilities, and natural gas supplies and storage facilities;
- the impact of public health threats, or the measures implemented by the Company as a result of these threats;
- the impact of cybersecurity attacks or other cyber-related events;
- developments, trends and consolidation in the water, wastewater, and natural gas utility and infrastructure industries;
- the impact of changes in and compliance with governmental laws, regulations and policies, including those dealing with the environment, health and water quality, taxation, and public utility regulation;
- the development of new services and technologies by us or our competitors;
- the availability of qualified personnel;
- the condition of our assets;
- recovery of capital expenditures and expenses in rates;
- projected capital expenditures and related funding requirements;
- the availability and cost of capital financing, including impacts of increasing financing costs and interest rates;
- dividend payment projections;
- the impact of geographic diversity on our exposure to unusual weather;
- the continuation of investments in strategic ventures;
- our ability to obtain fair market value for condemned assets;
- the impact of fines and penalties;
- the impact of legal proceedings;
- general economic conditions, including inflation;
- the impairment of goodwill resulting in a non-cash charge to earnings;
- the impact of federal and/or state tax policies and the regulatory treatment of the effects of those policies; and
- the amount of income tax deductions for qualifying utility asset improvements and the Internal Revenue Service's ultimate acceptance of the deduction methodology.

Because forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including but not limited to:

- the success in the closing of, and the profitability of future acquisitions;
- changes in general economic, business, credit and financial market conditions;
- our ability to manage the expansion of our business;
- changes in environmental conditions, including the effects of climate change;
- our ability to integrate and otherwise realize all of the anticipated benefits of businesses, technologies or services which we may acquire;
- the decisions of governmental and regulatory bodies, including decisions on regulatory filings, including rate increase requests and decisions regarding potential acquisitions;
- our ability to file rate cases on a timely basis to minimize regulatory lag;
- the impact of inflation on our business and on our customers;
- abnormal weather conditions, including those that result in water use restrictions or reduced or elevated natural gas consumption;
- the seasonality of our business;
- our ability to treat and supply water or collect and treat wastewater;
- our ability to source sufficient natural gas to meet customer demand in a timely manner;
- the continuous and reliable operation of our information technology systems, including the impact of cybersecurity attacks or other cyber-related events, and risks associated with new systems implementation or integration;
- impacts from public health threats, including on consumption, usage, supply chain, and collections.
- changes in governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the extent to which we are able to develop and market new and improved services;
- the effect of the loss of major customers;
- our ability to retain the services of key personnel and to hire qualified personnel as we expand;
- labor disputes;
- increasing difficulties in obtaining insurance and increased cost of insurance;
- cost overruns relating to improvements to, or the expansion of, our operations;
- inflation in the costs of goods and services;
- the effect of natural gas price volatility, including the potential impact of high commodity prices on usage or rate case outcomes;
- civil disturbance or terroristic threats or acts;
- changes to the rules or our assumptions underlying our determination of what qualifies for an income tax deduction for qualifying utility asset improvements;
- changes in, or unanticipated, capital requirements;
- changes in our credit rating or the market price of our common stock;
- changes in valuation of strategic ventures;
- changes in accounting pronouncements;
- litigation and claims; and
- restrictions on our subsidiaries' ability to make dividends and other distributions.

Risks Related to Acquisitions

One of the important elements of our growth strategy is the acquisition of regulated utility systems. Any acquisition we decide to undertake may involve risks. Further, competition for acquisition opportunities from other regulated utilities, governmental entities, and strategic and financial buyers may hinder our ability to grow our business. Lastly, competition and industry trends could impact our ability to retain existing customers or acquire new customers, which could have an adverse impact on our business, results of operations and financial condition.

One important element of our growth strategy is the acquisition and integration of regulated utility systems in order to broaden our service areas. We will not be able to acquire other businesses if we cannot identify suitable acquisition opportunities or reach mutually agreeable terms with acquisition candidates. It is our intent, when practical, to integrate any businesses we acquire with our existing operations. Investing in and integrating acquisitions could require us to incur significant costs and cause diversion of our management's time and resources, and we may be unable to successfully integrate our business with acquired businesses or to realize anticipated benefits of acquisitions. Acquisitions by us could also result in:

- dilutive issuances of our equity securities;
- incurrence of debt, contingent liabilities, and environmental liabilities;
- unanticipated capital expenditures;
- failure to maintain effective internal control over financial reporting;
- recording goodwill and other intangible assets for which we may never realize their full value and may result in an asset impairment that may negatively affect our results of operations;
- fluctuations in quarterly and/or annual results;
- other acquisition related expenses; and
- exposure to unknown or unexpected risks and liabilities.

Some or all of these items could harm our business, financial condition, results of operations, and cash flows, and our ability to finance our business and to comply with regulatory requirements. The businesses we acquire may not achieve sales and profitability that would justify our investment, and any difficulties we encounter in the integration process, including in the integration of processes necessary for internal control and financial reporting, could interfere with our operations, reduce our operating margins and harm our internal controls.

Some states in which we operate allow the respective public utility commissions to use fair market value to set ratemaking rate base instead of the traditional depreciated original cost of water or wastewater assets for certain qualifying municipal acquisitions. Depending on the state, there are varying rules and circumstances in which fair value is determined. A number of states' regulations allow ratemaking rate base to equal the lower of the average of the appraisals or the purchase price, subject to regulatory approval. There may be situations where we may pay more than the ultimate fair value of the utility assets as set by the regulatory commission, despite the fair value legislation suggesting its full recovery. In these situations, goodwill may be recognized to the extent there is an excess purchase price over the fair value of net tangible and identifiable intangible assets acquired through a business acquisition. Our financial condition and results of operations could be harmed by an inability to earn a return on, and recover our purchase price as a component of rate base. Regulatory actions or changes in significant assumptions, including discount and growth rates, utility sector market performance and comparable transaction multiples, projected operating and capital cash flows, and fair value of debt, could also potentially result in future impairments which could be material.

We compete with governmental entities, other regulated utilities, and strategic and financial buyers, for acquisition opportunities. As consolidation becomes more prevalent in the utility industry and competition for acquisitions increases, the prices for suitable acquisition candidates may increase to unacceptable levels and limit our ability to grow through acquisitions. In addition, our competitors may impede our growth by purchasing utilities near our existing operations, thereby preventing us from acquiring them. Governmental entities or environmental / social activist groups have challenged, and may in the future challenge our efforts to acquire new service territories, particularly from municipalities or municipal authorities. Additionally, on occasion we have entered into agreements to acquire water or wastewater utility systems that have been challenged by municipalities or other parties, or where referenda are required, which may impact our ability to complete the acquisition. Higher purchase prices and resulting rates may limit our ability to invest additional capital for system maintenance and upgrades in an optimal manner. Our growth could be hindered if we are not able to compete effectively for new companies and/or service territories with other companies or strategic and financial buyers that have lower costs of operations or capital, or that submit more attractive bids. Any of these risks may harm our business, financial condition, and results of operations.

We face the risk that large natural gas customers may bypass gas distribution services by gaining distribution directly from interstate pipelines, other gas distributors, or other energy sources. Increased competition or other changes in legislation, regulation, or policies could have a material adverse effect on our business, financial condition, or results of operations. Moreover, changes in wholesale natural gas prices compared with prices for electricity, fuel oil, coal, propane, or other energy sources may affect the retention of natural gas customers and may adversely impact our future financial condition and results of operations.

The integration of acquisitions can be a multi-year activity depending upon the complexity and significance of the acquisition.

One element of our strategic plans is our growth through acquisition strategy. Acquisitions in the utility industry are time consuming and complex, with the number of regulatory approvals needed. A significant acquisition can require significant time and resources, including devotion of management time, to integrate the acquired business.

Risks Related to Health and Safety and Environmental Concerns

Some scientific experts are predicting a worsening of weather volatility in the future, possibly created by climate change due to greenhouse gases. Changing severe weather patterns could require additional expenditures to reduce the risk associated with any increasing storm, flood, and drought occurrences.

The issue of climate change is receiving ever increasing attention worldwide. Many climate change predictions, if true, present several potential challenges to utilities, such as: increased frequency and duration of droughts, increased precipitation and flooding, potential degradation of water quality, and changes in demand for services. We maintain an ongoing facility planning process, and this planning or the enactment of new standards may result in the need for additional capital expenditures or raise our operating costs, including the cost of insurance. Because of the uncertainty of weather volatility related to climate change, we cannot predict its potential impact on our business, financial condition, or results of operations. Although any potential expenditures and operating costs may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that govern our business would approve rate increases to enable us to recover such expenditures and costs. Without adequate rate recovery, our costs of complying with climate change weather related measures may negatively impact our business, financial condition, or results of operations.

Climate change laws and regulations have been passed and are being proposed that require compliance with greenhouse gas emissions standards, as well as other climate change initiatives and reporting, which could impact our business, financial condition or results of operations.

Climate change is receiving ever increasing attention worldwide. Many scientists, legislators, and others attribute global warming to increased levels of greenhouse gases (GHG), including carbon dioxide. Climate change laws and regulations enacted and proposed could limit and impose costs tied to GHG emissions from covered entities and require additional monitoring/reporting. For example, in August 2022, the Inflation Reduction Act was signed into law, which includes a methane charge that is expected to be applicable to the reported annual methane emissions of certain oil and gas facilities,

that exceed certain methane emission thresholds, starting in calendar year 2024. A number of states have also adopted energy strategies or plans with goals that include the reduction of greenhouse gas emissions. For example, Pennsylvania has a methane reduction framework for the natural gas industry, which has resulted in permitting changes with the stated goal of reducing methane emissions from well sites, compressor stations, and pipelines. At this time, the existing GHG laws and regulations are not expected to materially harm the Company's operations or capital expenditures; however, the uncertainty of future climate change regulatory requirements still remains. We cannot predict the potential impact of future laws and regulations on our business, financial condition, or results of operations. Although these future expenditures and costs for regulatory compliance may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that govern our business would approve rate increases to enable us to recover such expenditures and costs. Competition from renewable energy sources may reduce the demand for natural gas, which could impact our future earnings and cash flows. Another potential risk related to climate change could be more frequent and more severe weather events, which could increase our costs to repair damaged facilities and restore service to our customers. If we are unable to provide utility services to our customers, our financial results would be impacted by lost revenues, and we would have to seek regulatory approval to recover restoration costs.

Climate change and other environmental, social, and governance matters are increasingly important to many investors, and we may fail to provide information desired by all investors or achieve our ESG goals.

Climate change and other environmental, social, and governance, or ESG, matters are increasingly important to many investors, including our current investors. We have focused attention on ESG matters and the communication of our ESG goals, targets, and activities to investors. These goals and targets reflect our current plans and aspirations. Our ability to achieve such goals and aspirations is subject to numerous risks and uncertainties, many of which rely on the collective efforts of others or may be outside of our control. As such, we cannot offer assurances that the results reflected or implied by any such statements will be realized or achieved. Moreover, standards and expectations for ESG matters continue to evolve and may be subject to varying interpretations, which may result in significant revisions to our goals or progress. We may also be unable to satisfactorily meet evolving standards, regulations, and disclosure requirements related to ESG. Any failure, or perceived failure, to meet evolving stakeholder expectations, additional regulations and industry standards and disclosures, or achieve our ESG goals and targets could have an adverse effect on our business, results of operations, financial condition, or stock price.

Our water supply, including water provided to our customers, is subject to various potential contaminants which may result in disruption in our services, additional costs, loss of revenue, fines, laws and/or regulations, and litigation which could harm our business, reputation, financial condition, and results of operations.

Our water supplies, including water provided to our customers, are subject to possible contaminants, including those from:

- naturally occurring compounds or man-made substances;
- chemicals and other hazardous materials;
- lead and other materials;
- manufactured sources, such as pharmaceuticals and personal care products; and
- possible deliberate or terrorist attacks.

Depending on the nature of the water contamination, we may have to interrupt the use of that water supply until we are able to substitute, where feasible, the flow of water from an uncontaminated water source, including if practicable, the purchase of water from other suppliers, or continue the water supply under restrictions on use for drinking or broader restrictions against all use except for basic sanitation and essential fire protection. We may experience a loss of revenue and incur significant costs, including, but not limited to, costs for water quality testing and monitoring, "do not consume" expenses, treatment of the contaminated source through modification of our current treatment facilities or development of new treatment methods, the purchase of alternative water supplies, or litigation related matters, including governmental enforcement actions. In addition, the costs we could incur to decontaminate a water source or our water distribution system and dispose of waste could also be significant. The costs resulting from the contamination may not be recoverable in rates we charge our customer, or may not be recoverable in a timely manner. Further, we may incur a loss of revenue in the event we elect to waive customers' water and wastewater charges. If we are unable to adequately treat the contaminated water supply or substitute a water supply from an uncontaminated water source in a timely or cost-effective manner, there may be an adverse effect on our business, reputation, financial condition, and results of operations. We could also be subject to:

- claims for consequences arising out of human exposure to contamination and/or hazardous substances in our water supplies, including toxic torts;
- claims for other environmental damage;
- claims for customers' business interruption as a result of an interruption in water service;
- claims for breach of contract;
- criminal enforcement actions;
- regulatory fines; or
- other claims.

We incur substantial costs on an ongoing basis to comply with all laws and regulations. New or stricter laws and/or regulations could increase our costs. Although we may seek to recover these costs through an increase in customer rates, there is no guarantee that the various state regulators would approve such an increase.

We have been working to prevent lead leaching from home plumbing sources by reducing water corrosivity and adding chemicals that can prevent leaching of lead in pipes and homes. We have a program to evaluate all changes in water sources prior to initiating a change in water supply. We also focus on identifying and removing lead service lines and encouraging customers to replace the customer-owned portion of the service line if it is lead as they are identified during our main replacement program or during other maintenance activities. In 2019, we initiated a "do not consume" advisory for some of our customers served by our Illinois subsidiary, which resulted in a loss of revenues and increased operating costs and for which we anticipate an additional recovery of other costs and losses. The do not consume advisory was lifted in 2019 and, in 2022, the water system was determined to be in compliance with the federal Lead and Copper Rule. We filed a claim with our insurance carrier for costs and losses incurred in 2019 related to the do not consume advisory, for which we recovered a portion of the costs and losses and for which we anticipate an additional recovery of other costs and losses.

We are devoting our attention to various emerging contaminants, including the Per- and Polyfluoroalkyl Substances (PFAS) family of chemicals and other chemicals and substances that do not have any federal regulatory standard in drinking water. We comply with governmental agency guidance that recommends the standard of protection from these contaminants, and we monitor proposed standards and other governmental agency guidance regarding these contaminants. On March 14, 2023, the U.S. Environmental Protection Agency (EPA) announced the proposed National Primary Drinking Water Regulation (NPDWR) for the treatment of six PFAS compounds. The NPDWR proposed maximum contaminant levels (MCLs) in drinking water. It is expected that the EPA will finalize the regulation in 2024. The Company will be provided a three-year window to comply with the NPDWR, and the Safe Drinking Water Act allows for an additional potential for a two-year extension at the state level, or the Compliance Period. We expect that the regulation, once finalized, will result in changes to or addition of certain treatment processes that will require increased capital expenditures and operating expenses. The Company performed its initial analysis of the NPDWR and estimates an investment of at least $450,000,000 of capital expenditures to install additional treatment facilities over the Compliance Period in order to comply with the proposed NPDWR. This figure could increase as plans for construction execution are refined or if additional sites require treatment in the future. Additionally, the Company estimates annual operating expenses of approximately five percent of the installed capital expenditures, in today's dollars, related to testing,

treatment, and disposal. These are preliminary estimates and actual capital expenditures and expenses may differ based upon a variety of factors, including supply chain issues and site-by-site requirements.

We may incur costs to defend our position and/or incur reputational damage even if we are not liable for consequences arising out of human exposure to contamination and/or hazardous substances in our water supplies, other environmental damage, or our customer's business interruption. Our insurance policies may not be sufficient to cover the costs of our defense or, in the event we are liable, these claims, and losses incurred, may make it difficult for us to secure insurance in the future at acceptable rates. Such claims or actions could harm our business, reputation, financial condition, and results of operations.

Transporting, distributing and storing natural gas involves numerous risks that may result in accidents and other operating risks and costs.

Natural gas transportation, distribution and storage activities inherently involve a variety of hazards and operational risks, such as leaks, accidental explosions, damage caused by third parties and mechanical problems, which could cause substantial financial losses. These risks could result in serious personal injury, loss of human life, significant damage to property, environmental pollution, impairment of operations, and substantial losses. The location of pipelines and storage facilities near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages resulting from these risks. These activities may also subject the Company to litigation or administrative proceedings. Such litigation or proceedings could result in substantial monetary judgments, fines or penalties against the Company or otherwise be resolved on unfavorable terms.

We are subject to federal and state laws and regulations requiring the Company to maintain certain safety and system integrity measures by identifying and managing storage and pipeline risks. In addition, companies that supply and transport gas to Peoples are also subject to similar regulations and other restrictions related to their activities. Compliance with these laws and regulations, or future changes in these laws and regulations, may, directly or indirectly, result in increased capital, operating, and other costs which may not be recoverable in a timely manner or at all from customers in rates. In accordance with customary industry practices, we maintain insurance against a significant portion, but not all, of these risks and losses. To the extent any of these events occur or regulations change, it could adversely affect our business, reputation, financial condition, and results of operations.

Risks Related to the Operation and Regulation of our Business

General economic conditions may affect our financial condition and results of operations.

A general economic downturn may lead to a number of impacts on our business and may affect our financial condition and results of operations. Such impacts may include:

- a reduction in discretionary and recreational water use by our residential water customers, particularly during the summer months when such discretionary usage is normally at its highest;
- a reduction in natural gas use by our residential customers, particularly during the winter months when such usage is normally at its highest;
- a decline in usage by industrial and commercial customers as a result of decreased business activity or a shift to alternative energy sources;
- an increased incidence of customers' inability to pay or delays in paying their utility bills, or an increase in customer bankruptcies, which may lead to higher bad debt expense, increased financing costs, and reduced cash flow;
- a lower natural customer growth rate due to a decline in new housing starts; and
- a decline in the number of active customers due to housing vacancies.

General economic turmoil may also lead to an investment market downturn, which may result in our pension and other post-retirement plans' asset market values suffering a decline and significant volatility. A decline in our plans' asset market values could increase our required cash contributions to the plans and increased expense in subsequent years. Inflation levels in excess of historical levels could also lead to regulatory lag and thus impact our earned returns and financial results.

Moreover, in recent years, inflation and rising interest rates have become areas of increasing economic concern. Changes in the cost of providing our products and services, including price increases in operating and capital costs, as well as increases in labor costs or borrowing costs, may negatively impact our financial condition and results of operations. We review the adequacy of our rates as approved by public utility commissions in relation to the increasing cost of providing services and the inherent regulatory lag in adjusting those rates. Rate increases are not retroactive and often lag increases in costs caused by inflation. On occasion, our regulated utility companies may enter into rate settlement agreements, which require us to wait for a period of time to file the next base rate increase request. These agreements may result in regulatory lag whereby inflationary increases in expenses or higher borrowing costs may not be reflected in rates, and may not yet be requested, or a gap may exist between when a capital project is completed and the start of its recovery in rates. Even during periods of moderate inflation, the effects of inflation can have a negative impact on our operating results. The ability to control operating expenses is an important factor that will influence future results.

Inflation could adversely impact our ability to control costs, including operating expenses and capital costs.

Although inflation had been low previously, it rose significantly in the second half of 2021 and through 2022 and 2023. In addition, global and industry-wide supply chain disruptions have resulted in shortages in labor, materials and services. Such shortages have resulted in inflationary cost increases for labor, materials and services and could continue to cause costs to increase, as well as a scarcity of certain products and raw materials. Inflation, higher interest rates and supply chain pressures resulted in an increase in certain operating and capital spending requirements in 2022 and 2023, which we expect will continue into 2024. To the extent inflation remains elevated, we may experience further cost increases for our operations, as well as increased labor costs. We cannot predict any future trends in the rate of inflation and interest rates, and a significant increase in inflation, to the extent we are unable to recover higher costs through rate cases, could negatively impact our business, financial condition and results of operation.

The rates we charge our customers are subject to regulation. If we are unable to obtain government approval of our requests for rate increases or if approved rate increases are untimely or inadequate to recover and earn a return on our capital investments, to recover expenses or taxes, or to take into account changes in water, wastewater, or natural gas usage, our profitability may suffer.

The rates we charge our customers are subject to approval by utility commissions in the states in which we operate. We file rate increase requests, from time to time, to recover our investments in utility plant and expenses. Our ability to maintain and meet our financial objectives is dependent upon the recovery of, and return on, our capital investments and expenses through the rates we charge our customers. Once a rate increase petition is filed with a utility commission, the ensuing administrative and hearing process may be lengthy and costly, and our costs may not always be fully recoverable. The timing of our rate increase requests are therefore partially dependent upon the estimated cost of the administrative process in relation to the investments and expenses that we expect to recover through the rate increase. In addition, the amount or frequency of rate increases may be decreased or lengthened as a result of many factors including changes in regulatory oversight in the states in which we operate utilities and income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures or qualifying utility asset improvements. We can provide no assurances that any future rate increase request will be approved by the appropriate utility commission; and, if approved, we cannot guarantee that these rate increases will be granted in a timely or sufficient manner.

In Virginia, North Carolina and Kentucky, we may bill our water utility customers, in certain circumstances, in accordance with a rate filing that is pending before the respective regulatory commission, which would allow for interim rates. Furthermore, some utility commissions authorize the use of expense deferrals and amortization in order to provide for an impact on our operating income by an amount that approximates the requested amount in a rate request. The additional revenue billed and collected prior to the final ruling is subject to refund to customers based on the outcome of the ruling. The revenue recognized and the expenses deferred by us reflect an estimate as to the final outcome of the ruling. If the request is denied completely or in part, we could be required to refund to customers some or all of the revenue billed to date, and write-off some or all of the deferred expenses.

Changes in our earnings may differ from changes in our rate base.

Our business is capital intensive and requires significant capital investments for additions to or replacement of property, plant and equipment. These capital investments create assets that are used and useful in providing regulated utility service, and as a result, increase our rate base, on which we generate earnings through the regulatory process. Changes in our reported earnings, however, may differ from changes in our rate base in a given period due to several factors, including rate case timing and the terms of such rate cases; over-or under-earnings in a given period due to changes in operating costs; the effects of tax rates or tax treatment of capital investments, including the effect of repair tax; capital expenditures that are not eligible for a DSIC between rate cases; acquisitions which have not yet been included in rate base; and issuances of equity. We anticipate that we may experience periods in which growth in earnings is less than growth in rate base; such differences may be material and may persist over multiple reporting periods.

Our ability to meet customers' natural gas requirements may be impaired if contracted natural gas supplies and interstate pipelines services are not available, are not delivered in a timely manner or if federal regulations decrease its available capacity, which may result in a loss of customers and an adverse effect on our financial conditions and results of operations.

We are responsible for acquiring sufficient natural gas supplies, interstate pipeline capacity and storage capacity to meet current and future customers' peak, annual and seasonal natural gas requirements. We rely on third-party service providers, as we purchase a portion of our natural gas supply from interstate sources and rely on interstate pipelines to transport natural gas to our distribution system, in addition to local production that is delivered directly into our pipeline system. The Federal Energy Regulatory Commission (FERC) regulates the transportation of the natural gas received from interstate sources, and any change in regulatory policies could increase our transportation costs or decrease our available pipeline capacity. A decrease in interstate pipeline capacity available, an increase in competition for interstate pipeline transportation service or other interruptions to pipeline gas supplies could reduce our normal interstate supply of natural gas. Additionally, federal or state legislation could restrict or limit natural gas drilling, which could decrease the supply of available natural gas. If we are unable to maintain access to a reliable and adequate natural gas supply or sufficient pipeline capacity to deliver that supply, we may be unable to meet our customers' requirements, resulting in a loss of customers and an adverse effect on our financial conditions and results of operations.

Peoples has traditionally used local production as a source of supply to fulfill a portion of its supply requirements. In order to absorb local gas into its system, Peoples has in place a network of pipelines and related facilities that move the gas either to customers located where gas is produced or to the more populated areas of the service territory where the greatest level of consumption occurs, and, in summer months, to Peoples' on-system and off-system storage facilities. This network of facilities includes gathering lines, compressor stations, and transmission lines. Peoples has entered into gas purchase agreements with various producers to supply this local production. A decrease in this supply could occur, for example, if the local gas producers no longer drill wells to offset natural well production decline or if such producers decide to cease production or produce into another pipeline. State and federal legislation or regulations could also limit drilling activities and in turn limit gas supply. If supply is limited, we would be faced with purchasing gas supplies likely at a higher cost, may be unable to find alternative gas supply, and accordingly, may be unable to meet customer requirements, resulting in a loss of customers and an adverse effect on our financial condition and results of operations.

Any failure of our water and wastewater treatment plants, network of water and wastewater pipes, or water reservoirs could result in damages that may harm our business, financial condition, and results of operations.

Our operating subsidiaries treat water and wastewater, distribute water, and collect wastewater through an extensive network of pipes, and store water in reservoirs. A failure of a major treatment plant, pipe, or reservoir could result in claims for injuries or property damage. The failure of a major treatment plant, pipe, or reservoir may also result in the need to shut down some facilities or parts of our network in order to conduct repairs. Such failures and shutdowns may limit our ability to supply water in sufficient quality and quantities to our customers or collect and treat wastewater in accordance with standards prescribed by governmental regulators, including state utility commissions, and may harm our business, financial condition, and results of operations. Any business interruption or other losses might not be covered by insurance policies or be recoverable in rates, and such losses may make it difficult for us to secure insurance in the future at acceptable rates.

Our facilities could be the target of a possible terrorist or other deliberate attack which could harm our business, financial condition and results of operations.

In addition to the potential contamination of our water supply or deliberate gas explosions as described in separate risk factors herein, we maintain security measures at our facilities and have heightened employee and public safety official awareness of potential threats to our utility systems. We have and will continue to bear increases in costs for security precautions to protect our facilities, operations, and supplies, most of which have been recoverable under state regulatory policies. While the costs of increases in security, including capital expenditures, may be significant, we expect these costs to continue to be recoverable in utility rates. Despite our security measures, we may not be in a position to control the outcome of terrorist events, or other attacks on our utility systems, should they occur. Such an event could harm our business, financial condition, and results of operations.

Our business is impacted by weather conditions and is subject to seasonal fluctuations, which could harm demand for water and natural gas services and our business, financial condition, and results of operations.

Demand for our water during the warmer months is generally greater than during cooler months due primarily to additional requirements for water in connection with irrigation systems, swimming pools, cooling systems, and other outside water use. Throughout the year, and particularly during typically warmer months, demand will vary with temperature, rainfall levels, and rainfall frequency. In the event that temperatures during the typically warmer months are cooler than normal, if there is more rainfall than normal, or rainfall is more frequent than normal, the demand for our water may decrease and harm our business, financial condition, and results of operations. In Illinois, our operating subsidiary has adopted a revenue stability mechanism which allows us to recognize state PUC authorized revenue for a period which is not based upon the volume of water sold during that period, and effectively reduces the impact of weather and consumption variability.

Peoples' revenues are seasonal and temperature sensitive and vary from year-to-year, depending on weather conditions, with a substantial portion of Peoples' revenue occurring in the first and fourth quarters of the year due to colder temperatures and increased heating needs. In 2023, this amounted to 73%, for the first and fourth quarters. This has the effect of reducing our quarterly revenues in the spring and summer months. In addition, warmer-than-normal-weather conditions can decrease the amount of natural gas Peoples sells in any year, which could adversely affect our business, financial condition, and results of operations. Finally, significantly colder-than-normal weather conditions can materially increase natural gas usage, resulting in challenges for our operations and our ability to serve our customers.

Decreased residential customer water and natural gas usage as a result of conservation efforts, and the impact of more efficient appliances and furnaces, may harm demand for our utility services and may reduce our revenues and earnings.

There has been a general decline in water usage per residential customer as a result of an increase in conservation awareness, and the impact of an increased use of more efficient plumbing fixtures and appliances. These gradual, long-term changes are normally taken into account by the utility commissions in setting rates, whereas short-term changes in water usage, if significant, may not be fully reflected in the rates we charge. We are dependent upon the revenue generated from rates charged to our residential customers for the volume of water used. If we are unable to obtain future rate increases to offset decreased residential customer water consumption to cover our investments, expenses, and return for which we initially sought the rate increase, our business, financial condition, and results of operations may be harmed.

In addition, over time, average customer gas consumption has declined, as more energy efficient appliances and furnaces have been installed and conservation programs have been implemented. If we are unable to compete effectively or if customers further reduce their gas needs, we may lose existing customers, sell less gas to our customers and/or fail to acquire new customers, which could have a material adverse effect on our business, financial condition, and results of operations.

Drought conditions and government-imposed water use restrictions may impact our ability to serve our current and future customers, and may impact our customers' use of our water, which may harm our business, financial condition, and results of operations.

We depend on an adequate water supply to meet the present and future demands of our customers. Drought conditions could interfere with our sources of water supply and could harm our ability to supply water in sufficient quantities to our existing and future customers. An interruption in our water supply could harm our business, financial condition, and results of operations. Moreover, governmental restrictions on water usage during drought conditions may result in a decreased demand for our water, even if our water supplies are sufficient to serve our customers during these drought conditions, which may harm our business, financial condition, and results of operations.

The failure of, or the requirement to repair, upgrade or dismantle any of our dams or reservoirs may harm our business, financial condition, and results of operations.

Several of our water systems include impounding dams and reservoirs of various sizes. Although we believe our dam review program, which includes regular inspections and other engineering studies, will ensure our dams are structurally sound and well-maintained, the failure of a dam could result in significant downstream damage and could result in claims for property damage or for injuries or fatalities. We periodically inspect our dams and purchase liability insurance to cover such risks, but depending on the nature of the downstream damage and cause of the failure, the policy limits of insurance coverage may not be sufficient, and losses incurred may make it difficult for us to secure insurance in the future at acceptable rates. A dam failure could also result in damage to, or disruption of, our water treatment and pumping facilities that are often located downstream from our dams and reservoirs. Significant damage to these facilities, or a significant decline in the storage of the raw water impoundment, could affect our ability to provide water to our customers until the facilities and a sufficient raw water impoundment can be restored. The estimated costs to maintain our dams are included in our capital budget projections and, although such costs to date have been recoverable in rates, there can be no assurance that rate increases will be granted in a timely or sufficient manner to recover such costs in the future, if at all.

Our operations are geographically concentrated in Pennsylvania, which make us susceptible to risks affecting Pennsylvania.

Although we operate water, wastewater, and natural gas utility infrastructure in a number of states, our operations are concentrated in Pennsylvania. As a result, our financial results are largely subject to political, resource supply, labor, utility cost and regulatory risks, economic conditions, natural disasters, and other risks affecting Pennsylvania.

Federal and state environmental laws and regulations impose substantial compliance requirements on our operations. Our operating costs could be significantly increased in order to comply with new or stricter regulatory standards imposed by federal and state environmental agencies.

Our water, wastewater, and natural gas services are governed by various federal and state environmental protection and health and safety laws and regulations, including the federal Safe Drinking Water Act, the Clean Water Act, Clean Air Act, Resource Conservation and Recovery Act and similar state laws, and federal and state regulations issued under these laws by the EPA and state environmental regulatory agencies. These laws and regulations establish, among other things, criteria and standards for drinking water and for discharges into the waters of the U.S. as well as dam safety, air emissions, and residuals management. Pursuant to these laws, we are required to obtain various environmental permits from environmental regulatory agencies for our operations. The Company routinely seeks to acquire wastewater systems, some of which may have combined wastewater and stormwater systems which may overflow and be subject to increased regulation by the U.S. EPA. We cannot assure you that we will be at all times in total compliance with these laws, regulations and permits. If we fail to comply with these laws, regulations or permits, we could be fined or otherwise sanctioned by regulators and such noncompliance could result in civil suits. Environmental laws and regulations are complex and change frequently. These laws, and the enforcement thereof, have tended to become more stringent over time. While we have budgeted for future capital and operating expenditures to comply with these laws and our permits, it is possible that new or stricter standards could be imposed that will require additional capital expenditures or raise our operating costs. Although these expenditures and costs may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that regulate our business would approve rate increases to enable us to

recover such expenditures and costs. In summary, we cannot assure you that our costs of complying with, current and future environmental and health and safety laws will not harm our business, financial condition, and results of operations.

Additionally, the discovery of presently unknown environmental conditions, including former manufactured gas plant sites, and claims under environmental laws and regulations may result in expenditures and liabilities, which could be material, and could materially harm our business, financial condition and results of operations.

We are increasingly dependent on the continuous and reliable operation of our information technology systems, including those of our third-party vendors, and a disruption of these systems, resulting from cybersecurity attacks, risks associated with new systems implementation or integration, or other events, could harm our business.

We rely on our information technology systems, including those of our third-party vendors, in connection with the operation of our business, especially with respect to customer service and billing, accounting and, in some cases, the monitoring and operation of our treatment, storage and pumping facilities, and our natural gas pipelines. In addition, we rely on our systems to track our utility assets and to manage maintenance and construction projects, materials and supplies, and our human resource functions. A loss of these systems, or major problems with the operation of these systems, could harm our business, financial condition, and results of operations. We could also be adversely affected by system or network disruptions if new or upgraded information technology systems are defective, not installed properly, or not properly integrated into operations. In addition, our information technology systems may be vulnerable to damage or interruption from the following types of cybersecurity attacks or other events:

- power loss, computer systems failures, and internet, telecommunications or data network failures;
- operator negligence or improper operation by, or supervision of, employees;
- physical and electronic loss of data;
- computer viruses, cybersecurity attacks, intentional security breaches, hacking, denial of service actions, misappropriation of data and similar events;
- difficulties in the implementation of upgrades or modification to our information technology systems; and
- hurricanes, fires, floods, earthquakes and other natural disasters.

Although we do not believe that our systems are at a materially greater risk of cybersecurity attacks than other similar organizations, our information technology systems may be vulnerable to damage or interruption from the types of cybersecurity attacks or other events listed above or other similar actions, and such incidents may go undetected for a period of time. Such cybersecurity attacks or other events may result in:

- the loss or compromise of customer, financial, employee, or operational data;
- disruption of billing, collections or normal field service activities;
- disruption of electronic monitoring and control of operational systems;
- delays in financial reporting and other normal management functions; and
- disruption in normal system operations.

Possible impacts associated with a cybersecurity attack or other events may include: remediation costs related to lost, stolen, or compromised data; repairs to data processing or physical systems; increased cybersecurity protection costs; adverse effects on our compliance with regulatory and environmental laws and regulation, including standards for drinking water; litigation; loss of revenue; and reputational damage. We maintain insurance to help defray costs associated with cybersecurity attacks or other events, but we cannot provide assurance that such insurance will provide coverage for any particular type of incident or event or that such insurance will be adequate, and losses incurred may make it difficult for us to secure insurance in the future at acceptable rates.

We have a cybersecurity controls framework in place. We monitor our control effectiveness in an increasing threat landscape and continuously take action to improve our security posture. We cannot assure you that, despite such measures, a form of system failure or data security breach will not have a material adverse effect on our financial condition and results of operations.

Our water or wastewater utility systems may be subject to condemnations or other methods of taking by governmental entities.

In the states where our subsidiaries operate water or wastewater utility systems, it is possible that portions of our subsidiaries' operations could be acquired by municipal governments by one or more of the following methods:

- eminent domain;
- the right of purchase given to or reserved by a municipality or political subdivision when the original franchise was granted; and
- the right of purchase given or reserved under the law of the state in which the subsidiary was incorporated or from which it received its permit.

The price to be paid upon such an acquisition by the municipal government is usually determined in accordance with applicable law under eminent domain. In other instances, the price may be negotiated, fixed by appraisers selected by the parties or computed in accordance with a formula prescribed in the law of the state or in the particular franchise or charter. We believe that our operating subsidiaries would be entitled to receive fair market value for any assets that are condemned. However, there is no assurance that the fair market value received for assets condemned would be in excess of book value.

In a very small number of instances, in one of our southern states where there are municipally-owned water or wastewater systems near our operating divisions, the municipally-owned system may either have water distribution or wastewater collection mains that are located adjacent to our division's mains or may construct new mains that parallel our mains. In these circumstances, on occasion, the municipally-owned system may attempt to offer service to customers who are connected to our mains, resulting in our mains becoming surplus or underutilized without compensation.

The final determination of our income tax liability may be materially different from our income tax provision.

Significant judgment is required in determining our provision for income taxes. Our calculation of the provision for income taxes is subject to our interpretation of applicable business tax laws in the jurisdictions in which we file. In addition, our income tax returns are subject to periodic examination by the Internal Revenue Service and other taxing authorities. Some of our subsidiaries use a tax method of accounting that permits the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for tax purposes. Our determination of what qualifies as a capital cost versus a tax deduction for utility asset improvements is subject to subsequent adjustment and may impact the income tax benefits that have been recognized.

Although we believe our income tax estimates, including any tax reserves for uncertain tax positions or valuation allowances on deferred tax assets are appropriate, there is no assurance that the final determination of our income tax liability will not be materially different; either higher or lower, from what is reflected in our income tax provision. In the event we are assessed additional income taxes, our business, financial condition, and results of operations could be harmed.

Wastewater operations entail significant risks and may impose significant costs.

Wastewater collection and treatment involve various unique risks. If collection or treatment systems fail or do not operate properly, or if there is a spill, untreated or partially treated wastewater could discharge onto property or into nearby streams and rivers, causing various damages and injuries, including environmental damage. These risks are most acute during periods of substantial rainfall or flooding, which are the main causes of wastewater overflow and system failure. Liabilities resulting from such damages and injuries could harm our business, financial condition, and results of operations.

Work stoppages and other labor relations matters could harm our operating results.

Approximately 50% of our Regulated Water and Regulated Natural Gas segments' workforce is unionized under 22 labor contracts with labor unions, which expire between at various times up until 2028. In light of rising costs for healthcare and retirement benefits, contract negotiations in the future may be difficult. We are subject to a risk of work stoppages and other labor actions as we negotiate with the unions to address these issues, which could harm our business, financial condition, and results of operations. We cannot assure you that issues with our labor forces will be resolved favorably to us in the future or that we will not experience work stoppages.

Workforce-related risks may affect our results of operations.

We are subject to various workforce-related risks, including the risk that we will be unable to attract and retain qualified personnel for our water, wastewater, and natural gas operations, that we will be unable to effectively transfer the knowledge and expertise of an aging workforce to new personnel as those workers retire, and that we will be unable to reach collective bargaining arrangements with the unions that represent certain of our workers, which could result in work stoppages. Additionally, we rely on outside resources to supplement our workforce, including construction crews which are key to our infrastructure replacement program. We face the same risks associated with these outside resources as we do with our own workforce. As a result, we may be unable to hire or retain an adequate number of individuals who are knowledgeable about public utilities, water or the natural gas industry or face a lengthy time period associated with skill development and knowledge transfer. Failure to address these risks may result in increased operational and safety risks as well as increased costs. Even with reasonable plans in place to address succession planning and workforce training, we cannot control the future availability of qualified labor. If we are unable to successfully attract and retain an appropriately qualified workforce, it could adversely affect our financial condition and results of operations.

Significant or prolonged disruptions in the supply of important goods or services from third parties could harm our business, financial condition, and results of operations.

We are dependent on a continuing flow of important goods and services from suppliers for our businesses. A disruption or prolonged delays in obtaining important supplies or services, such as maintenance services, purchased water, chemicals, utility pipe, valves, hydrants, electricity, or other materials, could harm our utility services and our ability to operate in compliance with all regulatory requirements, which could harm our business, financial condition, and results of operations. In some circumstances, we rely on third parties to provide important services (such as customer bill print and mail activities, payment processing, or utility service operations in some of our divisions) and a disruption in these services could harm our business, financial condition, and results of operations. Some possible reasons for a delay or disruption in the supply of important goods and services include:

- our suppliers may not provide materials that meet our specifications in sufficient quantities;
- our suppliers may provide us with water that does not meet applicable quality standards or is contaminated;
- our suppliers may provide us with natural gas not meeting quality standards or is of insufficient volume or pressure;
- our suppliers may face production or shipping delays due to public health threats, natural disasters, strikes, lock-outs, political disputes, or other such actions;
- one or more suppliers could make strategic changes in the lines of products and services they offer; and
- some of our suppliers, such as small companies, may be more likely to experience financial and operational difficulties than larger, well-established companies, because of their limited financial and other resources.

As a result of any of these factors, we may be required to find alternative suppliers for the materials and services on which we rely. Accordingly, we may experience delays in obtaining appropriate materials and services on a timely basis and in sufficient quantities from such alternative suppliers at a reasonable price, which could interrupt services to our customers and harm our business, financial condition, and results of operations.

We depend significantly on the services of the members of our management team, and the departure of any of those persons could cause our operating results to suffer.

Our success depends significantly on the continued individual and collective contributions of our management team. The loss of the services of any member of our management team or the inability to hire and retain experienced management personnel could harm our business, financial condition, and results of operations.

We may incur significant costs and liabilities resulting from pipeline integrity and other similar programs and related repairs.

Certain of Peoples' pipeline operations are subject to pipeline safety laws and regulations. The Department of Transportation's Pipeline and Hazardous Materials Safety Administration has adopted regulations requiring pipeline operators to develop integrity management programs, including more frequent inspections and other measures, for transmission pipelines located in "high consequence areas," which are those areas where a leak or rupture could do the most harm. The regulations require pipeline operators, including Peoples, to, among other things:

- perform ongoing assessments of pipeline integrity;
- develop a baseline plan to prioritize the assessment of a covered pipeline segment;
- identify and characterize applicable threats that could impact a high consequence area;
- improve data collection, integration, and analysis;
- develop processes for performance management, record keeping, management of change and communication;
- repair and remediate pipelines as necessary; and
- implement preventative and mitigating action.

We are required to maintain pipeline integrity testing programs that are intended to assess pipeline integrity. Peoples is also required to establish and maintain a Distribution Integrity Management Program for all distribution assets. This program requires protocols for identifying risks and threats to the distribution systems. The program incorporates a relative risk model to measure risk reduction to these threats. Any repair, remediation, preventative or mitigating actions may require significant capital and operating expenditures. Should we fail to comply with applicable statutes and related rules, regulations and orders, we could be subject to significant penalties and fines.

Our liquidity and, in certain circumstances, results of operations may be adversely affected by the cost of purchasing natural gas during periods in which natural gas prices are rising significantly.

The Peoples' regulated companies purchase their natural gas supply primarily through a combination of requirements contracts, some of which contain minimum purchase obligations, monthly spot purchase contracts, and forward purchase contracts. The price paid for natural gas acquired under forward purchase contracts is fixed prior to the delivery of the natural gas. Additionally, a portion of natural gas purchases is injected into natural gas storage facilities in the non-heating months and withdrawn from storage for delivery to customers during the heating months.

Our short-term borrowing requirements and liquidity are also significantly affected by the seasonal nature of the natural gas business. Changes in the price of natural gas due to, for example, extreme weather events, geopolitical forces, or regulatory policy changes, and the amount of natural gas needed to supply customers' needs due to, for example, colder than expected seasonal temperatures, could significantly affect the price and amount of natural gas we are required to purchase and the timing of such purchases, and, in turn, affect our borrowing requirements and liquidity position. If we fail to secure sufficient natural gas supplies at appropriate prices (due to, for example, more extreme winter conditions), we may be required to purchase additional natural gas supplies or purchase natural gas at elevated prices, which could adversely affect our borrowing levels, liquidity and financial condition.

Peoples' tariff rate schedules contain Purchased Gas Adjustment (PGA) clauses that permit filings for rate adjustments to recover the cost of purchased gas. Subject to regulatory approval, as described below, changes in the cost of purchased gas are flowed through to customers and may affect uncollectible amounts and cash flows and can therefore impact our financial condition and results of operations.

The state regulatory commissions approve the PGA changes on an interim basis, subject to refund and the outcome of a subsequent audit and prudence review. Due to such review process, there is a risk of a disallowance of full recovery of these costs. We are also subject to regulations and standards regarding the amount of lost and unaccounted for gas that may be recovered from customers. Any material disallowance of purchased gas costs would adversely affect our financial condition and results of operations.

Increases in the prices that we charge for gas may also adversely affect our business because increased prices could lead customers to reduce usage and cause some customers to have difficulty paying the resulting higher bills. These higher prices may increase bad debt expenses and ultimately reduce earnings. Additionally, rapid increases in the price of purchased gas may result in an increase in short-term debt.

Our non-regulated natural gas operations purchase natural gas utilizing a combination of requirements contracts, some of which contain minimum purchase obligations, monthly spot purchase contracts, and forward purchase contracts. Although price risk for the non-regulated companies is mitigated to a degree by efforts aimed at balancing supply and demand, there are practical limitations on the ability to accurately predict demand and any failure to do so could adversely affect our financial condition and results of operations.

An impairment in the carrying value of our goodwill could negatively impact our consolidated results of operations and net worth.

We have significant amounts of goodwill resulting from the acquisition of utility systems and businesses. As of December 31, 2023, the net carrying value of goodwill amounted to $2,340,738,000 or 13.9% of our total assets. Of the balance, $2,277,447,000 relates to our Regulated Natural Gas reporting unit. Goodwill is initially recorded at fair value, not amortized and reviewed for impairment at least annually or more frequently if impairment indicators arise. Indicators that are considered significant include changes in performance relative to expected operating results, significant negative industry or economic trends, including rising interest rates, or a significant decline in our stock price and/or market capitalization for a sustained period of time. If certain factors arise, we may be required to record a significant non-cash charge to earnings in our consolidated financial statements during the period in which an impairment of our goodwill is determined. Any such non-cash charge could have a material adverse impact on our results of operations and net worth.

Risk Related to Public Health Threats

Global or regional health pandemics, epidemics or similar public health threats could negatively impact our business, outlook, financial condition, results of operations and liquidity.

Public health threats, such as the COVID-19 pandemic, and the measures implemented to contain its spread, have widespread impacts on the global economy, our employees, customers, and third-party business partners. Public health threats could, in the future, materially impact our business in numerous ways, including, but not limited to, those outlined below:

- reduced demand from our commercial customers and shifts in demand for our regulated utility services;
- delay the timeliness of our service to customers because of shutdowns and/or illness and travel restrictions among our employees or employees of other companies on whom we rely;
- negatively impact the financial condition of our customers and their ability to pay for our products and services, and our ability to disconnect service for non-payment may be limited, and state regulators may impose bill deferral programs;
- may limit or curtail significantly or entirely the ability of public utility commissions to approve or authorize applications and other requests we may make with respect to our regulated water and natural gas businesses; and
- delays in our supply chain and our ability to complete maintenance, repairs, and capital programs, which could result in disruptions and increased costs.

These and other impacts of global or regional health pandemics, epidemics or similar public health threats could also have the effect of heightening many of the other risks described in "Risk Factors" in this Annual Report and the other reports we file from time to time with the SEC. We might not be able to predict or respond to all impacts on a timely basis to prevent near- or long-term adverse impacts to our results of operations, financial condition and liquidity. The ultimate impact of public health threats on our business depends on factors beyond our knowledge or control, including the duration and severity of the outbreak as well as third-party actions taken to contain its spread and mitigate its public health effects. Any of these factors could have a negative impact on our business, outlook, financial condition, and results of operations, which impact could be material.

Risks Related to the Company's Capital Needs and Common Stock

We have substantial indebtedness, as a result, it may be more difficult for the Company to pay or refinance its debts or take other actions, and the Company may need to divert cash to fund debt service payments.

As of December 31, 2023, our aggregate long-term and short-term debt balance was $7,098,131,000. The substantial indebtedness could:

- make it more difficult and/or costly for the Company to pay or refinance its debts as they become due, particularly during adverse economic and industry conditions, because a decrease in revenues or increase in costs could cause cash flow from operations to be insufficient to make scheduled debt service payments;
- limit the Company's flexibility to pursue other strategic opportunities or react to changes in its business and the industry sectors in which it operates and, consequently, put the Company at a competitive disadvantage to its competitors that have less debt;
- require a substantial portion of the Company's available cash to be used for debt service payments, thereby reducing the availability of its cash to fund working capital, capital expenditures, development projects, acquisitions, dividend payments, and other general corporate purposes, which could harm the Company's prospects for growth;
- result in a downgrade in the credit ratings on the Company's indebtedness, which could limit the Company's ability to borrow additional funds on favorable terms or at all and increase the interest rates under its credit facilities and under any new indebtedness it may incur;
- make it more difficult for the Company to raise capital to fund working capital, make capital expenditures, pay dividends, pursue strategic initiatives or for other purposes;
- result in higher interest expense, which could be further increased in the event of increases in interest rates on the Company's current or future borrowings; and
- require that additional materially adverse terms, conditions or covenants be placed on the Company under its debt instruments, which covenants might include, for example, limitations on additional borrowings and specific restrictions on uses of its assets, as well as prohibitions or limitations on its ability to create liens, pay dividends, receive distributions from its subsidiaries, redeem or repurchase its stock or make investments, any of which could hinder its access to capital markets and limit or delay its ability to carry out its capital expenditure program or otherwise limit its flexibility in the conduct of its business and make it more vulnerable to economic downturns and adverse competitive and industry conditions.

Based on the current and expected results of operations and financial condition of the Company, the Company believes that its cash flows from operations, together with the proceeds from borrowings, and issuances of equity and debt securities in the capital markets will generate sufficient cash on a consolidated basis to make all of the principal and interest payments when such payments are due under the Company's and its current subsidiaries' existing credit facilities, indentures and other instruments governing their outstanding indebtedness. However, the Company's expectation is based upon numerous estimates and assumptions and is subject to numerous uncertainties.

Our business requires significant capital expenditures that are partially dependent on our ability to secure appropriate funding. Disruptions in the capital markets may limit our access to capital. If we are unable to obtain sufficient capital, or if the cost of borrowing increases, it may harm our business, financial condition, results of operations, and our ability to pay dividends.

Our business is capital intensive. In addition to the capital required to fund customer growth through our acquisition strategy, on an annual basis, we invest significant sums for additions to or replacement of property, plant and equipment. We obtain funds for our capital expenditures from operations, contributions and advances by developers and others, debt issuances, and equity issuances. We have paid dividends consecutively for 79 years, and our Board of Directors recognizes the value that our common shareholders place on both our historical payment record and on our future anticipated dividend payments. Our ability to continue our growth through acquisitions and to maintain and meet our financial objectives is dependent upon the availability of adequate capital, and we may not be able to access the capital markets on favorable terms or at all. Additionally, if in the future, our credit facilities are not renewed or our short-term borrowings are called for repayment, we would need to seek alternative financing sources; however, there can be no assurance that these alternative financing sources would be available on terms acceptable to us. In the event we are unable to obtain sufficient capital, we may need to take steps to conserve cash by reducing our capital expenditures or dividend payments and our ability to pursue acquisitions may be limited. The reduction in capital expenditures may result in reduced potential earnings growth, affect our ability to meet environmental laws and regulations, and limit our ability to improve or expand our utility systems to the level we believe appropriate. There is no guarantee that we will be able to obtain sufficient capital in the future on reasonable terms and conditions for expansion, construction, and maintenance. In addition, delays in completing major capital projects could delay the recovery of the capital expenditures associated with such projects through rates.

If the cost of borrowing continues to increase, we might not be able to recover increases in our cost of capital through rates. The inability to recover higher borrowing costs through rates, or the regulatory lag associated with the time that it takes to begin recovery, may harm our business, financial condition, results of operations and cash flows.

Our inability to comply with debt covenants under our loan and debt agreements could result in prepayment obligations.

We are obligated to comply with debt covenants under some of our loan and debt agreements. Failure to comply with covenants under our loan and debt agreements could result in an event of default, which if not cured or waived, could result in us being required to repay or finance these borrowings before their due date, limit future borrowings, cause us to default on other obligations, and increase borrowing costs. If we are forced to repay or refinance (on less favorable terms) these borrowings, our business, financial condition, and results of operations could be harmed by reduced access to capital and increased costs and rates.

The price of our common stock may be volatile. This volatility may affect the price at which one could sell our common stock, and the sale or resale of substantial amounts of our common stock could adversely affect the market price of our common stock.

The sale or issuance of substantial amounts of our common stock, or the perception that additional sales or issuances could occur, could adversely affect the market price of our common stock, even if the business is doing well. In addition, the availability for sale of substantial amounts of our common stock could adversely impact its market price. Any of the foregoing may also impair our ability to raise additional capital through the sale of our equity securities.

Item 1B *Unresolved Staff Comments*

None

Item 1C *Cybersecurity*

Risk Management and Strategy

In connection with our enterprise risk management process, we identify, prioritize and monitor key risks that may affect the Company, including risks from cyber threats. Our cybersecurity program is aligned to the National Institute of Standards and Technology (NIST) Cybersecurity Framework. We have enterprise-wide security policies, standards and controls that incorporate best practices in security engineering, technology architecture and data protection, which support regulatory compliance. Our program includes encryption, data masking technology, data loss prevention technology, authentication technology, entitlement management, access control, anti-malware software and transmission of data over private networks, among other procedures designed to protect against unauthorized access to information. We also implemented specialized programs, such as enterprise-wide communications, presentations, phishing simulations and focused training for specific roles, as well as a general cybersecurity training program required for all employees. We also engage third parties to perform regular reviews of our security framework controls to promote objectivity. Our processes to identify, assess and manage material risks of cyber threats include risks associated with third party service providers, including cloud-based platforms. We believe that these processes provide us with a comprehensive assessment of potential cyber threats.

We maintain cybersecurity protection measures with respect to our information technology, including our customer data, and, in some cases, the monitoring and operation of our treatment, storage, pumping, and pipeline infrastructure. We rely on our information technology systems in connection with the operation of our business, especially with respect to customer service and billing, accounting and, in some cases, the monitoring and operation of our treatment, storage, pumping, and pipeline infrastructure. In addition, we rely on our systems to track our utility assets and to manage maintenance and construction projects, materials and supplies, and our human resource functions.

To date, risks from cybersecurity threats have not materially affected the Company, and we do not believe they are reasonably likely to materially affect the Company, including its business strategy, financial condition or results of operations. Refer to Item 1A – *Risk Factors* for additional information.

Governance

Role of Management - Our cybersecurity program is overseen by a cross-functional committee of senior business leaders and led by our Chief Information Officer and Information Security Director. This management committee meets bimonthly and is charged with overseeing our cybersecurity strategy, ensuring that cyber risk is managed, and that the program is aligned to business goals and objectives. Both our Chief Information Officer and Information Security Director have formal education in information technology; have combined, extensive experience working in the Company's information and technology function; and receive periodic training and education on cybersecurity-related topics.

Role of the Board of Directors - The Board of Directors has a Risk and Investment Policy Committee ("RP Committee") whose primary purpose is to assist the Board of Directors in fulfilling its oversight responsibilities. The RP Committee oversees a number of the Company's risk management practices, including cybersecurity risks. Our Chief Information Officer and Information Security Director provides updates on cybersecurity risks, threats, key developments in policies and practices, and related risk exposures to the RP Committee at least quarterly, and more often as needed. When covered during an RP Committee meeting, the Chairperson of the RP Committee reports on its discussions to the full Board of Directors. Additionally, management provides an update to the full Board of Directors at least once a year, and more often as needed. The Board of Directors annually reviews and approves the capital and operating budgets, ultimately reviewing and approving the amount spent on cybersecurity measures.

Item 2. *Properties*

Our Regulated Water properties consist of water transmission and distribution mains and wastewater collection pipelines, water and wastewater treatment plants, pumping facilities, wells, tanks, meters, pipes, dams, reservoirs, buildings, vehicles, land, easements, rights-of-way, and other facilities and equipment used for the operation of our systems, including the collection, treatment, storage, and distribution of water and the collection and treatment of wastewater. Substantially all of our treatment, storage, and distribution properties are owned by our subsidiaries, and a substantial portion of our property is subject to liens of mortgage or indentures. These liens secure bonds, notes and other evidences of long-term indebtedness of our subsidiaries. For some properties that we acquired through the exercise of the power of eminent domain and other properties we purchased, we hold title for water supply purposes only. We own, operate and maintain approximately 14,450 miles of transmission and distribution mains, 24 surface water treatment plants, many well treatment stations, and 203 wastewater treatment plants. A small portion of the properties are leased under long-term leases.

Our Regulated Natural Gas properties consist of approximately 15,400 miles of natural gas distribution mains, varying in size from one-half inch to 36 inches in diameter, 1,700 miles of gathering pipeline, and 300 miles of intrastate transmission/storage pipeline. Further, in each of the cities, towns, and rural areas where we serve natural gas customers, we own the underground gas mains and service lines, metering, and regulating equipment located on customers' premises and the district regulating equipment necessary for pressure maintenance. With a few exceptions, the measuring stations at which we receive gas from third parties are owned, operated, and maintained by others, and our distribution facilities begin at the outlet of the measuring equipment. These facilities, including odorizing equipment, are usually located on land owned by suppliers.

The following table indicates our net property, plant and equipment, in thousands of dollars, as of December 31, 2023 in the principal states where we operate:

	Net Property, Plant and Equipment	
Pennsylvania	$ 8,621,092	71.3%
Ohio	709,169	5.9%
Illinois	649,669	5.4%
North Carolina	548,807	4.5%
Texas	676,130	5.5%
Other (1)	892,205	7.4%
Consolidated	$ 12,097,072	100.0%

(1) Consists primarily of our operating subsidiaries in the following states: New Jersey, Indiana, Virginia, and Kentucky.

We believe that our properties are generally maintained in good condition and in accordance with current standards of good water, wastewater, and natural gas industry practice. We believe that our facilities are adequate and suitable for the conduct of our business and to meet customer requirements under normal circumstances.

Our corporate offices are leased from our subsidiary, Aqua Pennsylvania, and are located in Bryn Mawr, Pennsylvania.

Item 3. *Legal Proceedings*

There are various legal proceedings in which we are involved. Although the results of legal proceedings cannot be predicted with certainty, except for the matter described below, there are no other pending legal proceedings to which we or any of our subsidiaries is a party or to which any of our properties is the subject that we believe are material or are expected to materially harm our business, operating results, reputation, or financial condition.

PFAS Litigation
Several of the Company's subsidiaries are parties to several lawsuits against manufacturers of certain PFAS compounds for damages, contribution and reimbursement of costs incurred and continuing to be incurred to address the presence of such PFAS compounds in public water supply systems owned and operated by these utility subsidiaries and throughout its service area. One such suit, to which the Company is a party, is a multi-district litigation, or MDL, lawsuit which

commenced on December 7, 2018, in the United States District Court for the District of South Carolina. In August 2023, a potential class action settlement involving defendants The Chemours Company, Corteva, Inc., and DuPont de Nemours, Inc. to resolve claims brought in the MDL against them by public water systems, including the Company, and a similar class action settlement with defendant 3M Company received preliminary approval from the MDL court. The Company is monitoring and evaluating the ongoing litigation and settlement activity with the PFAS manufacturers for potential impacts to the various claims that the Company has asserted.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

Item 5. *Market for the Registrant's Common Stock, Related Stockholder Matters and Purchases of Equity Securities*

Our common stock is traded on the New York Stock Exchange under the ticker symbol WTRG. As of February 23, 2024, there were approximately 19,173 holders of record of our common stock.

The following table shows the cash dividends per share for the periods indicated:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
2023					
Dividend paid per common share	$ 0.2870	$ 0.2870	$ 0.3071	$ 0.3071	$ 1.1882
Dividend declared per common share	0.2870	-	0.3071	0.6142 *	1.2083
2022					
Dividend paid per common share	$ 0.2682	$ 0.2682	$ 0.2870	$ 0.2870	$ 1.1104
Dividend declared per common share	0.2682	0.2682	0.2870	0.5740 *	1.3974

**includes dividends declared in December that are payable to shareholders on March 1 of the subsequent year*

We have paid dividends consecutively for 79 years. On August 1, 2023, our Board of Directors authorized an increase of 7.0% in the September 1, 2023 quarterly dividend over the dividend Essential Utilities paid in the previous quarter. As a result of this authorization, beginning with the dividend payment in September 2023, the annualized dividend rate increased to $1.2284 per share. This is the 33rd dividend increase in the past 32 years and the 25th consecutive year that we have increased our dividend in excess of five percent. We presently intend to pay quarterly cash dividends in the future, on March 1, June 1, September 1, and December 1, subject to our earnings and financial condition, restrictions set forth in our debt instruments, regulatory requirements and such other factors as our Board of Directors may deem relevant. In 2023, our dividends paid represented 63.6% of net income.

Information with respect to restrictions set forth in our debt instruments is disclosed in Note 11 – *Long-term Debt and Loans Payable* in the *Notes to Consolidated Financial Statements* which is contained in Item 8 of this Annual Report.

During the fourth quarter of 2023, the Company did not repurchase any of its equity securities under any repurchase plan or program.

Item 6. *[RESERVED]*

(In thousands of dollars, except per share amounts)

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

OVERVIEW

The following discussion and analysis of our financial condition and results of operations should be read together with our Consolidated Financial Statements and accompanying Notes included in this Annual Report. This discussion contains forward-looking statements that are based on management's current expectations, estimates, and projections about our business, operations, and financial performance. All dollar amounts are in thousands of dollars, except per share amounts.

The Company

Essential Utilities, Inc., (Essential Utilities, the Company, we, us, or our), a Pennsylvania corporation, is the holding company for regulated utilities providing water, wastewater, or natural gas services to an estimated 5.5 million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, Virginia, and Kentucky under the Aqua and Peoples brands. One of our largest operating subsidiaries, Aqua Pennsylvania, Inc. (Aqua Pennsylvania), provides water or wastewater services to approximately one-half of the total number of water or wastewater customers we serve. These customers are located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated water or wastewater utility subsidiaries provide similar services in seven additional states. Our Peoples subsidiaries provide natural gas service to approximately 744,000 customers in western Pennsylvania and Kentucky. Approximately 95% of the total number of natural gas utility customers we serve are in western Pennsylvania. Lastly, the Company's market-based activities are conducted through Aqua Resources, Inc. and certain other non-regulated subsidiaries of Peoples. Aqua Resources offers, through a third-party, water and sewer service line protection solutions and repair services to households. Other non-regulated subsidiaries of Peoples provide utility service line protection services to households and operate gas marketing and production businesses.

In December 2022, the Company signed an agreement to sell its regulated natural gas utility assets in West Virginia, which represented approximately two percent of the Company's regulated natural gas customers. The sale closed on October 1, 2023 for an estimated purchase price of $39,965, subject to working capital and other adjustments. The sale concluded the Company's regulated utility operations in West Virginia. In October 2023, the Company entered into an agreement to sell its interest in three non-utility local microgrid and distributed energy projects for $165,000. The sale was completed in January 2024. These transactions are consistent with the Company's long-term strategy of focusing on its core business and will allow the Company to prioritize the growth of its utilities in states where it has scale. The Company intends to use the proceeds from these transactions to finance its capital expenditures and water and wastewater acquisitions, in place of external funding from equity and debt issuances. See Note 3 – *Assets Held for Sale and Dispositions* in the Notes to Consolidated Financial Statements for additional information.

Recent Developments

National Primary Drinking Water Regulation
On March 14, 2023, the U.S. Environmental Protection Agency ("EPA") announced the proposed National Primary Drinking Water Regulation ("NPDWR") for the treatment of six per- and polyfluoroalkyl substances or compounds ("PFAS"), which would establish legally enforceable levels for PFAS in drinking water. It is expected that the EPA will finalize the regulation in 2024. The Company will be provided a three-year window to comply with the NPDWR, and the Safe Drinking Water Act allows for an additional potential for a two-year extension at the state level (the "Compliance Period"). We expect that the regulation, once finalized, will result in changes to or addition of certain treatment processes that will require increased capital expenditures and operating expenses. The Company performed its initial analysis of the NPDWR and estimates an investment of at least $450,000 of capital expenditures to install additional treatment facilities over the Compliance Period in order to comply with the proposed NPDWR. This figure could increase as plans for construction execution are refined or if additional sites require treatment in the future. Additionally, the Company estimates annual operating expenses of approximately five percent of the installed capital expenditures, in today's dollars, related to testing, treatment, and disposal. These are preliminary estimates and actual capital expenditures and expenses may differ based upon a variety of factors, including supply chain issues and site-by-site requirements. The Company continues to advocate for actions to hold polluters accountable and is part of the Multi-District Litigation and other legal

actions against multiple PFAS manufacturers and polluters to attempt to ensure that the ultimate responsibility for the cleanup of these contaminants is attributed to the polluters and is seeking damages and other costs to address the contamination of its public water supply systems by PFAS. Capital expenditures and operating costs required as a result of water quality standards have been traditionally recognized by state utility commissions as appropriate for inclusion in establishing rates; however, we are also actively applying for grants and low interest loans, whenever possible, to reduce the overall cost to customers. The Company is also monitoring ongoing litigation and settlement activity with manufacturers of PFAS in these proceedings. For more information, see Part I, Item 3—Legal Proceedings in our Annual Report on Form 10-K for the year ended December 31, 2023.

Lead and Copper Rule Revisions and Improvements
On January 15, 2021, the EPA published the Lead and Copper Rule Revisions (LCRR) which details additional measures to better protect communities from exposure to lead in drinking water. Under the LCRR and subsequent rulings, water utilities are required to submit a lead service line inventory and a lead service line replacement plan to the respective states or agencies by October 16, 2024. We are continuing to enhance our lead service line inventory and refine our lead service line replacement plans, which we expect to complete by the deadline. On November 30, 2023, the EPA announced a proposed Lead and Copper Rule Improvements (LCRI) to further strengthen the key elements of the LCRR. The proposed LCRI includes, among others, a requirement to replace lead service lines within 10 years, lower lead action levels, changes to tap sampling protocol, and enhancements to public notification and customer communication. We are still in the process of reviewing the overall impact of the proposed LCRI. Capital expenditures and operating costs associated with compliance with any of these rule revisions will be determined once the EPA finalizes the rule.

Economic Regulation

Most of our utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions, and authorize the issuance of securities. The utility commissions also generally establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state and may change over time. A small number of our operations are subject to rate regulation by county or city government. Over time, the regulatory party in a particular state may change. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances in the various states in which we operate. One consideration we may undertake in evaluating on which states to focus our growth and investment strategy is whether a state provides for consolidated rates, a surcharge for replacing and rehabilitating infrastructure, fair value treatment of acquired utility systems, and other regulatory policies that promote infrastructure investment and efficiency in processing rate cases.

Rate Case Management Capability – The mission of the regulated utility industry is to provide quality and reliable utility service at reasonable rates to customers, while earning a fair return for shareholders. We strive to achieve the industry's mission by effective planning, efficient investments, and productive use of our resources. We maintain a rate case management capability to pursue timely and adequate returns on the capital investments that we make in improving our distribution system, treatment plants, information technology systems, and other infrastructure. This capital investment creates assets that are used and useful in providing utility service and is commonly referred to as rate base. Timely and adequate rate relief is important to our continued profitability and in providing a fair return to our shareholders; thus, providing access to capital markets to help fund these investments. In pursuing our rate case strategy, we consider the amount of net utility plant additions and replacements made since the previous rate decision, the changes in the cost of capital, changes in our capital structure, and changes in operating and other costs. Based on these assessments, our utility operations periodically file rate increase requests with their respective state utility commissions or local regulatory authorities. In general, as a regulated enterprise, our utility rates are established to provide full recovery of utility operating costs, taxes, interest on debt used to finance capital investments, and a return on equity used to finance capital investments. Our ability to recover our expenses in a timely manner and earn a return on equity employed in the business helps determine the profitability of the Company.

As of December 31, 2023, the Company's rate base is estimated to be $10,400,000, which is comprised of:

- $6,900,000 in the Regulated Water segment; and
- $3,500,000 in the Regulated Natural Gas segment.

As of December 31, 2023, the regulatory status of the Company's rate base is estimated to be as follows:

- $8,200,000 filed with respective state utility commissions or local regulatory authorities; and
- $2,200,000 not yet filed with respective state utility commissions or local regulatory authorities.

Our water and wastewater operations are composed of 57 rate divisions, and our natural gas operations are comprised of four rate divisions. Each of our utility rate divisions require a separate rate filing for the evaluation of the cost of service and recovery of investments in connection with the establishment of tariff rates for that rate division. When feasible and beneficial to our utility customers, we have sought approval from the applicable state utility commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the eight states in which we operate water and wastewater utilities currently permit us to file a revenue requirement using some form of consolidated rates for some or all of the rate divisions in that state.

Our operating subsidiaries received rate increases representing estimated annualized revenues of $28,426 in 2023 resulting from seven base rate decisions, $81,610 in 2022 resulting from seven base rate decisions, and $3,390 in 2021 resulting from six base rate decisions. Annualized revenues in aggregate from all of the rate increases realized in the year of grant were $10,109 in 2023, $51,163 in 2022, and $2,995 in 2021.

Revenue Surcharges – Each of our states in which we operate water, wastewater, and natural gas utilities, permit us to add an infrastructure rehabilitation surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. Prior to allowing for such surcharges, utilities absorbed all of the depreciation and capital costs of these projects between base rate increases without the benefit of additional revenues. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which could act as a disincentive for utilities to rehabilitate their infrastructure. In addition, some states permit our subsidiaries to use a surcharge or credit on their bills to reflect allowable changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new costs are fully incorporated in base rates. Additional information regarding revenue surcharges is provided in Note 17 – *Rate Activity* in this Annual Report.

Inflation and Operating Costs – Most elements of operating costs are subject to the effects of inflation and changes in the number of customers served. Several elements are subject to the effects of changes in water or gas consumption, weather conditions, and the degree of water treatment required due to variations in the quality of the raw water. The principal elements of operating costs are purchased gas, labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations. Electricity and chemical expenses vary in relationship to water or gas consumption, raw water quality, wastewater volumes, and price changes. Maintenance expenses are sensitive to extremely cold weather, which can cause utility mains to rupture and natural gas service lines to freeze, resulting in additional costs to repair the affected mains. Higher operating costs and capital requirements may also require us to increase borrowings under our credit facilities, resulting in higher interest expense.

Inflation, higher interest rates, higher insurance costs due to market conditions, and supply chain pressures resulted in an increase in our operating and capital spending requirements in 2022 and 2023, which we expect to continue through 2024. Recovery of the effects of increased cost of providing services and infrastructure improvements through higher customer rates is dependent upon receiving adequate and timely rate increases. However, rate increases are not retroactive and often lag increases in costs. On occasion, our regulated utility companies may enter into rate settlement agreements, which require us to wait for a period of time to file the next base rate increase request. These agreements may result in regulatory lag whereby inflationary increases in expenses may not be reflected in rates, and may not yet be requested, or a gap may exist between when a capital project is completed and the start of its recovery in rates. Even during periods of moderate inflation, the effects of inflation can have a negative impact on our operating results. We continue to pursue

enhancements to our regulatory practices to facilitate the efficient recovery of the increased cost of providing services and infrastructure improvements in our rates and mitigate the inherent regulatory lag associated with traditional rate making processes.

Our natural gas distribution operations are also affected by the cost of natural gas. We are able to generally pass the cost of gas to our customers without markup under purchase gas cost adjustment mechanisms; therefore, increases in the cost of gas are offset by a corresponding increase in revenues. However, higher gas costs may adversely impact our accounts receivable collections, resulting in higher bad debt expense. This risk is currently mitigated by rate design that allows us to collect from our customers a portion of our bad debt expense. A typical residential natural gas bill includes charges for the cost of gas, delivery, and other charges. As of January 1, 2024, the annual portion of a typical Peoples Natural Gas residential bill related to gas costs is approximately 41%. In periods when we experience market increases in natural gas costs, such as in 2022, customer affordability and usage may be reduced. Customer conservation measures may occur that can reduce natural gas revenues, either temporarily or over time.

Income Tax Accounting Method Change - In March 2020 and in June 2022, the Company changed the method of tax accounting for certain qualifying infrastructure investments at its Peoples Natural Gas and Peoples Gas Company subsidiaries, respectively. In December 2022, the Company made a similar change for its Aqua New Jersey subsidiary. These changes resulted in a tax deduction for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. The Company is utilizing the flow-through method to account for these timing differences. For Peoples Natural Gas, the Company calculated the income tax benefits for qualifying capital expenditures made prior to March 16, 2020 (catch-up adjustment) and recorded a regulatory liability for $160,655 for these income tax benefits. In May 2021, the Pennsylvania Public Utility Commission approved a settlement petition that allows Peoples Natural Gas to continue to use flow-through accounting for the current tax repair benefit and allows for the catch-up adjustment be given to its customers. These benefits are being provided back to customers over a five-year period through a credit on customer bills which commenced in August 2021. In addition, the settlement petition required the contribution of $500 to a customer-bill payment assistance program, completed in July 2021, and $5,000 in relief to past-due accounts for natural gas customers impacted by the COVID-19 pandemic, completed in December 2021. For Peoples Gas, the Company calculated the catch-up adjustment for periods prior to the 2021 tax year and recognized a regulatory liability of $13,808 for these income tax benefits.

In April 2023, the Internal Revenue Service issued Revenue Procedure 2023-15 which provides a safe harbor method of accounting that taxpayers can adopt to determine whether expenses to repair, maintain, replace, or improve natural gas transmission and distribution property must be capitalized for tax purposes. The Company evaluated the safe harbor and intends to adopt the methodology on its 2023 tax return. Upon completion of its 2023 tax return analyses, the Company will update the regulatory liabilities recorded with the recalculated amounts for the catch-up periods for its Peoples Natural Gas and Peoples Gas subsidiaries, and file a petition to update its Tax Repair Surcredit rider to address the benefits due to customers.

In the second quarter of 2023, based on the tax legislative guidance that was issued, the Company reevaluated the uncertain tax positions related to the Regulated Water Segment and ultimately released a portion of its historical income tax reserves. Concurrently, the Company deferred this tax benefit from the reserve release as a regulatory liability, as the accounting treatment is expected to be determined in a subsequent regulatory proceeding.

Growth-Through-Acquisition Strategy

Part of our strategy to meet the industry challenges is to actively explore opportunities to expand our utility operations through acquisitions of water, wastewater, and other utilities either in areas adjacent to our existing service areas or in new service areas, and to explore acquiring market-based businesses that are complementary to our regulated utility operations. To complement our growth strategy, we routinely evaluate the operating performance of our individual utility systems, and in instances where limited economic growth opportunities exist or where we are unable to achieve favorable operating results or a return on equity that we consider acceptable, we will seek to sell the utility system and reinvest the proceeds in other utility systems. Consistent with this strategy, we are focusing our acquisitions and resources in states where we have critical mass of operations in an effort to achieve economies of scale and increased efficiency. Our growth-through-acquisition strategy allows us to operate more efficiently by sharing operating expenses over more utility customers and

provides new locations for future earnings growth through capital investment. Another element of our growth strategy is the consideration of opportunities to expand by acquiring other utilities, including those that may be in a new state if they provide promising economic growth opportunities and a return on equity that we consider acceptable. Our ability to successfully execute this strategy historically and to meet the industry challenges has largely been due to our core competencies, financial position, and our qualified and trained workforce, which we strive to retain by treating employees fairly and providing our employees with development and growth opportunities.

During 2023, we completed seven acquisitions of water and wastewater systems, which along with the organic growth in our existing systems, represents 19,659 new customers. During 2022, we completed three acquisitions of water and wastewater systems, which along with the organic growth in our existing systems, represents 31,537 new customers. During 2021 we completed two acquisitions of water and wastewater systems, which along with the organic growth in our existing systems, represents 21,364 new customers.

The Company currently has six signed purchase agreements for additional water and wastewater systems that are expected to serve approximately 215,000 equivalent retail customers or equivalent dwelling units and total approximately $380,000 in purchase price in two of our existing states. This includes the Company's agreement to acquire the Delaware County Regional Water Quality Control Authority (DELCORA) for $276,500. DELCORA, a Pennsylvania sewer authority, serves approximately 198,000 equivalent dwelling units in the Philadelphia suburbs. Refer to Note 2 – *Acquisitions* in this Annual Report for further discussion.

As of December 31, 2023, the pipeline of potential water and wastewater municipal acquisitions the company is actively pursuing represents approximately 400,000 total customers or equivalent dwelling units. The Company remains on track to, on average, annually increase customers between 2% and 3% through acquisitions and organic customer growth.

Performance Measures Considered by Management

We consider the following financial measures (and the period to period changes in these financial measures) to be the fundamental basis by which we evaluate our operating results:

- earnings per share;
- water and wastewater operating revenues;
- gas operating revenues, net of purchased gas costs;
- operations and maintenance expenses;
- earnings before interest, taxes, and depreciation (EBITD);
- earnings before income taxes;
- net income; and
- the dividend rate on common stock.

In addition, we consider other key measures in evaluating our utility business performance within our Regulated Water and Regulated Natural Gas segments:

- our number of utility customers;
- the ratio of operations and maintenance expense compared to operating revenues (this percentage is termed "operating expense ratio");
- return on revenues (net income divided by operating revenues);
- rate base growth;
- return on equity (net income divided by stockholders' equity); and
- the ratio of capital expenditures to depreciation expense.

Some of these measures, like EBITD and gas operating revenues, net of purchased gas costs, are non-GAAP financial measures. The Company believes that the non-GAAP financial measures provide management the ability to measure the Company's financial operating performance across periods and are more comparable to measures reported by other companies. We believe EBITD is a relevant and useful indicator of operating performance, as we measure it for

management purposes because it provides a better understanding of our results of operations by highlighting our operations and the underlying profitability of our core businesses.

We review these measurements regularly and compare them to historical periods, to our operating budget as approved by our Board of Directors, and to other publicly-traded utilities. Additionally, our Regulated Natural Gas segment is affected by the cost of natural gas, which is passed through to customers using a purchased gas adjustment mechanism and includes commodity price, transportation and storage costs. These costs are reflected in the consolidated statement of operations and comprehensive income as purchased gas expenses. Therefore, fluctuations in the cost of purchased gas impact operating revenues on dollar-for-dollar basis. Management uses gas operating revenues, net of purchased gas costs, a non-GAAP financial measure, to analyze the financial performance of our Regulated Natural Gas segment. Management believes this measure provides a meaningful basis for evaluating our natural gas utility operations since purchased gas expenses are included in operating revenues and passed through to customers.

Our operating expense ratio is one measure that we use to evaluate our operating efficiency and management effectiveness of our regulated operations. Our operating expense ratio is affected by a number of factors, including the following:

- ***Regulatory lag*** – Our rate filings are designed to provide for the recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claim costs, and costs to comply with environmental regulations), capital, and taxes. The revenue portion of the operating expense ratio can be impacted by the timeliness of recovery of, and the return on capital investments. The operating expense ratio is further influenced by regulatory lag (increases in operations and maintenance expenses not yet recovered in rates or a gap between the time that a capital project is completed and the start of its cost recovery in rates). The operating expense ratio is also influenced by decreases in operating revenues without a commensurate decrease in operations and maintenance expense, such as changes in customer usage as impacted by adverse weather conditions, or conservation trends. During periods of inflation, our operations and maintenance expenses may increase, impacting the operating expense ratio, as a result of regulatory lag, since our rate cases may not be filed timely and are not retroactive.

- ***Acquisitions*** – In general, acquisitions of smaller undercapitalized utility systems in some areas may initially increase our operating expense ratio if the operating revenues generated by these operations do not reflect the true cost of service and are accompanied by a higher ratio of operations and maintenance expenses as compared to other operational areas of the company that are more densely populated and have integrated operations. In these cases, the acquired operations are characterized as having relatively higher operating costs to fixed capital costs, in contrast to the majority of our operations, which generally consist of larger, interconnected systems, with higher fixed capital costs (utility plant investment) and lower operating costs per customer. For larger acquisitions, we may incur significant transaction expenses, which increase operations and maintenance expenses in periods prior to and in the period of the closing of the acquisition. In addition, we operate market-based subsidiary companies consisting of our non-regulated natural gas operations and Aqua Resources. The cost-structure of these market-based companies differs from our utility companies in that, although they may generate free cash flow, these companies may at times have a higher ratio of operations and maintenance expenses to operating revenues and a lower capital investment and, consequently, a lower ratio of fixed capital costs versus operating revenues in contrast to our regulated operations. As a result, the operating expense ratio is not comparable between the businesses. These market-based subsidiary companies are not a component of our Regulated Water or Regulated Natural Gas segments.

We continue to evaluate initiatives to help control operating costs and improve efficiencies.

Other Operational Measures Considered by Management

Sendout - Sendout represents the quantity of treated water delivered to our distribution systems. We use sendout as an indicator of customer demand. Weather conditions tend to impact water consumption, particularly during the late spring, summer, and early fall when discretionary and recreational use of water is at its highest. Consequently, a higher proportion of annual Regulated Water segment operating revenues are realized in the second and third quarters. In general, during this period, an extended period of hot and dry weather increases water consumption, while above-average

rainfall and cool weather decreases water consumption. Conservation efforts, construction codes that require the use of low-flow plumbing fixtures, as well as mandated water use restrictions in response to drought conditions can reduce water consumption. We believe an increase in conservation awareness by our customers, including the increased use of more efficient plumbing fixtures and appliances, may continue to result in a long-term structural trend of declining water usage per customer. These gradual long-term changes are normally taken into account by the utility commissions in setting rates, whereas significant short-term changes in water usage, resulting from drought warnings, water use restrictions, or extreme weather conditions, may not be fully reflected in the rates we charge between rate proceedings. In Illinois, our operating subsidiary has a revenue stability mechanism which allows us to recognize state PUC-authorized revenue for a period which is not based upon the volume of water sold during that period, and effectively lessens the impact of weather and consumption variability.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions, regardless of our ability to meet unrestricted customer water demands. The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income. In general, water consumption in the summer months is affected by drought warnings and restrictions to a higher degree because discretionary and recreational use of water is highest during the summer months, particularly in our northern service territories. At other times of the year, warnings and restrictions generally have less of an effect on water consumption. Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

The geographic diversity of our utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of the country. During the year ended December 31, 2023, our operating revenues for our Regulated Water segment were derived principally from the following states: approximately 56% in Pennsylvania, 11% in Ohio, 8% in Illinois, 9% in Texas, and 7% in North Carolina.

Heating Degree Days – The regulated natural gas utility business is subject to seasonal fluctuations with the peak usage period occurring in the heating season which generally runs from October to March. A heating degree day (HDD) is each degree that the average of the high and the low temperatures for a day is below 65 degrees Fahrenheit in a specific geographic location. Particularly during the heating season, this measure is used to reflect the demand for natural gas needed for heating based on the extent to which the average temperature falls below a reference temperature for which no heating is required (65 degrees Fahrenheit). HDDs are used in the natural gas industry to measure the relative coldness of weather and to estimate the demand for natural gas. Normal temperatures are based on a historical twenty-year average heating degree days, as calculated from data provided by the National Weather Service for the same geographic location. During the year ended December 31, 2023, we experienced actual HDDs of 4,558 days, which was warmer by 16.0% than the average or normal HDDs for Pittsburgh, Pennsylvania, which we use as a proxy for our western Pennsylvania service territory.

(In thousands of dollars, except per share amounts)

RESULTS OF OPERATIONS

Consolidated financial and operational highlights for the years ended December 31, 2023, 2022, and 2021 are presented below. For discussion of our results of operations and cash flows for 2022 compared with 2021, refer to Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for our fiscal year ended December 31, 2022, filed with the SEC on March 1, 2023.

Years ended December 31,	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
Operating revenues:					
Regulated water segment	$ 1,153,376	$ 1,082,972	$ 980,203	$ 70,404	$ 102,769
Regulated gas segment	863,759	1,143,362	859,902	(279,603)	283,460
Other and eliminations	36,689	61,698	38,039	(25,009)	23,659
Consolidated operating revenues	$ 2,053,824	$ 2,288,032	$ 1,878,144	$ (234,208)	$ 409,888
Operations and maintenance expense	$ 575,518	$ 613,649	$ 550,580	$ (38,131)	$ 63,069
Net income	$ 498,226	$ 465,237	$ 431,612	$ 32,989	$ 33,625
Capital expenditures	$ 1,199,103	$ 1,062,763	$ 1,020,519	$ 136,340	$ 42,244
Operating Statistics					
Selected operating results as a percentage of operating revenues:					
Operations and maintenance	28.0%	26.8%	29.3%	1.2%	-2.5%
Depreciation and amortization	16.7%	14.0%	15.9%	2.7%	-1.9%
Taxes other than income taxes	4.4%	3.9%	4.6%	0.5%	-0.7%
Interest expense, net of interest income	13.6%	10.2%	10.9%	3.4%	-0.7%
Net income	24.3%	20.3%	23.0%	4.0%	-2.7%
Return on Essential Utilities stockholders' equity	8.4%	8.7%	8.3%	-0.3%	0.4%
Ratio of capital expenditures to depreciation expense	3.5	3.4	3.5	0.1	(0.1)
Effective tax rate	(15.4%)	(3.2%)	(2.3%)	(12.2%)	(0.9%)

Consolidated Results of Operations Comparison for 2023 and 2022

Operating revenues **-** Operating revenues decreased by $234,208 or 10.2% for the year ended December 31, 2023 compared to the year ended December 31, 2022. Revenues from our Regulated Water segment increased by $70,404, Regulated Natural Gas segment revenues decreased by $279,603 and Other business segment revenues decreased by $25,009. A detailed discussion of the factors contributing to the changes in segment net revenue is included below under the section, Segment Results of Operations.

Our Other business segment revenues consist of market-based revenues at Aqua Resources and our non-regulated natural gas operations amounting to $36,689 in 2023, $61,698 in 2022, and $38,435 in 2021. The decrease in Other business segment revenues is primarily due to lower revenues from our non-regulated natural gas operations as a result of lower average gas prices and lower gas usage in the current period as compared to the prior period.

Operating expenses **-** Operations and maintenance expenses decreased in 2023, as compared to 2022, by $38,131 or 6.2%, primarily due to:

- decrease in customer assistance surcharge costs of $18,710 in our Regulated Natural Gas segment, which has an equivalent offsetting amount in revenues;
- decrease in employee related costs of $5,381, primarily due to lower post-retirement benefit costs, higher capitalization in 2023 due to greater capital expenditures, and a one-time compensation payment for non-officer level employees in 2022;
- decrease in charitable contributions to the Essential Foundation and other organizations of $15,360;

- decrease in bad debt expense of $4,422;
- decrease in outside services, maintenance expenses, and other operating expenses of $7,707, primarily due to lower water main break activity and higher capitalization as a result of greater capital expenditures during the period in our Regulated Water segment;
- insurance recovery of $2,448 associated with clean-up and additional expenses incurred during Hurricane Ida;
- an asset impairment charge recognized in the first quarter of 2022 of $1,801 to write down a portion of the right of use asset of our Regulated Natural Gas segment's office space to fair value; offset by
- an increase in production costs for water and wastewater operations of $12,208, primarily due to higher chemical prices and an increase in wholesale purchased water costs;
- additional operating costs associated with acquired and pending acquisitions of water and wastewater utility systems and higher customer base of $5,767;
- increase in insurance expense of $1,741 due to higher reserve for claims and insurance premiums in 2023;
- increase in legal expenses of $2,427;
- lower operation and maintenance expense of $837 as a result of the sale and cessation of our regulated natural gas operations in West Virginia in October 2023; and
- lower operating expenses driven by various cost-saving measures.

Purchased gas decreased by $249,689 or 41.5% in 2023 compared to 2022. Purchased gas represents the cost of gas sold by Peoples for the regulated and non-regulated gas business and has a corresponding offset in revenue. This expense decreased for the regulated natural gas business and non-regulated business by $223,461 and $26,228, respectively. The decrease in 2023 is the result of the impact of lower cost of gas of $128,997 and, lower gas usage of $120,692 due to warmer weather conditions as compared with 2022.

Depreciation and amortization expense increased by $22,518 or 7.0%, in 2023 over 2022, principally due to continued capital expenditures to expand and improve our utility facilities, upgrade our information systems, our acquisitions of new utility systems, and additional rate case filings. Expenses associated with filing rate cases are deferred and amortized over periods that generally range from one to three years.

Taxes other than income taxes totaled $90,208 in 2023 and $90,024 in 2022, and has increased by $184 or 0.2% in 2023 as compared to 2022.

Other expense, net - Interest expense, net was $279,961 in 2023 and $234,441 in 2022. Interest expense increased in 2023 primarily due to an increase in average borrowings, and an increase in average interest rates. The weighted average cost of fixed rate long-term debt was 3.86% at December 31, 2023 and 3.78% at December 31, 2022. The weighted average cost of fixed and variable rate long-term debt was 4.14% at December 31, 2023 and 3.94% at December 31, 2022.

Allowance for funds used during construction (AFUDC) was $16,967 in 2023 and $23,665 in 2022, and varies as a result of changes in the average balance of utility plant construction work in progress, to which AFUDC is applied, changes in the AFUDC rate which is based predominantly on short-term interest rates, changes in the balance of short term-debt, and changes in the amount of AFUDC related to equity. The decrease in 2023 is primarily due to a decrease in the average balance of utility plant construction work in progress, to which AFUDC is applied. The amount of AFUDC related to equity was $11,726 in 2023 and $17,618 in 2022.

Gain on sale of other assets totaled $65 in 2023 and $991 in 2022, and consists of the sales of property, plant and equipment.

Other (income) expense totaled $(2,613) in 2023 and $494 in 2022, and largely consists of the non-service cost component of our net benefit cost for post-retirement benefits and unrealized gains and losses on investments associated with our non-qualified pension plan. In 2023, the fair values of our investments associated with our non-qualified plan increased, and we recognized a gain of $582 in 2023 compared to a loss of $895 in 2022. Additionally, the non-service cost component of the net benefit cost for post-retirement benefits in our Regulated Gas segment was lower in 2023.

(In thousands of dollars, except per share amounts)

Income tax benefit - Our effective income tax rate was a benefit of 15.4% in 2023 and 3.2% in 2022. The Company's provision for income taxes represents an income tax benefit due to the effects of tax deductions recognized for certain qualifying infrastructure investments. The decrease in the effective tax rate is primarily attributed to the increase in our income tax benefit associated with the tax deduction for qualifying infrastructure investments in our Regulated Natural Gas segment.

Net income -

	Years ended December 31,		
	2023	2022	2021
Operating income	$ 692,097	$ 661,187	$ 602,709
Net income	498,226	465,237	431,612
Diluted net income per share	1.86	1.77	1.67

The changes in diluted net income per share in 2023 over the previous year were due to the aforementioned changes.

Although we have experienced increased income in the recent past, continued adequate rate increases reflecting increased operating costs and new capital improvements are important to the future realization of improved profitability.

Segment Results of Operations Comparison for 2023 and 2022

We have identified eleven operating segments, and we have two reportable segments based on the following:

- Eight segments are composed of our water and wastewater regulated utility operations in the eight states where we provide these services. These operating segments are aggregated into one reportable segment, Regulated Water, since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution and/or wastewater collection methods, and the nature of the regulatory environment.

- Our Regulated Natural Gas segment is composed of natural gas utility companies in three states acquired in the Peoples Gas Acquisition. These utilities provide natural gas distribution services, and their operating results subsequent to the March 16, 2020 acquisition date are reported in the Regulated Natural Gas segment. In October 2023, the Company sold its regulated natural gas utility assets in West Virginia, which represented approximately two percent of the Company's regulated natural gas customers. The sale concluded the Company's regulated utility operations in West Virginia.

- Two segments are not quantitatively significant to be reportable and are composed of our non-regulated natural gas operations and Aqua Resources. These segments are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, because they would not be recoverable as a cost of utility service, and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

(In thousands of dollars, except per share amounts)

Regulated Water Segment

The following tables present the selected operating results and customers served for our Regulated Water segment, for and as of the year ended December 31:

	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
Sendout (in millions of gallons)					
Pennsylvania	42,525	42,666	42,198	(141)	468
Ohio	13,560	14,604	13,971	(1,044)	633
Illinois	8,421	8,784	8,764	(363)	20
Texas	8,703	8,606	7,212	97	1,394
North Carolina	5,824	5,934	5,984	(110)	(50)
Other states	6,526	6,272	6,191	254	81
Subtotal	85,559	86,866	84,320	(1,307)	2,546
Elimination	(122)	(141)	(154)	19	13
Total sendout by state	85,437	86,725	84,166	(1,288)	2,559
Utility customers:					
Residential water	859,331	850,673	842,200	8,658	8,473
Commercial water	43,853	43,119	42,864	734	255
Industrial water	1,283	1,286	1,331	(3)	(45)
Other water	19,123	18,446	17,932	677	514
Wastewater	190,119	181,721	162,478	8,398	19,243
Total water and wastewater utility customers	1,113,709	1,095,245	1,066,805	18,464	28,440
Operating revenues:					
Residential water	$ 641,351	$ 607,473	$ 561,996	$ 33,878	$ 45,477
Commercial water	180,731	168,460	151,071	12,271	17,389
Industrial water	33,949	32,581	30,230	1,368	2,351
Other water	92,784	94,359	89,472	(1,575)	4,887
Wastewater	187,462	165,312	132,316	22,150	32,996
Other utility	17,099	14,787	15,118	2,312	(331)
Total operating revenues	$ 1,153,376	$ 1,082,972	$ 980,203	$ 70,404	$ 102,769
Operating expenses:					
Operations and maintenance expense	$ 368,843	$ 370,850	$ 332,598	$ (2,007)	$ 38,252
Depreciation and amortization	$ 217,593	$ 201,392	$ 182,074	$ 16,201	$ 19,318
Taxes other than income taxes	$ 62,759	$ 64,472	$ 63,264	$ (1,713)	$ 1,208
Other expense, net	$ 105,674	$ 84,396	$ 81,931	$ 21,278	$ 2,465
Provision for income taxes	$ 57,546	$ 47,510	$ 26,633	$ 10,036	$ 20,877
Segment net income	$ 340,961	$ 314,352	$ 293,703	$ 26,609	$ 20,649

Operating revenues - The growth in our Regulated Water segment's revenues over the past three years is primarily a result of increases in our water and wastewater rates and our customer base. Water and wastewater rate increases, including infrastructure rehabilitation surcharges, implemented during the past three years have provided additional operating revenues of $57,924 in 2023, $63,367 in 2022, and $27,421 in 2021. The number of customers increased at an annual compound rate of 2.1% over the past three years due to acquisitions and organic growth, adjusted to exclude customers associated with utility system dispositions. Acquisitions in our Regulated Water segment have provided additional water and wastewater revenues of $9,646 in 2023, $16,145 in 2022, and $6,750 in 2021.

Our Regulated Water segment also includes operating revenues of $14,863 in 2023, $11,477 in 2022 and $13,358 in 2021, associated with revenues earned primarily from fees received from telecommunication operators that have put cellular antennas on our water towers, fees earned from municipalities for our operation of their water or wastewater treatment services or to perform billing services, and fees earned from developers for accessing our water mains.

(In thousands of dollars, except per share amounts)

Operating expenses - Operations and maintenance expense for the year ended December 31, 2023 was $368,843 compared to $370,850 in the prior period. The decrease of $2,007 or 0.5% was primarily due to the following:

- increase in production costs for water and wastewater operations of $12,208;
- additional operating costs resulting from acquired water and wastewater utility systems and higher customer base of $5,767; offset by
- decrease in employee related costs of $8,379 primarily due to lower post-retirement benefit costs, higher capitalization in 2023 due to greater capital expenditures, and a one-time compensation payment for non-officer level employees in 2022;
- decrease in bad debt expense of $902;
- insurance recovery of $2,448 associated with clean-up costs and other expenses incurred during Hurricane Ida; and,
- lower outside services, maintenance expenses and other operating expenses of $7,707 primarily due to lower water main break activity and higher capitalization as a result of greater capital expenditures during the period.

Depreciation and amortization increased by $16,201 or 8.0% primarily due to continued capital investment to expand and improve our utility facilities and our acquisitions of new utility systems.

Other expense, net – Interest expense, net, increased by $12,742 or 11.4% primarily due to the increase in average borrowings and increased borrowing costs.

AFUDC decreased by $6,164 or 29.4% due to the decrease in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Other income, inclusive of loss/gain on sale of other assets, totaled $4,220 in 2023 and $6,592 in 2022. The decrease in other income is largely due to the increase in the non-service cost component of post-retirement benefits in our Regulated Water segment in 2023.

Provision for income tax – The effective income tax rate for our Regulated Water segment was an expense of 14.4% in 2023, compared to an expense of 13.1% in 2022. The change in the effective tax rate is primarily due to a decrease in the amortization of certain regulatory liabilities associated with deferred taxes.

(In thousands of dollars, except per share amounts)

Regulated Natural Gas Segment

The following tables present the selected operating results and customers served for our Regulated Natural Gas segment for and as of the year ended December 31:

	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
Gas utility customers:					
Residential gas	683,811	695,198	692,174	(11,387)	3,024
Commercial gas	59,384	59,684	59,595	(300)	89
Industrial gas	551	1,459	1,475	(908)	(16)
Total gas utility customers	743,746	756,341	753,244	(12,595)	3,097
Delivered volumes (thousand cubic feet)					
Residential gas	51,698,440	61,093,372	56,542,038	(9,394,932)	4,551,334
Commercial gas	33,151,308	37,240,382	33,403,899	(4,089,074)	3,836,483
Industrial gas	48,323,846	49,017,036	49,726,237	(693,190)	(709,201)
Total delivered volumes	133,173,594	147,350,790	139,672,174	(14,177,196)	7,678,616
Heating Degree Days (a)	4,558	5,648	5,139	(1,090)	509
Average Heating Degree Days (b)	5,427	5,438	5,466	(11)	(28)

	2023	2022	2021	2023 vs. 2022	2022 vs. 2021
Operating revenues:					
Residential gas	$ 519,406	$ 720,490	$ 530,338	$ (201,084)	$ 190,152
Commercial gas	111,272	149,653	99,596	(38,381)	50,057
Industrial gas	3,232	5,636	3,427	(2,404)	2,209
Gas transportation	184,598	205,825	198,195	(21,227)	7,630
Customer rate credits	-	-	(5,000)	-	5,000
Other utility	45,251	61,758	33,346	(16,507)	28,412
Total operating revenues	$ 863,759	$ 1,143,362	$ 859,902	$ (279,603)	$ 283,460
Operating expenses:					
Operations and maintenance expense	$ 209,073	$ 239,506	$ 226,194	$ (30,433)	$ 13,312
Purchased gas	$ 327,548	$ 551,009	$ 313,390	$ (223,461)	$ 237,619
Depreciation and amortization	$ 125,263	$ 118,955	$ 113,238	$ 6,308	$ 5,717
Taxes other than income taxes	$ 23,846	$ 22,642	$ 20,801	$ 1,204	$ 1,841
Other expense, net	$ 90,819	$ 87,916	$ 78,099	$ 2,903	$ 9,817
Income tax benefit	$ (113,353)	$ (61,942)	$ (40,013)	$ (51,411)	$ (21,929)
Segment net income	$ 200,563	$ 185,276	$ 148,193	$ 15,287	$ 37,083

(a) Unit of measure reflecting temperature-sensitive natural gas consumption, calculated by subtracting the average of a day's high and low temperatures from 65 degrees Fahrenheit; measured at Pittsburgh, PA.

(b) Based on historical twenty-year average heating degree days, as calculated from data provided by the National Weather Service for the same geographic location.

Operating revenues – Operating revenues from the Regulated Natural Gas segment decreased by $279,603 or 24.5% due to:

- impact of lower gas cost of $223,461 in 2023 as compared to 2022;
- lower gas usage of $53,122 due to warmer weather conditions in 2023;
- decrease in customer assistance surcharge of $18,710, which has an equivalent offsetting amount in operations and maintenance expense; offset by
- an increase of $11,141 due to higher rates and other surcharges.

(In thousands of dollars, except per share amounts)

Operating expenses – Operations and maintenance expense for the year ended December 31, 2023 decreased by $30,433 or 12.7% primarily due to the following:

- decrease in customer assistance surcharge costs of $18,710, which has an equivalent offsetting amount in revenues;
- lower charitable contributions to the Essential Foundation and other organizations of $13,360;
- an asset impairment charge recognized in the first quarter of 2022 of $1,801 to write down a portion of the right of use asset to fair value;
- lower operations and maintenance expense of $837 as a result of the sale and cessation of our regulated natural gas operations in West Virginia in October 2023;
- decrease in bad debt of $3,520; offset by
- an increase in legal fees of $1,892; and
- an increase in materials and supplies of $2,121.

Our Regulated Natural Gas segment is affected by the cost of natural gas, which is passed through to customers using a purchased gas adjustment clause and includes commodity price, transportation and storage costs. These costs are reflected in the consolidated statement of operations and comprehensive income as purchased gas expenses. Therefore, fluctuations in the cost of purchased gas impact operating revenues on dollar-for-dollar basis. Purchased gas decreased by $223,461 or 40.6% in 2023 compared to 2022. The decrease is the result of the impact of lower cost of gas and lower gas usage which amounted to $118,371 and $105,090, respectively, in 2023 as compared with the prior year.

Depreciation and amortization increased by $6,308 or 5.3% primarily due to continued capital investment in pipe replacement.

Taxes other than income taxes increased by $1,204 or 5.3% mainly due to higher gross receipts tax and public utility commission assessments in 2023 as compared with the prior year.

Other expense, net – Interest expense, net, increased by $5,134 or 5.9% for 2023 compared to 2022 due to additional borrowings and a higher interest rate on our revolving line of credit in 2023.

AFUDC decreased by $534 or 19.7% due to the decrease in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Other expense, inclusive of loss/gain on sale of other assets, totaled $680 in 2023 and $3,445 in 2022. The decrease in other expense is driven by a lower non-service cost component of our net benefit cost for post-retirement benefits in our Regulated Gas segment in 2023.

Income tax benefit – The effective income tax rate was a benefit of 130.0% in 2023, compared to a benefit of 50.2% in 2022. The change in the effective tax rate is primarily attributed to an increase in the income tax benefit associated with the tax deduction for qualifying infrastructure investments.

(In thousands of dollars, except per share amounts)

LIQUIDITY AND CAPITAL RESOURCES

Consolidated Cash Flow and Capital Expenditures

Net operating cash flows, dividends paid on common stock, capital expenditures, including allowances for funds used during construction, and expenditures for acquiring utility systems were as follows for the years ended December 31:

	Net Operating Cash Flows	Dividends	Capital Expenditures	Acquisitions
2021	$ 644,679	$ 258,650	$ 1,020,519	$ 36,326
2022	600,306	288,632	1,062,763	116,891
2023	933,587	316,806	1,199,103	45,303
	$ 2,178,572	$ 864,088	$ 3,282,385	$ 198,520

Net cash flows from operating activities increased from 2022 to 2023 largely due to the decrease in accounts receivable, unbilled revenues and inventory - gas stored. Average cost of gas stored in inventories and associated recoveries of gas costs from customers was lower in 2023 than in 2022.

Included in capital expenditures for the three year period are: expenditures for the rehabilitation of existing utility systems, the expansion of our utility systems, modernization and replacement of existing treatment facilities, meters, office facilities, information technology, vehicles, and equipment. During this three year period, we received $50,960 of customer advances and contributions in aid of construction to finance new utility mains and related facilities that are not included in the capital expenditures presented in the above table. In addition, during this period, we have made repayments of debt, which includes the net effect of borrowings and repayments under our long-term revolving credit facility of $1,441,098 and have refunded $21,202 of customers' advances for construction. Dividends increased during the past three years as a result of annual increases in the dividends declared and paid and increases in the number of shares outstanding.

Our planned 2024 capital program, excluding the costs of new mains financed by advances and contributions in aid of construction is estimated to be approximately $1,365,000 in infrastructure improvements for the communities we serve. The 2024 capital program is expected to include approximately $935,000 for infrastructure rehabilitation surcharge qualified projects. Our planned 2024 capital program in Pennsylvania for our water and natural gas utilities is estimated to be approximately $915,000, a portion of which is expected to be eligible as a deduction for qualifying utility asset improvements for Federal income tax purposes. Our overall 2024 capital program along with $67,415 of debt repayments and $322,176 of other contractual cash obligations, as reported in the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations – *Contractual Obligations*", has been, or is expected to be, financed through internally-generated funds, our revolving credit facilities, and the issuance of long-term debt and equity.

Future utility construction in the period 2025 through 2026, including recurring programs, such as the ongoing replacement or rehabilitation of utility meters and mains, water treatment plant upgrades, storage facility renovations, pipes, service lines, and additional transmission mains to meet customer demands, excluding the costs of new mains financed by advances and contributions in aid of construction, is estimated to require aggregate expenditures of approximately $2,769,000. We anticipate that more than one half of these expenditures will require external financing. We expect to refinance $168,875 of long-term debt during this period as it becomes due with funds from new issues of long-term debt, issuances of equity, internally-generated funds, and our revolving credit facilities. The estimates discussed above do not include any amounts for possible future acquisitions of utility systems or the financing necessary to support them.

Our primary sources of liquidity are cash flows from operations (including the allowed deferral of Federal income tax payments), borrowings under various short-term lines of credit and other credit facilities, and customer advances and contributions in aid of construction. Our cash flow from operations, or internally-generated funds, is impacted by the timing of rate relief, utility operating revenues, and changes in Federal tax laws, and accelerated tax depreciation or deductions for utility construction projects. We fund our capital and typical acquisitions through internally-generated funds, supplemented by short-term lines of credit. Over time, we partially repay or pay-down our short-term lines of credit with long-term debt. The ability to finance our future construction programs, as well as our acquisition activities, depends on our ability to attract the necessary external debt and equity financing and maintain internally-generated funds. Timely rate orders permitting compensatory rates of return on invested capital will be required by our operating subsidiaries to achieve an adequate level of earnings and cash flow to enable them to secure the capital they will need to operate and to maintain satisfactory debt coverage ratios.

Acquisitions

As part of the Company's growth-through-acquisition strategy, as of December 31, 2023, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of five municipalities and a private company for a total combined purchase price in cash of approximately $380,000. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur in 2024 or 2025, which is subject to the timing of the various regulatory approval processes. These acquisitions are expected to add approximately 215,000 equivalent retail customers in two of the states in which the Company operates.

In July 2023, the Company completed the following water utility asset acquisitions: Shenandoah Borough, Pennsylvania, which serves approximately 2,900 customers for $12,291; La Rue, an Ohio municipality, which serves approximately 300 customers for $2,253; and, Southern Oaks Water System, which serves approximately 800 customers in Texas for $3,321. In July 2023, the Company completed their acquisition of a portion of the water and wastewater utility assets of the Village of Frankfort, an Illinois municipality, which serves approximately 1,500 customers for $1,424. In June 2023, the Company acquired the wastewater utility assets of Union Rome, Ohio, which serves approximately 4,300 customers for a cash purchase price of $25,547. Additionally, in March 2023, the Company acquired the North Heidelberg Sewer Company in Berks County, Pennsylvania, which serves approximately 300 customer connections for a cash purchase price of $136.

In November 2022, the Company acquired the water system of Oak Brook, DuPage County, Illinois, which serves 2,037 customers, for a cash purchase price of $12,500. In August 2022, the Company acquired the municipal wastewater assets of East Whiteland Township, Chester County, Pennsylvania, which serves 4,018 customers, for a cash purchase price of $54,374. In March 2022, the Company acquired the wastewater system of Lower Makefield Township, which serves 11,323 customer connections in Lower Makefield, Falls, and Middletown townships, and Yardley Borough, Bucks County, Pennsylvania, for a cash purchase price of $53,000.

Subsequent to the August 2022 closing on the acquisition of the municipal wastewater assets of East Whiteland Township, a party filed an appeal to the Pennsylvania Public Utility Commission's order of approval. On July 31, 2023, a decision was issued by the Pennsylvania Commonwealth Court that agreed with the party's appeal and reversed the order which approved the acquisition. In an effort to resolve the matter, the Company pursued and is continuing to pursue certain legal actions. Management believes the final resolution of this matter is not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Refer to Note 2 – *Acquisitions* in this Annual Report for additional information.

In August 2021, the Company acquired the water utility system assets of The Commons Water Supply, Inc., which serves 992 customers in Harris County, Texas, and the wastewater utility system assets of the Village of Bourbonnais, which serves approximately 6,500 customers in Kankakee County, Illinois. The total cash purchase prices for these utility systems were $4,000 and $32,100, respectively.

During the past three years, we have expended cash of $198,520 related to the acquisition of both water and wastewater utility systems. We continue to pursue the acquisition of water and wastewater utility systems and explore other utility

acquisitions that may be in a new state. Our typical acquisitions are expected to be financed with short-term debt with subsequent repayment from the proceeds of long-term debt, retained earnings, or equity issuances.

Assets Held for Sale and Dispositions

We routinely review and evaluate areas of our business and operating divisions and, over time, may sell utility systems or portions of systems. In December 2022, the Company signed an agreement to sell its regulated natural gas utility assets in West Virginia, which represented approximately two percent of the Company's regulated natural gas customers. The sale closed on October 1, 2023 for an estimated purchase price of $39,965, subject to working capital and other adjustments. The sale concluded the Company's regulated utility operations in West Virginia. In October 2023, the Company entered into an agreement to sell its interest in three non-utility local microgrid and distributed energy projects for $165,000. The sale was completed in January 2024. These transactions are consistent with the Company's long-term strategy of focusing on its core business and will allow the Company to prioritize the growth of its utilities in states where it has scale. The Company intends to use the proceeds from these transactions to finance its capital expenditures and water and wastewater acquisitions, in place of external funding from equity and debt issuances. Refer to Note 3 – *Asset Held for Sale and Dispositions* in this Annual Report for additional information.

Sources of Capital

Since net operating cash flow plus advances and contributions in aid of construction have not been sufficient to fully fund our cash requirements including capital expenditures and our growth through acquisitions program, we issued $2,786,632 of long-term debt, and obtained other short-term borrowings during the past three years. At December 31, 2023, we have a $1,000,000 unsecured long-term revolving credit facility that expires in December 2027, of which $16,838 was designated for letter of credit usage, $263,162 was available for borrowing, and $720,000 of borrowings were outstanding at December 31, 2023. This credit facility was established in December 2022, replacing a similar facility, and was used to repay all indebtedness and fees under our prior unsecured revolving credit facility, and for other general corporate purposes. In addition, we have short-term lines of credit of $435,500 of which $275,377 was available as of December 31, 2023. Included in the short-term lines of credit is an Aqua Pennsylvania $100,000 364-day unsecured revolving credit facility and a Peoples Natural Gas $300,000 364-day unsecured revolving credit facility. These short-term lines of credit are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

On January 8, 2024, the Company issued $500,000 of long-term debt (the "2024 Senior Notes"), less expenses of $4,610, due in 2034 with an interest rate of 5.375%. The Company used the net proceeds from the issuance of 2024 Senior Notes (1) to repay a portion of the borrowings under the Company's existing five year unsecured revolving credit facility, and (2) for general corporate purposes.

In August 2023, the Company's subsidiary, Aqua Pennsylvania, issued $225,000 in aggregate principal amount of first mortgage bonds. The bonds consisted of $175,000 of 5.48% first mortgage bonds due in 2053; and $50,000 of 5.56% first mortgage bonds due in 2061. In January 2023 and October 2022, Aqua Pennsylvania issued $75,000 and $125,000 of first mortgage bonds, due in 2043 and 2052, and with interest rates of 5.60% and 4.50%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

On October 14, 2022, the Company entered into at-the market sales agreements ("ATM") with third-party sales agents, under which the Company may offer and sell shares of its common stock, from time to time, at its option, having an aggregate gross offering price of up to $500,000 pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-255235). The Company intends to use the net proceeds from the sales of shares through the ATM for working capital, capital expenditures, water and wastewater utility acquisitions and repaying outstanding indebtedness. As of December 31, 2022, the Company has issued 1,321,994 shares for net proceeds of $63,040 under the ATM. During the year ended December 31, 2023, the Company sold 8,938,839 shares of common stock, in exchange for net proceeds of $322,983 under the ATM. As of December 31, 2023, approximately $110,000 remained available for sale under the ATM.

On June 29, 2023, Aqua Pennsylvania and Peoples Natural Gas Companies amended the terms of their respective $100,000 and $300,000, 364-day revolving credit agreements, as follows: (1) extended the maturity dates to June 27, 2024; and (2) updated the adjustment on the Bloomberg Short-Term Bank Yield Index (BSBY) Rate.

On May 20, 2022, the Company issued $500,000 of long-term debt (the "Senior Notes"), less expenses of $5,815, due in 2052 with an interest rate of 5.30%. The Company used the net proceeds from the issuance of Senior Notes to (1) to repay $49,700 of borrowings under Aqua Pennsylvania's 364-day revolving credit facility and $410,000 of borrowings under the Company's existing five year unsecured revolving credit facility, and (2) for general corporate purposes.

On April 15, 2021, our operating subsidiary, Aqua Ohio, Inc., issued $100,000 of first mortgage bonds, of which $50,000 is due in 2031 and $50,000 is due in 2051, with interest rates of 2.37% and 3.35%, respectively. The proceeds from these bonds were used for general corporate purposes and to repay existing indebtedness. Further, on April 19, 2021, the Company issued $400,000 of long-term debt, with expenses of $4,010, which is due in 2031 with an interest rate of 2.40%. The Company used the proceeds from this issuance to repay $50,000 of borrowings under the Aqua Pennsylvania revolving credit facility, and the balance was used to repay in full the borrowings under its existing five-year unsecured revolving credit agreement.

In August 2020, we entered into a forward equity sale agreement for 6,700,000 shares of common stock with a third party (the "forward purchaser"). In connection with the forward equity sale agreement, the forward purchaser borrowed an equal number of shares of our common stock from stock lenders and sold the borrowed shares to the public. We did not receive any proceeds from the sale of our common stock by the forward purchaser until settlement of the forward equity sale agreement. On August 9, 2021, the Company settled the forward equity sale agreement in full by physical share settlement. The Company issued 6,700,000 shares and received cash proceeds of $299,739 at a forward price of $44.74 per share. Pursuant to the agreement, the forward price was computed based upon the initial forward price of $46.00 per share, adjusted for a floating interest rate factor equal to a specified daily rate less a spread and scheduled dividends during the term of the agreement. The Company used the proceeds received upon settlement of the forward equity sale agreement to fund general corporate purposes, including for water and wastewater acquisitions, working capital and capital expenditures. The forward equity sale agreement has now been completely settled, and there are no additional shares subject to the forward equity sale agreement.

Our consolidated balance sheet historically has had a negative working capital position, whereby routinely our current liabilities exceed our current assets. Management believes that internally-generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt and common equity will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

Our loan and debt agreements require us to comply with certain financial covenants, which among other things, subject to specific exceptions, limit the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2023, we were in compliance with our debt covenants under our credit facilities. Failure to comply with our debt covenants could result in an event of default, which could result in us being required to repay or refinance our borrowings before their due date, possibly limiting our future borrowings, and increasing our borrowing costs.

In April 2021, the Company filed a universal shelf registration statement through a filing with the SEC to allow for the potential future offer and sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices. During the past three years, we issued common stock, including common stock in connection with a forward equity sale agreement, and long-term debt in offerings under this shelf registration statement. Refer to Note 11 – *Long-term Debt and Loans Payable* and Note 13 – *Stockholders' Equity* in this Annual Report for further information regarding these financings.

In addition, we have an acquisition shelf registration statement, which was filed with the SEC on February 27, 2015, to permit the offering from time to time of an aggregate of $500,000 of our common stock and shares of preferred stock in connection with acquisitions. The balance remaining available for use under the acquisition shelf registration as of December 31, 2023 is $487,155.

We will determine the form and terms of any further securities issued under the universal shelf registration statement and the acquisition shelf registration statement at the time of issuance.

We offer a Dividend Reinvestment and Direct Stock Purchase Plan (the Plan) that provides a convenient and economical way to purchase shares of the Company. Under the direct stock purchase portion of the Plan, shares are issued throughout the year. The dividend reinvestment portion of the Plan offers a five percent discount on the purchase of shares of common stock with reinvested dividends. As of the December 2023 dividend payment, holders of 4.3% of the common shares outstanding participated in the dividend reinvestment portion of the Plan. The shares issued under the Plan are either original issue shares or shares purchased by the Company's transfer agent in the open-market. During the past three years, we have sold 1,173,589 original issue shares of common stock for net proceeds of $49,423 through the dividend reinvestment portion of the Plan, and we used the proceeds to invest in our operating subsidiaries, to repay short-term debt, and for general corporate purposes. In 2023, 2022 and 2021, we sold 430,487, 368,278, and 374,824 original issues shares of common stock for net proceeds of $16,005, $16,619, and $16,799, respectively, through the dividend reinvestment portion of the plan.

Credit Risk

As of December 31, 2023, our credit ratings remained at investment grade levels. On July 12, 2023, S&P affirmed an A issuer credit rating for the Company, Aqua Pennsylvania and Peoples Natural Gas Companies, and revised its outlook from stable to negative for the companies, citing weakening financial measures as a result of inflationary pressures and our significant capital spending. However, as can be noted in their report, S&P continues to assess our business risk profile as excellent, considering our low-risk and rate-regulated water and gas distribution operations in credit-supportive regulatory environments, our geographic and regulatory diversity, our large and stable residential and commercial customer base, and our solid and reliable operations. On August 29, 2023, Moody's Investors Service ("Moody's") affirmed the Company's senior unsecured notes rating of Baa2 and stable outlook; and, affirmed Peoples Natural Gas Companies' senior secured notes rating of Baa1 and revised its outlook from stable to negative. The Company's ability to maintain its credit rating depends, among other things, on adequate and timely rate relief, its ability to fund capital expenditures in a balanced manner using both debt and equity, and its ability to generate cash flow. A material downgrade of our credit rating may result in the imposition of additional financial and/or other covenants, impact the market prices of equity and debt securities, increase our borrowing costs, and adversely affect our liquidity, among other things. Management continues to enhance our regulatory practices to address regulatory lag and recover capital project costs and increases in operating costs efficiently and timely through various rate-making mechanisms.

Off-Balance Sheet Financing Arrangements

We do not engage in any off-balance sheet financing arrangements. We do not have any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities.

Contractual Obligations

The following table summarizes our contractual cash obligations as of December 31, 2023:

		Payments Due by Period			
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Long-term debt	$ 6,938,008	$ 67,415	$ 168,875	$ 964,760	$ 5,736,958
Interest on fixed-rate, long-term debt (1)	286,799	2,660	8,599	56,123	219,417
Operating leases (2)	53,038	9,037	16,166	13,933	13,902
Unconditional purchase obligations (3)	18,067	5,990	7,961	3,035	1,081
Gas purchase obligations (4)	2,519,459	206,378	471,836	485,586	1,355,659
Other purchase obligations (5)	87,187	87,187	-	-	-
Pension plan obligations (6)	9,393	9,393	-	-	-
Other obligations (7)	8,428	1,531	2,499	2,659	1,739
Total	$ 9,920,379	$ 389,591	$ 675,936	$ 1,526,096	$ 7,328,756

(1) Represents interest payable on fixed rate, long-term debt. Amounts reported may differ from actual due to future refinancing of debt.

(2) Represents minimum lease payments for long-term operating leases of land, office facilities, office equipment, and vehicles.

(3) Represents our commitment to purchase minimum quantities of water as stipulated in agreements with other water purveyors. We use purchased water to supplement our water supply, particularly during periods of peak customer demand. Our actual purchases may exceed the minimum required levels.

(4) Represents our commitment to purchase minimum quantities of natural gas stipulated in agreements with various producers of natural gas to meet regulated customers' natural gas requirements.

(5) Represents an approximation of the open purchase orders for goods and services purchased in the ordinary course of business.

(6) Represents contributions to be made to the Company's retirement plans.

(7) Represents expenditures estimated to be required under legal and binding contractual obligations.

In addition to the contractual obligations table above, we have the following obligations:

- *Refunds of customer's advances for construction* – We pay refunds on customers' advances for construction over a specific period of time based on operating revenues related to developer-installed utility mains or as new customers are connected to and take service from such mains. After all refunds are paid, any remaining balance is transferred to contributions in aid of construction. The refund amounts are not included in the above table because the refund amounts and timing are dependent upon several variables, including new customer connections, customer consumption levels and future rate increases, which cannot be accurately estimated. Portions of these refund amounts are payable annually through 2033 and amounts not paid by the contract expiration dates become non-refundable.

- *Asset Retirement Obligations* – We recognize asset retirement obligations associated with retirements of production, storage wells and other pipeline components at fair value, as incurred, or when sufficient information becomes available to determine a reasonable estimate of the fair value of the retirement activities to be performed. Expected obligations are not included in the above table because the amounts and timing are dependent upon several variables, which cannot be accurately estimated.

- *Uncertain tax positions* – We have uncertain tax positions of $7,898. Although we believe our tax positions comply with applicable law, we have made judgments as to the sustainability of each uncertain tax position based on its technical merits. Due to the uncertainty of future cash outflows, if any, associated with our uncertain tax positions, we are unable to make a reasonable estimate of the timing or amounts that may be paid. See Note 7 – *Income Taxes* in this Annual Report for further information on our uncertain tax positions.

We will fund these contractual obligations with cash flows from operations and liquidity sources held by or available to us.

The Company is routinely involved in legal matters, including both asserted and unasserted legal claims, during the ordinary course of business. See Note 9 – *Commitments and Contingencies* in this Annual Report for a discussion of the Company's legal matters. It is not always possible for management to make a meaningful estimate of the potential loss or range of loss associated with such litigation. Also, unanticipated changes in circumstances and/or revisions to the assessed probability of the outcomes of legal matters could result in expenses being incurred in future periods as well as an increase in actual cash required to resolve the legal matter.

(In thousands of dollars, except per share amounts)

Capitalization
The following table summarizes our capitalization as of December 31, 2023 and 2022:

December 31,	2023	2022
Long-term debt (1)	54.1%	55.2%
Essential Utilities stockholders' equity	45.9%	44.8%
	100.0%	100.0%

(1) Includes current portion, as well as our borrowings under a variable rate revolving credit agreement of $720,000 at December 31, 2023, and $490,000 at December 31, 2022.

Over the past two years, the changes in the capitalization ratios primarily resulted from the issuance of debt to finance our acquisitions and capital program, changes in net income, the issuance of common stock, and the declaration of dividends.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our financial condition and results of operations are impacted by the methods, assumptions, and estimates used in the application of critical accounting policies. The following accounting policies are particularly important to our financial condition or results of operations and require estimates or other judgments of matters of uncertainty. Changes in the estimates or other judgments included within these accounting policies could result in a significant change to the financial statements. We believe our most critical accounting policies include the use of regulatory assets and liabilities, revenue recognition, the valuation of our long-lived assets (which consist primarily of utility plant in service, regulatory assets, and goodwill), our accounting for post-retirement benefits, and our accounting for income taxes. We have discussed the selection and development of our critical accounting policies and estimates with the Audit Committee of the Board of Directors.

Regulatory Assets and Liabilities — We defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that these costs and credits will be recognized in the rate-making process in a period different from when the costs and credits were incurred. These deferred amounts, both assets and liabilities, are then recognized in the consolidated statement of operations in the same period that they are reflected in our rates charged for utility service. We make significant judgments and estimates to record regulatory assets and liabilities, such as for amounts related to income taxes, pension and postretirement benefits, acquisitions and capital projects. For each regulatory jurisdiction with regulated operations, we evaluate at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to us in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances may challenge our prudence of business policies and practices, seek cost disallowances or request other relief.

In the event that our assessment as to the probability of the inclusion in the rate-making process is incorrect, the associated regulatory asset or liability would be adjusted to reflect the change in our assessment or change in regulatory approval.

Revenue Recognition — Our utility revenues recognized in an accounting period include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. The estimated usage is based on our judgment and assumptions; our actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates is determined.
In Virginia, North Carolina, and Kentucky, we may bill our utility customers, in certain circumstances, in accordance with a rate filing that is pending before the respective regulatory commission, which would allow interim rates before the final commission rate order is issued. The revenue recognized reflects an estimate based on our judgment of the final outcome of the commission's ruling. We monitor the applicable facts and circumstances regularly and revise the estimate as required. The revenue billed and collected prior to the final ruling is subject to refund based on the commission's final ruling.

Valuation of Long-Lived Assets, Goodwill and Intangible Assets — We review our long-lived assets for impairment, including utility plant in service. We also review regulatory assets for the continued application of the FASB accounting guidance for regulated operations. Our review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely. For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission.

Our long-lived assets, which consist primarily of utility plant in service, operating lease right-of-use assets and intangible assets, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, we determine whether it is more likely than not that the fair value of those assets is less than their carrying amount. If we determine that it is more likely than not (that is, the likelihood of more than 50 percent), we would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, we would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. This assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. These estimates include significant inherent uncertainties, since they involve forecasting future events. If changes in circumstances or events occur, or estimates and assumptions that were used in this review are changed, we may be required to record an impairment charge on our long-lived assets. Refer to Note 1 – *Summary of Significant Accounting Policies – Impairment of Long-Lived Assets* in this Annual Report for additional information regarding the review of long-lived assets for impairment.

We test the goodwill attributable to each of our reporting units for impairment at least annually, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, changes to regulatory environment, recent regulatory and legislative proceedings, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Based on our assessment of the qualitative factors previously noted, or at our discretion, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit by weighting the results from the income approach and the market approach. These valuation approaches consider a number of factors that include, but are not limited to, prospective financial information (which includes projected operating income, expected future capital expenditures, and projected regulatory rate base, among others), growth rates, terminal value, discount rates, and comparable multiples from publicly traded companies in our industry and require us to make certain assumptions and estimates regarding industry economic factors and future profitability of our business. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. If changes in circumstances or events occur, or estimates and assumptions that were used in our impairment test change, we may be required to record an impairment charge for goodwill. Refer to Note 1 – *Summary of Significant Accounting Policies – Goodwill* in this Annual Report for further information.

As part of the October 1, 2023 annual goodwill assessment, we elected to perform a quantitative goodwill impairment assessment on the goodwill attributable to our Regulated Natural Gas reporting unit and a qualitative assessment for our Regulated Water and Other reporting units. Additionally, the Company performed a market capitalization reconciliation to further support the Company's estimated fair value and support the implied premium. Based on our analysis, we determined that none of the goodwill of our reporting units was impaired.

(In thousands of dollars, except per share amounts)

We generally assumed operating margins in future years would increase as we continue to integrate and implement our rate base growth strategy. However, unforeseen events, such as adverse changes in market conditions and changes in the regulatory environment which could lead to disallowances of a portion of capital investments, may result in future non-cash impairment charges that could be material. If we were to assume changes in certain of our key assumptions used to determine the fair value of our Regulated Natural Gas reporting unit, the following would be the impact on the amount of headroom over the carrying value:

Sensitivity Analysis[1]	Percentage decrease in headroom of Regulated Natural Gas Reporting Unit
Increase in discount rate by 100 basis points	40%
Decrease in Market Multiples by 1x	46%
Reduction in terminal value EBITDA[2] by 10%	49%

[1] Each assumption used in the sensitivity analysis is independent of the other assumptions

[2] Defined as earnings before interest, taxes, depreciation and amortization

Accounting for Post-Retirement Benefits — We maintain a qualified and a non-qualified defined benefit pension plan and plans that provide for post-retirement benefits other than pensions. Accounting for pension and other post-retirement benefits requires an extensive use of assumptions including the discount rate, expected return on plan assets, the rate of future compensation increases received by our employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from our actuarial consultant, who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefits expense that we recognize.

Our discount rate assumption, which is used to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the projected benefit payments of the plans. A decrease in the discount rate would generally increase our post-retirement benefits expense and benefit obligation. After reviewing the hypothetical portfolio of bonds, we selected a discount rate of 5.17% for our pension plan, and 5.09% for our other post-retirement benefit plans as of December 31, 2023, which represent a 34 and 36 basis-point decrease as compared to the discount rates selected at December 31, 2022, respectively. Our post-retirement benefits expense under these plans is determined using the discount rate as of the beginning of the year, which was 5.51% for our pension plan and 5.45% for our other-postretirement benefit plan for 2023. In 2023, settlement accounting was triggered by the amount of lump-sum payments by our qualified pension plan to retirees and other separated employees exceeding the threshold of service and interest cost for the period. As a result, we remeasured our qualified pension plan assets and liabilities using a discount rate of 5.20%, and the remeasurement did not have a material impact to our consolidated financial statements.

Our expected return on plan assets is determined by evaluating the asset class return expectations with our advisors as well as actual, long-term, historical results of our asset returns. The Company's market-related value of plan assets is equal to the fair value of the plans' assets as of the last day of its fiscal year and is a determinant for the expected return on plan assets, which is a component of post-retirement benefits expense. The allocation of our plans' assets impacts our expected return on plan assets. As of December 31, 2023, the expected return on plan assets is based on a targeted allocation of 20% to 40% return seeking assets and 30% to 70% liability hedging assets for our pension plan, and a targeted allocation of 50% to 70% return seeking assets and 30% to 50% liability hedging assets for our other post-retirement benefit plans. Our post-retirement benefits expense increases as the expected return on plan assets decreases. We believe that our actual long-term asset allocations on average will approximate our targeted allocations. Our targeted allocations are driven by our investment strategy to earn a reasonable rate of return while maintaining risk at acceptable levels through the diversification of investments across and within various asset categories. For 2023, we used a 6.8% expected return on plan assets assumption and are currently reviewing this assumption for 2024.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and our funding policy, during 2024 our pension contribution is expected to be $9,393. Future years' contributions will be subject to economic conditions, plan participant data and the funding rules in effect at such time as the funding calculations are performed, though we expect future changes in the amount of contributions and expense recognized to be generally included in customer rates.

Accounting for Income Taxes — We estimate the amount of income tax payable or refundable for the current year and the deferred income tax liabilities and assets that results from estimating temporary differences resulting from the treatment of specific items, such as depreciation, for tax and financial statement reporting. Generally, these differences result in the recognition of a deferred tax asset or liability on our consolidated balance sheet and require us to make judgments regarding the probability of the ultimate tax impact of the various transactions we enter into. Based on these judgments, we may record tax reserves or adjustments to valuation allowances on deferred tax assets to reflect the expected realization of future tax benefits. Actual income taxes could vary from these estimates and changes in these estimates can increase income tax expense in the period that these changes in estimates occur.

Our determination of what qualifies as a capital cost versus a tax deduction, for qualifying utility asset improvements, as it relates to our income tax accounting method, is subject to subsequent adjustment as well as IRS audits, changes in income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures, or qualifying utility asset improvements, the expiration of a statute of limitations, or other unforeseen matters could impact the tax benefits that have already been recognized. We establish reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. We believe our tax positions comply with applicable law and that we have adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than our estimates recorded, we would then need to adjust our tax reserves which could result in additional income tax expense or benefits in the period that this information is known.

IMPACT OF RECENT ACCOUNTING PRONOUNCEMENTS

We describe the impact of recent accounting pronouncements in Note 1 – *Summary of Significant Accounting Policies* in this Annual Report.

Item 7A. *Quantitative and Qualitative Disclosures About Market Risk*

We are subject to market risks in the normal course of business, including changes in interest rates, gas commodity prices and equity prices. Volatile equity market conditions arising from public health threats and global conflicts and sanctions imposed in response thereto, may result in our pension and other post-retirement plans' assets market values suffering a decline, which could increase our required cash contributions to the plans and expense in subsequent years. The exposure to changes in interest rates is a result of financings through the issuance of fixed rate long-term debt. Such exposure is typically related to financings between utility rate increases, since generally our rate increases include a revenue level to allow recovery of our current cost of capital. Interest rate risk is managed through the use of a combination of long-term debt, which is at fixed interest rates; short-term debt, which is at floating interest rates; and at times in the past interest rate swap agreements. As of December 31, 2023, the debt maturities by period, in thousands of dollars, and the weighted average interest rate for long-term debt are as follows:

	2024	2025	2026	2027	2028	Thereafter	Total	Fair Value
Long-term debt:								
Fixed rate	$ 67,415	$ 147,319	$ 21,556	$ 237,728	$ 7,032	$ 5,736,958	$ 6,218,008	$ 5,260,722
Variable rate	-	-	-	720,000	-	-	720,000	720,000
Total	$ 67,415	$ 147,319	$ 21,556	$ 957,728	$ 7,032	$ 5,736,958	$ 6,938,008	$ 5,980,722
Weighted average interest rate	3.95%	4.76%	7.37%	5.83%	4.32%	3.82%	4.14%	

From time to time, we make investments in marketable equity securities. As a result, we are exposed to the risk of changes in equity prices for the marketable equity securities. As of December 31, 2023, we have assets of, in thousands of dollars, $26,442 to fund our deferred compensation and non-qualified pension plan liabilities. The market risk of the deferred compensation plan assets are borne by the participants in the deferred compensation plan.

Our natural gas commodity price risk, driven mainly by price fluctuations of natural gas, is mitigated by our purchased-gas cost adjustment mechanisms. We also use derivative instruments to economically hedge the cost of anticipated natural gas purchases during the winter heating months that seeks to offset the risk to our customers from upward market price volatility. These instruments include requirements contracts and spot purchase contracts to meet our regulated customers' natural gas requirements and these instruments may have fixed or variable pricing. The variable price contracts qualify as derivative instruments; however, because the contract price is the prevailing price at the future transaction date the contract has no determinable fair value. The fixed price contracts and firm commitments to purchase a fixed quantity of gas in the future qualify for the normal purchases and normal sales exception that is allowed for contracts that are probable of delivery in the normal course of business and, as such, are accounted for under the accrual basis and not recorded at fair value in the Company's consolidated financial statements. We also manage gas commodity price risk and supply risk by injecting natural gas into storage during the summer months and withdrawing the natural gas during the winter heating season.

Item 8. *Financial Statements and Supplementary Data*

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Essential Utilities, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets, including the consolidated statements of capitalization, of Essential Utilities, Inc. and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of operations and comprehensive income, of equity, and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes and schedule of condensed parent company financial statements as of December 31, 2023 and 2022 and for each of the three years in the period ended December 31, 2023 appearing after the signature pages (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for Rate Regulation

As described in Notes 1 and 6 to the consolidated financial statements, most of the operating companies of the Company that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. As of December 31, 2023, regulatory assets were $1.80 billion and regulatory liabilities were $0.85 billion. Regulated public utilities follow the Financial Accounting Standards Board's accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in the Company's rates charged for utility service. If, as a result of a change in circumstances, it is determined that a regulated operating company no longer meets the criteria to apply regulatory accounting, the operating company would have to discontinue regulatory accounting and write-off the respective regulatory assets and liabilities. Management makes significant judgments and estimates to record regulatory assets and liabilities. For each regulatory jurisdiction with regulated operations, management evaluates at the end of each reporting period whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to the Company in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings and, in these instances, may challenge the prudence of business policies and practices, seek cost disallowances or request other relief.

The principal considerations for our determination that performing procedures relating to management's accounting for rate regulation is a critical audit matter are the significant judgment by management when assessing the impact of regulation on the accounting for regulatory assets and liabilities, which in turn led to a high degree of auditor judgment and effort in performing procedures and in evaluating audit evidence related to whether the regulatory assets will be recovered and liabilities will be refunded.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of regulatory matters impacting regulatory assets and liabilities, including controls over the recovery of regulatory assets and the refund of regulatory liabilities. These procedures also included, among others (i) obtaining the Company's correspondence with regulators and assessing the reasonableness of management's judgments regarding the recovery of regulatory assets and refund of regulatory liabilities, (ii) assessing the reasonableness of management's accounting judgments related to new and updated regulatory orders and guidelines, and (iii) testing the calculation of regulatory assets and liabilities based on provisions outlined in regulatory correspondence.

/s/ PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
February 29, 2024

We have served as the Company's auditor since 2000.

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ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In thousands of dollars, except per share amounts)

	December 31, 2023	December 31, 2022
Assets		
Property, plant and equipment, at cost	$ 14,977,021	$ 13,737,387
Less: accumulated depreciation	2,879,949	2,606,441
Net property, plant and equipment	12,097,072	11,130,946
Current assets:		
Cash and cash equivalents	4,612	11,398
Accounts receivable, net	144,300	206,324
Unbilled revenues	101,436	170,504
Inventory - materials and supplies	47,494	46,592
Inventory - gas stored	65,173	153,143
Current assets held for sale	-	11,167
Prepayments and other current assets	99,884	39,759
Regulatory assets	29,080	19,272
Total current assets	491,979	658,159
Regulatory assets	1,766,892	1,342,753
Deferred charges and other assets, net	102,388	166,653
Funds restricted for construction activity	1,381	1,342
Goodwill	2,340,738	2,340,792
Non-current assets held for sale	-	32,124
Operating lease right-of-use assets	37,416	41,734
Intangible assets	3,593	4,604
Total assets	$ 16,841,459	$ 15,719,107

See accompanying notes to consolidated financial statements.

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ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS (continued)
(In thousands of dollars, except per share amounts)

	December 31, 2023	December 31, 2022
Liabilities and Equity		
Essential Utilities stockholders' equity:		
Common stock at $0.50 par value, authorized 600,000,000 shares, issued 276,595,228 and 266,973,321 as of December 31, 2023 and December 31, 2022	$ 138,297	$ 133,486
Capital in excess of par value	4,137,696	3,793,262
Retained earnings	1,706,675	1,534,331
Treasury stock, at cost, 3,299,191 and 3,236,237 shares as of December 31, 2023 and December 31, 2022	(86,485)	(83,693)
Total stockholders' equity	5,896,183	5,377,386
Long-term debt, excluding current portion	6,870,593	6,418,039
Less: debt issuance costs	44,508	46,982
Long-term debt, excluding current portion, net of debt issuance costs	6,826,085	6,371,057
Commitments and contingencies (See Note 9)		
Current liabilities:		
Current portion of long-term debt	67,415	199,356
Loans payable	160,123	228,500
Accounts payable	221,191	238,843
Book overdraft	13,358	28,694
Accrued interest	53,084	47,063
Accrued taxes	40,641	34,393
Liabilities related to assets held for sale	-	3,263
Regulatory liabilities	31,270	35,276
Dividends payable	83,929	75,808
Other accrued liabilities	126,916	130,673
Total current liabilities	797,927	1,021,869
Deferred credits and other liabilities:		
Deferred income taxes and investment tax credits	1,628,324	1,345,766
Customers' advances for construction	128,755	114,732
Regulatory liabilities	820,910	778,754
Asset retirement obligations	848	843
Operating lease liabilities	34,425	37,666
Non-current liabilities related to assets held for sale	-	974
Pension and other postretirement benefit liabilities	38,850	31,244
Other	24,086	28,562
Total deferred credits and other liabilities	2,676,198	2,338,541
Contributions in aid of construction	645,066	610,254
Total liabilities and equity	$ 16,841,459	$15,719,107

See accompanying notes to consolidated financial statements.

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ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(In thousands, except per share amounts)

	Years ended December 31,		
	2023	2022	2021
Operating revenues	$ 2,053,824	$ 2,288,032	$ 1,878,144
Operating expenses:			
Operations and maintenance	575,518	613,649	550,580
Purchased gas	352,306	601,995	340,262
Depreciation	338,655	315,811	292,191
Amortization	5,040	5,366	5,761
Taxes other than income taxes	90,208	90,024	86,641
Total operating expenses	1,361,727	1,626,845	1,275,435
Operating income	692,097	661,187	602,709
Other expense (income):			
Interest expense	283,362	238,116	207,709
Interest income	(3,401)	(3,675)	(2,384)
Allowance for funds used during construction	(16,967)	(23,665)	(20,792)
Gain on sale of other assets	(65)	(991)	(976)
Other	(2,613)	494	(2,848)
Income before income taxes	431,781	450,908	422,000
Income tax benefit	(66,445)	(14,329)	(9,612)
Net income	$ 498,226	$ 465,237	$ 431,612
Comprehensive income	$ 498,226	$ 465,237	$ 431,612
Net income per common share:			
Basic	$ 1.86	$ 1.77	$ 1.68
Diluted	$ 1.86	$ 1.77	$ 1.67
Average common shares outstanding during the period:			
Basic	267,171	262,246	257,487
Diluted	267,659	262,868	258,180

See accompanying notes to consolidated financial statements.

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ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CAPITALIZATION
(In thousands of dollars, except per share amounts)

	December 31, 2023	December 31, 2022
Stockholders' equity:		
Common stock, $0.50 par value	$ 138,297	$ 133,486
Capital in excess of par value	4,137,696	3,793,262
Retained earnings	1,706,675	1,534,331
Treasury stock, at cost	(86,485)	(83,693)
Total stockholders' equity	5,896,183	5,377,386
Long-term debt of subsidiaries (substantially collateralized by utility plant):		
Interest Rate Range / Maturity Date Range		
0.00% to 0.99% / 2023 to 2033	2,935	1,875
1.00% to 1.99% / 2023 to 2039	7,538	8,369
2.00% to 2.99% / 2024 to 2058	207,917	209,755
3.00% to 3.99% / 2023 to 2056	1,313,932	1,351,432
4.00% to 4.99% / 2023 to 2059	1,245,727	1,403,313
5.00% to 5.99% / 2023 to 2061	312,745	14,357
6.00% to 6.99% / 2026 to 2036	31,000	31,000
7.00% to 7.99% / 2025 to 2027	28,125	28,378
8.00% to 8.99% / 2025	1,289	2,116
9.00% to 9.99% / 2026	11,800	11,800
	3,163,008	3,062,395
Notes payable to bank under revolving credit agreement, variable rate, due 2027	720,000	490,000
Unsecured notes payable:		
Notes at 2.40% due 2031	400,000	400,000
Notes at 2.704% due 2030	500,000	500,000
Notes ranging from 3.01% to 3.59%, due 2029 through 2050	1,125,000	1,125,000
Notes at 4.28%, due 2049	500,000	500,000
Notes at 5.30%, due 2052	500,000	500,000
Notes at 5.95%, due 2023 through 2034	30,000	40,000
Total long-term debt	6,938,008	6,617,395
Current portion of long-term debt	67,415	199,356
Long-term debt, excluding current portion	6,870,593	6,418,039
Less: debt issuance costs	44,508	46,982
Long-term debt, excluding current portion, net of debt issuance costs	6,826,085	6,371,057
Total capitalization	$ 12,722,268	$ 11,748,443

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands of dollars, except per share amounts)

	Common stock	Capital in excess of par value	Retained earnings	Treasury stock	Total
Balance at December 31, 2020	$ 124,285	$ 3,379,057	$ 1,261,862	$ (81,327)	$ 4,683,877
Net income	-	-	431,612	-	431,612
Dividends declared and paid ($1.0378 per share)	-	-	(258,650)	-	(258,650)
Issuance of common stock from stock purchase contracts (127,749 shares)	64	(64)	-	-	-
Issuance of common stock under dividend reinvestment plan (374,824 shares)	187	16,612	-	-	16,799
Issuance of common stock from forward equity sale agreement (6,700,000 shares)	3,350	296,389	-	-	299,739
Repurchase of stock (76,732 shares)	-	-	-	(3,291)	(3,291)
Equity compensation plan (206,163 shares)	103	(103)	-	-	-
Exercise of stock options (122,297 shares)	61	4,111	-	-	4,172
Stock-based compensation	-	9,998	(623)	-	9,375
Other	-	(186)	-	1,003	817
Balance at December 31, 2021	$ 128,050	$ 3,705,814	$ 1,434,201	$ (83,615)	$ 5,184,450
Net income	-	-	465,237	-	465,237
Dividends declared and paid ($1.1104 per share)	-	-	(288,632)	-	(288,632)
Dividends of March 1, 2023 declared ($0.287 per share)	-	-	(75,808)	-	(75,808)
Issuance of common stock from stock purchase contracts (9,029,461 shares)	4,515	(4,515)	-	-	-
Issuance of common stock under dividend reinvestment plan (368,278 shares)	184	16,435	-	-	16,619
Issuance of common stock from at-the-market sale agreements (1,321,994 shares)	661	62,379	-	-	63,040
Repurchase of stock (25,037 shares)	-	-	-	(1,192)	(1,192)
Equity compensation plan (81,516 shares)	41	(41)	-	-	-
Exercise of stock options (69,684 shares)	35	2,440	-	-	2,475
Stock-based compensation	-	12,094	(667)	-	11,427
Other	-	(1,344)	-	1,114	(230)
Balance at December 31, 2022	$ 133,486	$ 3,793,262	$ 1,534,331	$ (83,693)	$ 5,377,386
Net income	-	-	498,226	-	498,226
Dividends declared and paid ($1.1882 per share)	-	-	(240,999)	-	(240,999)
Dividends of March 1, 2024 declared ($0.3071 per share)	-	-	(83,929)	-	(83,929)
Issuance of common stock under dividend reinvestment plan (430,487 shares)	215	15,790	-	-	16,005
Issuance of common stock from at-the-market sale agreements (8,938,839 shares)	4,470	318,513	-	-	322,983
Repurchase of stock (89,785 shares)	-	-	-	(3,981)	(3,981)
Equity compensation plan (244,407 shares)	122	(122)	-	-	-
Exercise of stock options (8,174 shares)	4	283	-	-	287
Stock-based compensation	-	11,330	(954)	-	10,376
Other	-	(1,360)	-	1,189	(171)
Balance at December 31, 2023	$ 138,297	$ 4,137,696	$ 1,706,675	$ (86,485)	$ 5,896,183

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands of dollars, except per share amounts)

	Years ended December 31,		
	2023	2022	2021
Cash flows from operating activities:			
Net income	$ 498,226	$ 465,237	$ 431,612
Adjustments to reconcile net income to net cash flows from operating activities:			
Depreciation and amortization	343,695	321,177	297,952
Deferred income taxes	(79,845)	(23,045)	(8,514)
Provision for doubtful accounts	23,209	27,631	27,336
Stock-based compensation	11,323	12,206	10,078
Gain on sale of utility system and other assets	(65)	(991)	(1,589)
Net change in receivables, deferred purchased gas costs, inventory and prepayments	189,989	(223,335)	(109,605)
Net change in payables, accrued interest, accrued taxes and other accrued liabilities	(14,559)	53,761	5,190
Pension and other postretirement benefits contributions	(20,343)	(22,027)	(15,135)
Other	(18,043)	(10,308)	7,354
Net cash flows from operating activities	933,587	600,306	644,679
Cash flows from investing activities:			
Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $5,241, $6,047 and $4,510	(1,199,103)	(1,062,763)	(1,020,519)
Acquisitions of utility systems and other, net	(45,303)	(116,891)	(36,326)
Net proceeds from the sale of utility systems and other assets	41,758	1,081	1,819
Other	(19,080)	271	(1,032)
Net cash flows used in investing activities	(1,221,728)	(1,178,302)	(1,056,058)
Cash flows from financing activities:			
Customers' advances and contributions in aid of construction	23,982	11,714	15,264
Repayments of customers' advances	(8,471)	(5,006)	(7,725)
Net proceeds (repayments) of short-term debt	(68,377)	163,500	(13,350)
Proceeds from long-term debt	1,207,619	1,646,742	1,095,171
Repayments of long-term debt	(876,379)	(977,175)	(769,546)
Change in cash overdraft position	(15,336)	(53,028)	37,719
Proceeds from issuance of common stock under dividend reinvestment plan	16,005	16,619	16,799
Proceeds from issuance of common stock from forward equity sale agreement	-	-	299,739
Proceeds from issuance of common stock from at-the-market sale agreement	322,983	63,040	-
Proceeds from exercised stock options	287	2,475	4,172
Repurchase of common stock	(3,981)	(1,192)	(3,291)
Dividends paid on common stock	(316,806)	(288,632)	(258,650)
Other	(171)	(230)	817
Net cash flows from financing activities	281,355	578,827	417,119
Net increase (decrease) in cash and cash equivalents	(6,786)	831	5,740
Cash and cash equivalents at beginning of year	11,398	10,567	4,827
Cash and cash equivalents at end of year	$ 4,612	$ 11,398	$ 10,567
Cash paid during the year for:			
Interest, net of amounts capitalized	$ 272,532	$ 225,820	$ 201,792
Income taxes	7,839	11,269	5,692
Non-cash investing activities:			
Property, plant and equipment additions purchased at the period end, but not yet paid	$ 102,770	$ 102,129	$ 95,945
Non-cash utility property contributions	56,297	35,698	36,882

See accompanying notes to consolidated financial statements.

Refer to Note 15 – *Employee Stock and Incentive Plan* for a description of non-cash activities.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
(In thousands of dollars, except per share amounts)

Note 1 – *Summary of Significant Accounting Policies*

Nature of Operations ─ Essential Utilities, Inc. ("Essential Utilities," the "Company," "we," "our", or "us") is the holding company for regulated utilities providing water, wastewater, or natural gas services concentrated in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, Virginia, and Kentucky under the Aqua and Peoples brands. One of our largest operating subsidiaries is Aqua Pennsylvania, Inc., which accounted for approximately 56% of our Regulated Water segment's operating revenues and approximately 68% of our Regulated Water segment's income for 2023. As of December 31, 2023, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of Regulated Water customers we serve. Aqua Pennsylvania's service territory is located in the suburban areas north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. The Company's other regulated water or wastewater utility subsidiaries provide similar services in seven additional states. Our Peoples subsidiaries provide natural gas service to approximately 744,000 customers in western Pennsylvania and Kentucky. Approximately 95% of the total number of natural gas utility customers we serve are in western Pennsylvania. The Company also operates market-based activities, conducted through its non-regulated subsidiaries, that provide utility service line protection solutions and repair services to households and gas marketing and production activities.

In December 2022, the Company signed an agreement to sell its regulated natural gas utility assets in West Virginia, which represented approximately two percent of the Company's regulated natural gas customers. The sale closed on October 1, 2023, and concluded our regulated utility operations in West Virginia. In October 2023, the Company entered into an agreement to sell its interest in three non-utility local microgrid and distribution energy projects. This sale was completed in January 2024. See Note 6 – *Assets Held for Sale and Dispositions* for further information.

Regulation ─ Most of the operating companies that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. The respective utility commissions have jurisdiction with respect to rates, service, accounting procedures, issuance of securities, acquisitions and other matters. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. Regulated public utilities follow the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. Costs, for which the Company has received or expects to receive prospective rate recovery, are deferred as a regulatory asset and amortized over the period of rate recovery in accordance with the FASB's accounting guidance for regulated operations. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in Company's rates charged for utility service. If, as a result of a change in circumstances, it is determined that a regulated operating company no longer meets the criteria to apply regulatory accounting, the operating company would have to discontinue regulatory accounting and write-off the respective regulatory assets and liabilities. See Note 6 - *Regulatory Assets and Liabilities* for further information regarding the Company's regulatory assets.

The Company makes significant judgments and estimates to record regulatory assets and liabilities. For each regulatory jurisdiction with regulated operations, the Company evaluates at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to the Company in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances, may challenge the prudence of our business policies and practices, seek cost disallowances or request other relief.

Use of Estimates in Preparation of Consolidated Financial Statements ─ The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Basis of Presentation – The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated.

Property, Plant and Equipment and Depreciation ─ Property, plant and equipment consist primarily of utility plant. The cost of additions includes contracted cost, direct labor and fringe benefits, materials, overheads, and for additions meeting certain criteria, allowance for funds used during construction. Utility systems acquired are typically recorded at estimated original cost of utility plant when first devoted to utility service and the applicable depreciation is recorded to accumulated depreciation. Further, utility systems acquired under fair value regulations would be recorded based on the valuation of the utility plant as approved by the respective utility commission. The difference between the estimated original cost, less applicable accumulated depreciation, and the purchase price may be recorded as an acquisition adjustment within utility plant as permitted by the applicable regulatory jurisdiction. At December 31, 2023 and 2022, utility plant includes a net credit acquisition adjustment of $6,444 and $6,076, respectively, which is generally being amortized from 10 to 53 years. Amortization of the acquisition adjustments totaled $2,103 in 2023, $2,788 in 2022, and $2,842 in 2021.

Utility expenditures for maintenance and repairs, including major maintenance projects and minor renewals, are charged to operating expenses when incurred in accordance with the system of accounts prescribed by the utility commissions of the states in which the company operates. The cost of new units of property and betterments are capitalized. Utility expenditures for water main cleaning and relining of pipes are deferred and are presented in net property, plant and equipment in accordance with the FASB's accounting guidance for regulated operations. As of December 31, 2023, $1,635 of these costs have been incurred since the last respective rate proceeding and the Company expects to recover these costs in future rates.

The cost of software upgrades and enhancements are capitalized if they result in added functionality, which enables the software to perform tasks it was previously incapable of performing. Information technology costs associated with major system installations, conversions and improvements, such as software training, data conversion and business process reengineering costs, are deferred as a regulatory asset if the Company expects to recover these costs in future rates. If these costs are not deferred, then these costs are charged to operating expenses when incurred. As of December 31, 2023, $44,238 of these costs have been deferred since the last respective rate proceeding as a regulatory asset, and the deferral is reported as a component of net property, plant and equipment.

When units of utility property are replaced, retired or abandoned, the recorded value thereof is credited to the asset account and such value, together with the net cost of removal, is charged to accumulated depreciation. To the extent the Company anticipates recovery of the cost of removal or other retirement costs through rates after the retirement costs are incurred, a regulatory asset is recorded as those costs are incurred. In some cases, the Company recovers retirement costs through rates during the life of the associated asset and before the costs are incurred. These amounts, which are not yet utilized, result in a regulatory liability being reported based on the amounts previously recovered through customer rates.

The straight-line remaining life method is used to compute depreciation on utility plant. Generally, the straight-line method is used with respect to transportation and mechanical equipment, office equipment and laboratory equipment.

Impairment of Long-Lived Assets - Long-lived assets of the Company, which consist primarily of utility plant in service, operating lease right-of-use assets and intangible assets, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, the Company determines whether it is more likely than not that the fair value of those assets is less than their carrying amount. If the Company determines that it is more likely than not (that is, the likelihood of more than 50 percent), the Company would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, the Company would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. During the years ended December 31, 2022 and 2021, the Company recorded an impairment loss to write down a portion of the operating lease right-of-use asset for office space not used in operations to fair value. Refer to Note 10 – *Leases*, for further details.

Regulatory assets are reviewed for the continued application of the FASB accounting guidance for regulated operations. The Company's review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely. For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission.

Allowance for Funds Used During Construction — The allowance for funds used during construction ("AFUDC") represents the capitalized cost of funds used to finance the construction of utility plant. In general, AFUDC is applied to construction projects requiring more than one month to complete. No AFUDC is applied to projects funded by customer advances for construction, contributions in aid of construction, or applicable state-revolving fund loans. AFUDC includes the net cost of borrowed funds and a rate of return on other funds when used and is recovered through rates as the utility plant is depreciated. The amount of AFUDC related to equity funds in 2023 was $11,726, 2022 was $17,618, and 2021 was $16,282. No interest was capitalized by our market-based businesses.

Lease Accounting — The Company evaluates the contracts it enters into to determine whether such contracts contain leases. A contract contains a lease if the contract conveys the right to control the use of identified property, plant or equipment for a period of time in exchange for consideration. We enter into operating lease contracts for the right to utilize certain land, office facilities, office equipment, and vehicles from third parties. For contracts that extend for a period greater than 12 months, we recognize a right of use asset and a corresponding lease liability on our consolidated balance sheet. The present value of each lease is based on the future minimum lease payments in accordance with Accounting Standards Codification ("ASC") 842 and is determined by discounting these payments using an incremental borrowing rate.

Recognition of Revenues — The Company recognizes revenue as utility services are provided to our customers, which happens over time as the services are delivered and the performance obligation is satisfied. The Company's utility revenues recognized in an accounting period includes amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. Unbilled amounts are calculated by deriving estimates based on an average usage of the prior month. The Company's actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates are determined.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Generally, payment is due within 30 days once a bill is issued to a customer. Sales tax and other taxes we collect on behalf of government authorities, concurrent with our revenue-producing activities, are primarily excluded from revenue. The following table presents our revenues disaggregated by major source and customer class for the years ended December 31:

2023	Water Revenues	Wastewater Revenues	Natural Gas Revenues	Other Revenues
Revenues from contracts with customers:				
Residential	$ 641,351	$ 139,188	$ 519,406	$ -
Commercial	180,731	35,530	111,272	-
Fire protection	41,257	-	-	-
Industrial	33,949	2,087	3,232	-
Gas transportation	-	-	184,598	-
Other water	51,527	-	-	-
Other wastewater	-	10,589	-	-
Other utility	-	-	43,163	14,863
Revenues from contracts with customers	948,815	187,394	861,671	14,863
Alternative revenue program	2,236	68	2,088	-
Other and eliminations	-	-	-	36,689
Consolidated	$ 951,051	$ 187,462	$ 863,759	$ 51,552

2022	Water Revenues	Wastewater Revenues	Natural Gas Revenues	Other Revenues
Revenues from contracts with customers:				
Residential	$ 607,473	$ 122,612	$ 720,490	$ -
Commercial	168,460	30,340	149,653	-
Fire protection	38,970	-	-	-
Industrial	32,581	1,755	5,636	-
Gas transportation	-	-	205,825	-
Other water	55,389	-	-	-
Other wastewater	-	10,676	-	-
Other utility	-	-	61,393	11,478
Revenues from contracts with customers	902,873	165,383	1,142,997	11,478
Alternative revenue program	3,309	(71)	365	-
Other and eliminations	-	-	-	61,698
Consolidated	$ 906,182	$ 165,312	$ 1,143,362	$ 73,176

2021	Water Revenues	Wastewater Revenues	Natural Gas Revenues	Other Revenues
Revenues from contracts with customers:				
Residential	$ 561,996	$ 99,931	$ 530,338	$ -
Commercial	151,071	22,060	99,596	-
Fire protection	35,984	-	-	-
Industrial	30,230	1,729	3,427	-
Gas transportation	-	-	198,195	-
Other water	53,488	-	-	-
Other wastewater	-	8,860	-	-
Customer rate credits	-	-	(5,000)	-
Other utility	-	-	32,812	13,358
Revenues from contracts with customers	832,769	132,580	859,368	13,358
Alternative revenue program	1,760	(264)	534	-
Other and eliminations	-	-	-	38,039
Consolidated	$ 834,529	$ 132,316	$ 859,902	$ 51,397

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Revenues from Contracts with Customers – These revenues are composed of four main categories: water, wastewater, natural gas, and other. Water revenues represent revenues earned for supplying customers with water service. Wastewater revenues represent revenues earned for treating wastewater and releasing it into the environment. Natural gas revenues represent revenues earned for the gas commodity and delivery of natural gas to customers. Other revenues are associated fees that relate to our utility businesses but are not water, wastewater, or natural gas revenues. Refer to the description below for a discussion of the performance obligation for each of these revenue streams.

- Tariff Revenues – These revenues are categorized by customer class: residential, commercial, fire protection, industrial, gas transportation, other water, and other wastewater. The rates that generate these revenues are approved by the respective state utility commission, and revenues are billed cyclically and accrued for when unbilled. The regulated natural gas rates are set and adjusted for increases or decreases in our purchased gas costs through purchased gas adjustment mechanisms. Purchased gas adjustment mechanisms provide us with a means to recover purchased gas costs on an ongoing basis without filing a rate case. Other water and other wastewater revenues consists primarily of fines, penalties, surcharges, and availability lot fees. Our performance obligation for tariff revenues is to provide potable water, wastewater treatment service, or delivery and sale of natural gas to customers. This performance obligation is satisfied over time as the services are rendered. The amounts that the Company has a right to invoice for tariff revenues reflect the right to consideration from the customers in an amount that corresponds directly with the value transferred to the customer for the performance completed to date.

- Other Utility Revenues – Other utility revenues represent revenues earned primarily from: antenna revenues, which represents fees received from telecommunication operators that have put cellular antennas on our water towers; operation and maintenance and billing contracts, which represent fees earned from municipalities for our operation of their water or wastewater treatment services or performing billing services; and fees earned from developers for accessing our water mains, miscellaneous service revenue from gas distribution operations, gas processing and handling revenue, sales of natural gas at market-based rates and contracted fixed prices, sales of gas purchased from third parties, and other gas marketing activities. The performance obligations vary for these revenues, but all are primarily recognized over time as the service is delivered.

- Alternative Revenue Program:
  - Water / Wastewater Revenues – These revenues represent the difference between the actual billed utility volumetric water and wastewater revenues for Aqua Illinois and the revenues set in the last Aqua Illinois rate case. In accordance with the Illinois Commerce Commission, we recognize revenues based on the target amount established in the last rate case, and then record either a regulatory asset or liability based on the cumulative annual difference between the target and actual amounts billed, which results in either a payment from customers or a refund due to customers. The cumulative annual difference is either refunded to customers or collected from customers over a nine-month period.

  - Natural Gas Revenues – These revenues represent the weather-normalization adjustment (“WNA”) mechanism in place for our natural gas customers served in Kentucky. The WNA serves to minimize the effects of weather on the Company’s results for its residential and small commercial natural gas customers. This regulatory mechanism adjusts revenues earned for the variance between actual and normal weather and can have either positive (warmer than normal) or negative (colder than normal) effects on revenues. Customer bills are adjusted in the December through April billing months, with rates adjusted for the difference between actual revenues and revenues calculated under this mechanism billed to the customers.

  These revenue programs represent a contract between the utility and its regulators, not customers, and therefore are not within the scope of the FASB’s accounting guidance for recognizing revenue from contracts with customers.

- Other and Eliminations – Other and eliminations consist of market-based revenues, which are earned through our non-regulated natural gas operations and Aqua Resources, and intercompany activities for revenue billed between our subsidiaries. Our non-regulated natural gas operations consist of utility service line protection solutions and repair services for households and the operation of gas marketing and production entities. Revenue is recognized and the performance obligation is satisfied over time as the service is delivered. Aqua Resources earned revenues and continues to earn revenue through third-party water and sewer service line protection and repair services. For the service line protection business, the performance obligations are allowing the use of our logo to a third-party water and sewer service line repair provider. Revenues are primarily recognized over time as service is delivered.

Cash and Cash Equivalents — The Company considers all highly liquid investments with an original maturity of three months or less, which are not restricted for construction activity, to be cash equivalents.

The Company had a book overdraft, which represents transactions that have not cleared the bank accounts at the end of the period, for specific disbursement cash accounts of $13,358 and $28,694 at December 31, 2023 and 2022, respectively. The Company transfers cash on an as-needed basis to fund these items as they clear the bank in subsequent periods. The balance of the book overdraft is reported as book overdraft and the change in the book overdraft balance is reported as cash flows from financing activities, due to our ability to fund the overdraft with the Company's credit facility.

Accounts Receivable — Accounts receivable are recorded at the invoiced amounts, which consists of billed and unbilled revenues. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in our existing accounts receivable and is determined based on lifetime expected credit losses and the aging of account balances. The Company reviews the allowance for doubtful accounts quarterly. Account balances are written off against the allowance when it is probable the receivable will not be recovered. When utility customers request extended payment terms, credit is extended based on regulatory guidelines, and collateral is not required.

Inventories – Materials and Supplies – Inventories are stated at cost. Cost is determined using the first-in, first-out method.

Inventory – Gas Stored – The Company accounts for gas in storage inventory using the weighted average cost of gas method.

Assets Held for Sale — When the Company makes a decision to sell an asset or to stop some part of its business, the Company assesses if such assets should be classified as an asset held for sale. Assets held for sale are measured at the lower of their carrying amount or fair value less cost to sell. For long-lived assets or disposal groups that are classified as held for sale but do not meet the criteria for discontinued operations, the assets and liabilities are presented separately on the consolidated balance sheet of the initial period in which it is classified as held for sale. The major classes of assets

and liabilities classified as held for sale are disclosed in the notes to the consolidated financial statements. See *"Note 3 – Assets Held for Sale and Dispositions"*.

Goodwill – Goodwill represents the excess cost over the fair value of net tangible and identifiable intangible assets acquired through acquisitions. Goodwill is not amortized but is tested for impairment annually, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, changes to regulatory environment, recent regulatory and legislative proceedings, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted or at our discretion, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the reporting unit's carrying amount of goodwill.

Impairment testing for goodwill is done at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment (also known as a component). A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available, and segment management regularly reviews the operating results of that component. We assigned assets and liabilities to each reporting unit based on either specific identification or by using judgment for the remaining assets and liabilities that are not specific to a reporting unit. Goodwill was assigned to the reporting units based on a combination of specific identification and relative fair values.

Determining the fair value of our reporting units involves the use of significant estimates and assumptions and considerable management judgment. We base our fair value estimates on assumptions we believe to be reasonable at the time, but such assumptions are subject to inherent uncertainty. We estimated the fair value of reporting units by weighting results from the market approach and the income approach. These valuation approaches consider a number of factors that include, but are not limited to, prospective financial information, growth rates, terminal value, discount rates, and comparable multiples from publicly traded companies in our industry. Changes in market conditions, changes in the regulatory environment, pending or new legislation that could impact the ability to recover costs through regulated rates or other factors outside of our control, could cause us to change key assumptions and our judgment about a reporting unit's prospects. Similarly, in a specific period, a reporting unit could significantly underperform relative to its historical or projected future operating results. Either situation could result in a meaningfully different estimate of the fair value of our reporting units, and a consequent future impairment charge.

During the fourth quarter of 2023, as part of the annual goodwill assessment as of October 1, 2023, we elected to perform a quantitative goodwill impairment assessment on the goodwill attributable to our Regulated Natural Gas reporting unit and a qualitative assessment for our Regulated Water and Other reporting units. Based on our analysis, we determined that none of the goodwill of our reporting units was impaired.

The following table summarizes the changes in the Company's goodwill:

	Regulated Water	Regulated Natural Gas	Other	Consolidated
Balance at December 31, 2021	$ 58,527	$ 2,277,447	$ 4,841	$ 2,340,815
Goodwill acquired	-	-	-	-
Reclassifications to utility plant acquisition adjustment	(23)	-	-	(23)
Balance at December 31, 2022	58,504	2,277,447	4,841	2,340,792
Goodwill acquired	-	-	-	-
Reclassifications to utility plant acquisition adjustment	(54)	-	-	(54)
Balance at December 31, 2023	$ 58,450	$ 2,277,447	$ 4,841	$ 2,340,738

The reclassification of goodwill to utility plant acquisition adjustment results from either a regulatory order or a mechanism approved by the applicable utility commission. A regulatory order may provide for the one-time transfer of certain acquired goodwill. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

Intangible assets – The Company's intangible assets consist of customer relationships for our non-regulated natural gas operations and non-compete agreements with certain former employees of Peoples. These intangible assets are amortized on a straight-line basis over their estimated useful lives of fifteen years for the customer relationships and five years for the non-compete agreements.

Derivative Instruments – The Company's natural gas commodity price risk, driven mainly by price fluctuations of natural gas, is mitigated by its purchased-gas cost adjustment mechanisms. The Company also uses derivative instruments to economically hedge the cost of anticipated natural gas purchases during the winter heating months that seeks to offset the risk to the Company's utility customers from upward market price volatility. These strategies include requirements contracts, spot purchase contracts and underground storage to meet regulated customers' natural gas requirements that may have fixed or variable pricing. The variable price contracts qualify as derivative instruments; however, because the contract price is the prevailing price at the future transaction date the contract has no determinable fair value. The fixed price contracts and firm commitments to purchase a fixed quantity of gas in the future qualify for the normal purchases and normal sales exception that is allowed for contracts that are probable of delivery in the normal course of business and, as such, are accounted for under the accrual basis and are not recorded at fair value in the Company's consolidated financial statements.

Deferred Charges and Other Assets — Deferred charges and other assets consist primarily of assets held to compensate employees in the future who participate in the Company's deferred compensation plan, and prepaid pension and other post-retirement benefit plans assets, which amounted to $26,442 and $43,025 as of December 31, 2023; and $24,962 and $43,827 as of December 31, 2022, respectively. The assets of the deferred compensation plan are invested in mutual funds which are carried on the consolidated balance sheet at fair market value, and changes in fair value are included in other expense (income), refer to Note 12 – *Fair Value of Financial Instruments* for further details. Refer to Note 16 – *Pension Plans and Other Post-Retirement Benefit Plans* for further information on the prepaid pension and other post-retirement benefit plan assets.

As of December 31, 2022, deferred charges and other assets also included the non-current portion of the Company's interest in three non-utility local microgrid and distributed energy projects amounting to $63,204. In October 2023, the Company entered to an agreement to sell their interests in these projects for $165,000. As of December 31, 2023, the balances associated with these projects of $63,182 are included in prepayments and other current assets in the consolidated balance sheets. In January 2024, the sale was completed. Refer to Note 3 – *Assets Held for Sale and Dispositions* for further details.

Income Taxes — The Company accounts for some income and expense items in different time periods for financial and tax reporting purposes. Deferred income taxes are provided on specific temporary differences between the tax basis of the assets and liabilities, and the amounts at which they are carried in the consolidated financial statements. The income tax effect of temporary differences not currently included in rates is recorded as deferred taxes with an offsetting regulatory asset or liability. These deferred income taxes are based on the enacted tax rates expected to be in effect when such temporary differences are projected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amount more likely than not to be realized. Investment tax credits are deferred and amortized over the estimated useful lives of the related properties. Judgment is required in evaluating the Company's Federal and state tax positions. Despite management's belief that the Company's tax return positions are fully supportable, the Company establishes reserves when it believes that its tax positions are likely to be challenged and it may not fully prevail in these challenges. The Company's provision for income taxes includes interest, penalties and reserves for uncertain tax positions.

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(In thousands of dollars, except per share amounts)

Customers' Advances for Construction and Contributions in Aid of Construction — Utility mains, other utility property or, in some instances, cash advances to reimburse the Company for its costs to construct utility mains or other utility property, are contributed to the Company by customers, real estate developers and builders in order to extend utility service to their properties. The value of these contributions is recorded as customers' advances for construction. Over time, the amount of non-cash contributed property will vary based on the timing of the contribution of the non-cash property and the volume of non-cash contributed property received in connection with development in our service territories. The Company makes refunds on these advances over a specific period of time based on operating revenues related to the property, or as new customers are connected to and take service from the applicable water main. After all refunds are made, any remaining balance is transferred to contributions in aid of construction for our regulated water business. Contributions in aid of construction include direct non-refundable contributions and the portion of customers' advances for construction that become non-refundable. For our regulated gas business, non-refundable contributions are netted against the cost of the related utility mains or other utility property.

Based on regulatory conventions in states where the Company operates, generally our subsidiaries depreciate contributed property and amortize contributions in aid of construction at the composite rate of the related property. Contributions in aid of construction and customers' advances for construction are deducted from the Company's rate base for rate-making purposes, and therefore, no return is earned on contributed property.

Stock-Based Compensation — The Company records compensation expense in the financial statements for stock-based awards based on the grant date fair value of those awards. Stock-based compensation expense includes an estimate for pre-vesting forfeitures and is recognized over the requisite service periods of the awards on either a straight-line basis, or the graded vesting method, which is generally commensurate with the vesting term.

Fair Value Measurements – The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or

- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. Additionally, assets that are measured at fair value using the net asset value ("NAV") per share practical expedient are not classified in the fair value hierarchy. There have been no changes in the valuation techniques used to measure fair value or asset or liability transfers between the levels of the fair value hierarchy for the years ended December 31, 2023 and 2022.

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Recent Accounting Pronouncements —

Pronouncements to be adopted upon the effective date:

In December 2023, the FASB issued ASU 2023-09, *"Income Taxes (*Topic 740*): Improvements to Income Tax Disclosures"*. The ASU enhances the transparency and decision usefulness of income tax disclosures and is effective for annual periods beginning after December 15, 2024 on a prospective basis. Early adoption is permitted. The Company is currently evaluating the impact of this ASU on its consolidated financial statements and related disclosures.

In November 2023, the FASB issued ASU 2023-07 *Segment Reporting - Improving Reportable Segment Disclosures (Topic 280)*. The update is intended to improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant expenses. The ASU requires disclosures to include significant segment expenses that are regularly provided to the chief operating decision maker (CODM), a description of other segment items by reportable segment, and any additional measures of a segment's profit or loss used by the CODM when deciding how to allocate resources. The ASU also requires all annual disclosures currently required by Topic 280 to be included in interim periods. The update is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted and requires retrospective application to all prior periods presented in the financial statements. The Company is currently assessing the timing and impact of adopting the updated provisions.

Pronouncements adopted during the fiscal year:

In October 2021, the FASB issued accounting guidance on accounting for acquired revenue contracts with customers in a business combination. The guidance specifies for all acquired revenue contracts, regardless of their timing of payment, the circumstances in which the acquirer should recognize contract assets and contract liabilities that are acquired in a business combination, as well as how to measure those contract assets and contract liabilities. The updated accounting guidance is effective for fiscal years beginning after December 15, 2022 with early adoption permitted. The Company adopted this guidance effective January 1, 2023, and will apply it prospectively to business combinations occurring on or after that date.

Recently issued accounting standards or pronouncements not disclosed above have been excluded as they are not relevant to the Company.

Note 2 – *Acquisitions*

Water and Wastewater Utility Acquisitions – Pending Completion

In December 2023, the Company entered into a purchase agreement to acquire North Versailles wastewater assets in North Versailles Township, Pennsylvania which serves approximately 4,400 customers for between $25,000 and $30,000.

In September 2023, the Company entered into a purchase agreement to acquire Greenville Municipal Water Authority's water system in Greenville, Pennsylvania which serves approximately 3,000 customers for $18,000.

In June 2023, the Company entered into a purchase agreement to acquire Westfield HOA wastewater assets, which serves approximately 200 customers within Westfield Homeowners Subdivision in Glenview, Illinois for $50.

In April 2023, the Company entered into a purchase agreement to acquire Greenville Sanitary Authority's wastewater utility assets, which serves approximately 2,300 customers in Greenville, Pennsylvania for $18,000.

In October 2021, the Company entered into a purchase agreement to acquire the wastewater utility assets of the City of Beaver Falls, Pennsylvania which consists of approximately 7,600 customers for $41,250.

The purchase price for each of these pending acquisitions is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired. We plan to finance the purchase price of these acquisitions by utilizing our revolving credit facility until permanent debt and common equity are secured. These pending acquisitions are expected to close in 2024 or 2025. Closing for our utility acquisitions are subject to the timing of the respective regulatory approval processes.

DELCORA Purchase Agreement

In September 2019, the Company entered into a purchase agreement to acquire the wastewater utility system assets of the Delaware County Regional Water Quality Control Authority ("DELCORA"), which consists of approximately 16,000 customers, or the equivalent of 198,000 retail customers, in 42 municipalities in Southeast Pennsylvania for $276,500. There are several legal proceedings involving the Company as a result of the purchase agreement:

- In 2020, Delaware County, Pennsylvania (the "County") filed a lawsuit alleging that DELCORA did not have the legal authority to establish and fund a customer trust with the net proceeds of the transaction (the "County Lawsuit"). In 2020, the judge in the Delaware County Court lawsuit issued an order that (1) the County cannot interfere with the purchase agreement between DELCORA and the Company; (2) the County cannot terminate DELCORA prior to the closing of the transaction; and (3) the establishment of the customer trust was valid. The County appealed this decision to the Commonwealth Court of Pennsylvania. On March 3, 2022, the Commonwealth Court issued a decision finding that the County can dissolve DELCORA if it so chooses, but the purchase agreement must be upheld regardless of who is operating the system. The case was remanded back to the trial court for the entry of an order consistent with the Commonwealth Court's opinion and the order was issued in September 2022 ("Remand Order"). Since then, the County has challenged the Remand Order that has resulted in the Remand Order being on appeal to the Commonwealth Court. The Commonwealth Court has scheduled oral argument on this appeal for April 2024.

- On January 25, 2023, DELCORA filed in the Delaware Court of Common Pleas a complaint for Declaratory Judgment against the Company and the County seeking resolution of whether the County Ordinance dissolving DELCORA is a final action prohibiting DELCORA from carrying out the material transaction of the Asset Purchase Agreement and, in the event that DELCORA retains the ability to close the transaction, whether DELCORA is permitted to exist as a trust (the "DELCORA Complaint"). The Company filed preliminary objections to the DELCORA complaint, which were scheduled for a hearing on October 12, 2023. However, prior to the scheduled hearing, the Court notified the parties that the hearing was canceled and would be re-listed after the parties receive the benefit of the Commonwealth Court's decision on the appeal addressed above.

The administrative law judges ("ALJ") in the regulatory approval process (the "PUC Process") recommended that the Company's application to acquire DELCORA be denied, and subsequently, the Company provided exceptions to the recommended decision. On March 30, 2021, the Pennsylvania Public Utility Commission ("PUC") ruled that the case be remanded back to the ALJ and vacated the original administrative law judges' recommended decision ("2021 Order"). This 2021 Order was also appealed to the Commonwealth Court by the County on April 29, 2021. A decision was issued by the Commonwealth Court on September 12, 2022, which dismissed the appeal of the County.

- After the PUC issued the 2021 Order, on April 16, 2021, the ALJ issued an order staying the proceeding until the County Lawsuit is final and unappealable. On March 25, 2022, the Company sent a letter notifying the PUC of the March 3, 2022, Commonwealth Court decision (that originated in Delaware County Court of Common Pleas) and requested that the PUC move forward with processing the application. On July 14, 2022, the Commission moved to lift the stay imposed by the ALJ, and required the ALJ to establish a schedule on remand for the proceeding. The ALJ established a procedural schedule for the remand proceeding, which was subsequently stayed.

- On August 17, 2022, the Receiver for the City of Chester filed suit in Delaware County Common Pleas Court against DELCORA premised upon the claimed reversionary interest of the City of Chester in some of DELCORA's assets. The Company intervened in that matter and filed preliminary objections. Following a hearing on the Company's preliminary objections, the Receiver for the City of Chester discontinued the case without prejudice.

- On January 26, 2023, several parties involved in the PUC case filed a joint motion for stay based on the DELCORA Complaint and referenced the City of Chester's bankruptcy filing in which the City of Chester has asserted reversionary contract interests regarding some of DELCORA's wastewater assets. On February 6, 2023, the ALJ stayed the PUC Process.

- On May 23, 2023, the United States Bankruptcy Court issued an order in the City of Chester's bankruptcy filing staying the PUC Process until relief from the stay is granted by the Bankruptcy Court. The Company appealed the Bankruptcy Court stay order to the United States District Court for the Eastern District of Pennsylvania and is awaiting the Court decision whether oral argument will be scheduled or a decision rendered based solely on the briefing.

- On June 16, 2023, the Company filed a Complaint against DELCORA in the Delaware County Court of Common Pleas requesting a declaratory judgment and injunctive relief regarding breach of the Asset Purchase Agreement in acting outside the ordinary course of business by attempting to enter into a new agreement with Philadelphia Water Department ("PWD") for the treatment of wastewater without the Company's consent. DELCORA filed an answer, new matter and counterclaim against the Company, alleging that the Company has tortiously interfered with DELCORA's contract with PWD. The Company filed preliminary objections to the counterclaim, and DELCORA filed an amended counterclaim. The Company filed preliminary objections to the amended counterclaim, and on October 9, 2023, DELCORA filed a second amended counterclaim, to which the Company filed preliminary objections. The preliminary objections remain pending before the Court.

The purchase price for this pending acquisition is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired. We plan to finance the purchase price of this acquisition with a mix of equity and debt financing, utilizing our revolving credit facility until permanent debt is secured. Closing of our acquisition of DELCORA is subject to the timing of the above-described regulatory approval process and on-going litigation.

Water and Wastewater Utility Acquisitions - Completed

In July 2023, the Company completed the following water utility asset acquisitions: Shenandoah Borough, Pennsylvania, which serves approximately 2,900 customers for $12,291; La Rue, an Ohio municipality, which serves approximately 300 customers for $2,253; and, Southern Oaks Water System, which serves approximately 800 customers in Texas for $3,321. Additionally, in July 2023, the Company completed their acquisition of a portion of the water and wastewater utility assets of the Village of Frankfort, an Illinois municipality, which serves approximately 1,500 customers for $1,424.

In June 2023, the Company acquired the wastewater utility assets of Union Rome, Ohio, which serves approximately 4,300 customers for a cash purchase price of $25,547.

In March 2023, the Company acquired the North Heidelberg Sewer Company in Berks County, Pennsylvania, which serves approximately 300 customer connections for a cash purchase price of $136.

In November 2022, the Company acquired certain water utility assets of Oak Brook, Illinois, which serve 2,037 customers for a cash purchase price of $12,500.

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On July 29, 2022, the Pennsylvania Public Utility Commission issued an order (the "PUC Order") approving the Company's acquisition of the municipal wastewater assets of East Whiteland Township, Chester County, Pennsylvania, which serves 4,018 customers (the "East Whiteland Wastewater Assets"). On August 12, 2022, the Company acquired the East Whiteland Wastewater Assets for a cash purchase price of $54,374. Subsequently on August 25, 2022, the Office of Consumer Advocate ("OCA") filed an appeal of the PUC Order to the Pennsylvania Commonwealth Court. On July 31, 2023, a decision was issued by the Pennsylvania Commonwealth Court, in which the Pennsylvania Commonwealth Court agreed with the OCA and reversed the PUC order which approved the acquisition. On September 26, 2023, the Pennsylvania Commonwealth Court denied our motion for reargument. On October 26, 2023, the Company, the Pennsylvania Public Utility Commission, and East Whiteland Township filed an appeal to the Pennsylvania Supreme Court. East Whiteland Township filed to Supplement its Petition for Allowance of Appeal on January 2, 2024. On January 16, 2024, the Company, the OCA and the PUC filed Answers to East Whiteland Township's Petition. The Company is currently waiting to see if the Supreme Court will grant allocatur. Management believes the final resolution of this matter is not expected to have a material adverse effect on the Company's financial position, results of operations, or cash flows.

In March 2022, the Company acquired the wastewater system of Lower Makefield Township, which serves 11,323 customer connections in Lower Makefield, Falls, and Middletown townships, and Yardley Borough, Bucks County, Pennsylvania, for a cash purchase price of $53,000. The purchase price allocation for these acquisitions consisted primarily of property, plant and equipment.

In August 2021, the Company acquired the water utility system assets of The Commons Water Supply, Inc., which serves 992 customers in Harris County, Texas, and the wastewater utility system assets of the Village of Bourbonnais, which serves approximately 6,500 customers in Kankakee County, Illinois. The total cash purchase prices for these utility systems were $4,000 and $32,100, respectively. The purchase price allocation for these acquisitions consisted primarily of property, plant and equipment.

The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for these utility systems acquired in 2023 are $3,290.

The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2022 were $18,039 in 2023 and $11,393 in 2022.

The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2021 were $7,930 in 2023, $7,421 in 2022, and $2,462 in 2021.

The pro forma effect of the utility systems acquired is not material either individually or collectively to the Company's results of operations.

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Note 3 – *Assets Held for Sale and Dispositions*

In December 2022, the Company entered into a definitive agreement with Hope Gas, Inc. for the sale of its regulated natural gas utility assets in West Virginia, which served approximately 13,000 customers or about 2% of the Company's regulated natural gas customers ("Peoples Gas West Virginia"). The Peoples Gas West Virginia sale closed on October 1, 2023 for an estimated purchase price of $39,965, subject to working capital and other adjustments. The sale of Peoples Gas West Virginia had no major effect on the Company's operations and did not meet the requirements to be classified as discontinued operations. The assets and liabilities of Peoples Gas West Virginia were reported as held for sale in the accompanying consolidated balance sheet, and consist of the following as of December 31, 2022.

Inventory - gas stored	$	2,807
Other current assets		3,284
Regulatory assets		5,076
Current assets held for sale	$	11,167
Property, plant and equipment, net		30,267
Regulatory assets and other		1,857
Non-current assets held for sale	$	32,124
Current liabilities related to assets held for sale	$	3,263
Regulatory liabilities		649
Other long-term liabilities		325
Non-current liabilities related to assets held for sale	$	974

In October 2023, the Company entered into an agreement to sell its interest in three non-utility local microgrid and distributed energy projects for $165,000. As of December 31, 2023, balances associated with these projects are included in prepayments and other current assets in the consolidated balance sheets totaling $63,182. As of December 31, 2022, balances associated with these projects are included in deferred charges and other assets, and prepayments and other current assets, amounting to $63,204 and $2,517, respectively. The sale was subject to various closing conditions and regulatory approvals and was completed in January 2024. The sale of these projects had no major effect on the Company's operations and did not meet the requirements to be classified as discontinued operations.

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Note 4 – *Property, Plant and Equipment*

	December 31,		Approximate Range of Useful Lives	Weighted Average Useful Life
	2023	2022		
Regulated Water segment:				
Utility plant and equipment				
Mains and accessories	$ 4,523,718	$ 4,213,197	26-90 years	73 years
Services, hydrants, treatment plants and reservoirs	3,140,497	2,910,496	5-89 years	56 years
Operations structures and water tanks	413,147	388,596	15-80 years	48 years
Miscellaneous pumping and purification equipment	1,237,967	1,131,975	7-76 years	41 years
Meters, transportation and other operating equipment	1,104,643	1,045,053	5-84 years	28 years
Land and other non-depreciable assets	143,752	133,618	-	-
Utility plant and equipment - regulated water segment	10,563,724	9,822,935	-	-
Utility construction work in progress	315,973	366,777	-	-
Net utility plant acquisition adjustment	(6,444)	(6,076)	10-53 years	22 years
Non-utility plant and equipment	20,019	20,561	17-64 years	58 years
Property, Plant and Equipment - Regulated Water segment	10,893,272	10,204,197		
Regulated Natural Gas segment:				
Natural gas transmission	429,465	398,658	5-93 years	67 years
Natural gas storage	62,157	61,639	5-85 years	44 years
Natural gas gathering and processing	147,700	144,337	5-77 years	59 years
Natural gas distribution	2,733,054	2,206,434	25-78 years	63 years
Meters, transportation and other operating equipment	613,653	568,305	5-61 years	23 years
Land and other non-depreciable assets	4,139	4,187	-	-
Utility plant and equipment - Regulated Natural Gas segment	3,990,168	3,383,560		
Utility construction work-in-progress	93,581	149,630	-	-
Property, plant and equipment - Regulated Natural Gas segment	4,083,749	3,533,190		
Total property, plant and equipment	$ 14,977,021	$ 13,737,387		

Note 5 – *Accounts Receivable*

	December 31,	
	2023	2022
Billed utility revenue	$ 199,986	$ 265,504
Other	4,887	4,801
	204,873	270,305
Less allowance for doubtful accounts	60,573	63,981
Net accounts receivable	$ 144,300	$ 206,324

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As of December 31, 2023, the Company's utility customers are located principally in the following states: 66% in Pennsylvania, 9% in Ohio, 6% in North Carolina, 5% in Texas, and 5% in Illinois. No single customer accounted for more than one percent of the Company's utility operating revenues during the years ended December 31, 2023, 2022, and 2021. The following table summarizes the changes in the Company's allowance for doubtful accounts:

	2023	2022	2021
Balance at January 1,	$ 63,981	$ 58,073	$ 40,099
Amounts charged to expense	23,209	27,631	27,336
Accounts written off	(27,759)	(22,507)	(19,731)
Recoveries of accounts written off and other (a)	1,142	784	10,369
Balance at December 31,	$ 60,573	$ 63,981	$ 58,073

(a) Recoveries of accounts written off and other in 2021 includes measurement period adjustments of $12,851 from the Peoples Gas Acquisition before the measurement period ended.

Note 6 – *Regulatory Assets and Liabilities*

Regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. Except for income taxes and utility plant retirement costs, regulatory assets and regulatory liabilities are excluded from the Company's rate base and do not earn a return. The components of regulatory assets and regulatory liabilities are as follows:

	December 31, 2023		December 31, 2022	
	Regulatory Assets	Regulatory Liabilities	Regulatory Assets	Regulatory Liabilities
Income taxes	$ 1,553,111	$ 599,088	$ 1,164,294	$ 571,110
Purchased gas costs	21,019	29,807	15,435	28,955
Utility plant retirement costs	38,148	68,815	36,440	64,212
Post-retirement benefits	80,000	153,816	51,810	142,390
Accrued vacation	1,877	-	3,231	-
Water tank painting	17,044	-	10,385	-
Fair value adjustment of long-term debt assumed in acquisition	38,482	-	49,954	-
Debt refinancing	12,674	-	13,906	-
Rate case filing expenses and other	33,617	654	16,570	7,363
	$ 1,795,972	$ 852,180	$ 1,362,025	$ 814,030

Items giving rise to deferred state income taxes, as well as a portion of deferred Federal income taxes related to specific differences between tax and book depreciation expense, are recognized in the rate setting process on a cash basis or as a reduction in current income tax expense and will be recovered as they reverse. Amounts include differences that arise between specific utility asset improvement costs capitalized for book and deducted as an expense for tax purposes. Additionally, the recording of AFUDC for equity funds results in the recognition of a regulatory asset for income taxes, which represents amounts due related to the revenue requirement. The Company records regulatory assets when a valuation allowance is recorded on deferred tax assets, associated with state NOLs that the Company does not believe are more likely than not to be realized, and are expected to be fully recovered from customers in future rates. Regulatory liabilities are refundable in future rate filings based on the difference between the amount of the income tax benefits that were incorporated into the Company's cost of service in its latest rate case as compared to the actual income tax benefits recognized.

A portion of the regulatory liability for income taxes is related to Aqua Pennsylvania's income tax accounting change for the tax benefits realized on the Company's 2012 tax return, which have not yet reduced current income tax expense due to a rate order requiring a ten year amortization period which began in 2013. Beginning in 2013, the Company amortized $38,000, annually, of its deferred income tax benefits, which reduced current income tax expense. In 2022, the

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amortization period for this regulatory liability was extended for an additional three years. A portion of the income taxes regulatory liability is also related to Peoples Natural Gas' income tax accounting change for the tax benefits expected to be realized for the periods prior to adoption on March 16, 2020. The Company recorded a regulatory liability for this catch-up adjustment in the amount of $160,655 in 2020, and it remained on the consolidated balance sheet as of December 31, 2020. In May 2021, the Company received a regulatory order directing the Company to refund the catch-up adjustment to its utility customers over a five-year period, which was initiated by the Company in August 2021. In 2022, the Company made a similar change for its Peoples Gas and Aqua New Jersey subsidiaries, resulting in the recognition of a regulatory liability for each of these subsidiaries for the tax benefits prior to the year of adoption.

The regulatory asset or liability for purchased gas costs reflects the differences between actual purchased gas costs and the levels of recovery for these costs in current rates. The unrecovered costs are recovered and the over-recovered costs are refunded in future periods, typically within a year, through quarterly and annual filings with the applicable state regulatory agency.

The regulatory asset for utility plant retirement costs, including cost of removal, represents costs already incurred that are expected to be recovered in future rates over a five year recovery period. The regulatory liability for utility plant retirement costs represents amounts recovered through rates during the life of the associated asset and before the costs are incurred.

The regulatory asset for accrued vacation represents costs that would otherwise be charged to operations and maintenance expense for vacation that is earned by employees, which is recovered as a cost of service.

The regulatory asset for post-retirement benefits, which includes pension and other post-retirement benefits, primarily reflects a regulatory asset that has been recorded for the costs that would otherwise be charged to stockholders' equity for the underfunded status of the Company's pension and other post-retirement benefit plans. The Company also has a regulatory asset related to post-retirement benefits costs that represent costs already incurred which are now being or anticipated to be recovered in rates over a period ranging from approximately 10 to 37 years. The regulatory liability for post-retirement benefits represents costs recovered in rates in excess of post-retirement benefits expense.

Expenses associated with water tank painting are deferred and amortized over a period of time as approved in the regulatory process. Water tank painting costs are generally being amortized over a period ranging from 10 to 20 years. The regulatory liability for water tank painting costs represents amounts recovered through rates and before the costs are incurred.

The Company recorded a fair value adjustment for fixed rate, long-term debt assumed in acquisitions that matures in various years ranging from 2024 to 2033. The regulatory asset or liability results from the rate setting process continuing to recognize the historical interest cost of the assumed debt.

The regulatory asset for debt refinancing represents a portion of a make whole payment of $25,237 incurred in 2019 for the Company's redemption of $313,500 of the Company's outstanding notes that had maturities ranging from 2019-2037 and interest rates ranging from 3.57-5.83%. The Company deferred a portion of the make whole payment as it represents an amount by which we expect to receive prospective rate recovery.

The regulatory asset related to rate case filing expenses and other represents the costs associated with filing for rate increases that are deferred and amortized over periods that generally range from one year to five years, and costs incurred by the Company for which it has received or expects to receive rate recovery. Other regulatory assets also include the financial impacts of customer-owned lead service line replacement costs and regulatory balancing accounts. Regulatory balancing accounts represent the difference between revenues recognized and authorized revenue requirements until they are recovered from customers, and low-income customer assistance programs.

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The regulatory asset related to the costs incurred for information technology software projects and water main cleaning and relining projects are described in Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*.

Note 7 – *Income Taxes*

Income tax benefit for the years ended December 31, is comprised of the following:

	Years Ended December 31,		
	2023	2022	2021
Current:			
Federal	$ 1,913	$ -	$ (5,132)
State	11,487	8,716	4,034
	13,400	8,716	(1,098)
Deferred:			
Federal	(103,617)	(8,258)	3,036
State	23,772	(14,787)	(11,550)
	(79,845)	(23,045)	(8,514)
Total income tax benefit	$ (66,445)	$ (14,329)	$ (9,612)

The statutory Federal tax rate is 21% for 2023, 2022, and 2021. For states with a corporate net income tax, the state corporate net income tax rates range from 2.5% to 9.99% for all years presented. The Company's effective income tax rate for 2023, 2022, and 2021 was (15.4)%, (3.2)%, and (2.3)%, respectively. The Company remains subject to examination by federal and state tax authorities for the 2020 through 2023 tax years.

The differences between income taxes expected at the federal statutory rate and the reported income tax benefit are described below:

	Years Ended December 31,		
	2023	2022	2021
Computed Federal tax expense at statutory rate	$ 90,674	$ 94,691	$ 88,620
Decrease in Federal tax expense related to the flow through benefit of repair deductions	(117,370)	(72,302)	(58,929)
Amortization of deferred benefit from repair method changes	(18,454)	(21,012)	(15,155)
State income taxes, net of Federal tax benefit	(15,115)	(3,972)	(4,132)
Amortization of excess deferred income taxes	(8,324)	(8,425)	(11,715)
Impact of acquisitions and reorganizations	-	-	(4,632)
Net change in unrecognized tax benefit	(4,796)	718	2,270
Valuation allowance for deferred tax assets	8,148	-	-
Other, net	(1,208)	(4,027)	(5,939)
Actual income tax benefit	$ (66,445)	$ (14,329)	$ (9,612)

A valuation allowance for state deferred tax assets in the amount of $10,969 is included in state income taxes, net of federal tax benefit above.

Certain prior year amounts have been reclassified for consistency with the current year presentation.

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In 2012, Aqua Pennsylvania changed its tax method of accounting for qualifying utility system repairs, which provides for a tax deduction for qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. In compliance with a rate order issued by the Pennsylvania Public Utility Commission, the tax deduction is accounted for using a flow-through method of accounting for income tax benefits, which results in a reduction in current income tax expense through the recognition of income tax benefits due to the income tax accounting method change.

In 2019, the Pennsylvania Public Utility Commission issued a rate order to Aqua Pennsylvania and commencing in 2020, the base rates were designed to include annual tax benefits for qualifying utility system improvement costs equal to a deduction of $158,865, subject to a $3,000 collar either above or below this target amount. In May 2022, Aqua Pennsylvania received a rate order that adjusted this target to $159,060 and revised the collar amount to $4,000, beginning with the 2022 fiscal year. To the extent actual tax benefits are outside this range, tax benefits will either be deferred or accrued, and settled in the next rate filing.

In March 2020 and June 2022, the Company filed applications for automatic tax accounting method changes for certain qualifying infrastructure investments at its Peoples Natural Gas and Peoples Gas Company subsidiaries, respectively. These method changes result in tax deductions for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. The Company uses the flow-through method to account for these timing differences.

For Peoples Natural Gas, the Company calculated the income tax benefits for qualifying capital expenditures made prior to the date of its acquisition on March 16, 2020 (“catch-up adjustment”) and recognized a regulatory liability of $160,655 for these income tax benefits. On May 6, 2021, the Pennsylvania Public Utility Commission approved a settlement order which stipulates, among other points, that the catch-up adjustment be provided by a surcredit to utility customers over a five-year period beginning August 2021, and the Company can continue to use flow-through accounting for the current tax repair benefit until its next base rate case. For each year in 2023 and 2022, there was a $22,848 reduction to income tax expense to reflect the benefit to Peoples Natural Gas customers through the surcredit. For Peoples Gas Company, the Company calculated the catch-up adjustment from periods prior to the 2021 tax year and recognized a regulatory liability of $13,808 for these income tax benefits.

On its 2022 tax return, both the Peoples Natural Gas and Peoples Gas Divisions filed for accounting method changes to deduct costs incurred for mandatory relocations. The Company calculated the catch-up adjustment from periods prior to the 2022 tax year and recognized a regulatory liability of $14,251 for their income tax benefits. In addition, the Peoples Natural Gas and Peoples Gas Divisions intend to file an accounting method change on its 2023 tax return to adopt the Internal Revenue Service Revenue Procedure 2023-15, a natural gas safe harbor that was issued in April 2023 to determine the amount of tax-deductible repairs. In the fourth quarter, the Company updated its calculation of the catch-up adjustment that should be returned to customers for periods prior to March 16, 2020 for the Peoples Natural Gas Division, and periods prior to the 2021 tax year for the Peoples Gas Division and deferred an additional tax benefit of $25,883 and $7,785, respectively. The Company will file an updated tax repair surcredit calculation with the Pennsylvania Public Utility Commission to determine the treatment of these tax benefits when the final calculations of the deductions have been determined.

The following table provides the changes in the Company’s unrecognized tax benefits:

	2023	2022	2021
Balance at January 1,	$ 18,217	$ 20,201	$ 19,194
Impact of current year activity	7,219	(900)	1,007
Effect of Pennsylvania tax rate change	-	(1,084)	-
Decrease for prior year tax positions	(17,538)	-	-
Balance at December 31,	$ 7,898	$ 18,217	$ 20,201

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax

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benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. From time to time, the Company may be assessed interest and penalties by taxing authorities, which would be recorded as income tax expense. During the years ended December 31, 2023, 2022, and 2021, there were expenses of $23, $118, and $409 for interest and penalties related to uncertain tax positions. As of December 31, 2023 and 2022 the Company recognized liabilities of $144 and $620, respectively, for interest and penalties related to its uncertain tax positions.

On its 2012 Federal tax return, filed in September 2013, Aqua Pennsylvania filed a change in accounting method to adopt the IRS temporary tangible property regulations. This method change allowed the Company to take a current year deduction for expenses that were previously capitalized for tax purposes. Since the filing of the 2012 tax return, the IRS has issued final regulations. While the Company maintains the belief that the deduction taken on its tax return is appropriate, the methodology for determining the deduction has not been agreed to by the taxing authorities. Provisions for uncertain tax positions were recorded to reflect the possible challenge of the Company's methodology for determining its repair deduction as required by the FASB's accounting guidance for income taxes. Should the taxing authority challenge the Company's tax treatment, and ultimately disallow a portion of the repair deduction, the Company expects Federal net operating loss carryforwards to offset any resulting liability, and state net operating loss carryforwards will offset a portion of any resulting liability.

The unrecognized tax benefits relate to the income tax accounting change, and the tax position is attributable to a temporary difference. The Company does not anticipate material changes to its unrecognized tax benefits within the next year. As a result of the regulatory treatment afforded by the income tax accounting change in Pennsylvania and despite this position being a temporary difference, as of December 31, 2023 and 2022, $6,918 and $35,267, respectively, of these tax benefits would have an impact on the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position.

In April 2023, the Internal Revenue Service issued Revenue Procedure 2023-15 which provides a safe harbor method of accounting that taxpayers may use to determine whether expenses to repair, maintain, replace, or improve natural gas transmission and distribution property must be capitalized for tax purposes. The Company evaluated the safe harbor and intends to adopt the methodology on its 2023 tax return. In the second quarter of 2023, based on the tax legislative guidance that was issued, the Company reevaluated the uncertain tax positions related to the Regulated Water Segment and ultimately released a portion of its historical income tax reserves. Concurrently, the Company deferred this tax benefit from the reserve release as a regulatory liability, as the accounting treatment is expected to be determined in the next rate case.

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The following table provides the components of net deferred tax liability:

	December 31, 2023	December 31, 2022
Deferred tax assets:		
Customers' advances for construction	$ 20,332	$ 27,009
Costs expensed for book not deducted for tax, principally accrued expenses	29,135	23,585
Post-retirement benefits	1,368	-
Tax effect of regulatory liabilities for post-retirement benefits	49,199	41,602
Tax attributes and credit carryforwards	458,001	235,838
Operating lease liabilities	11,529	13,558
Other	1,378	9,613
	570,942	351,205
Less valuation allowance	(149,486)	(38,940)
	421,456	312,265
Deferred tax liabilities:		
Utility plant, principally due to depreciation and differences in the basis of fixed assets due to variation in tax and book accounting	1,662,741	1,495,526
Deferred taxes associated with the gross-up of revenues necessary to recover, in rates, the effect of temporary differences	348,646	128,975
Post-retirement benefits	-	6,130
Operating lease right-of-use assets	10,301	12,250
Tax effect of regulatory assets for post-retirement benefits	28,092	15,150
	2,049,780	1,658,031
Net deferred tax liability	$ 1,628,324	$ 1,345,766

Certain prior year amounts have been reclassified for consistency with the current year presentation.

At December 31, 2023, the Company has cumulative Federal NOLs of $1,280,694. The Company believes the Federal NOLs are more likely than not to be recovered and require no valuation allowance. The Company's Federal NOLs will begin to expire in 2032.

At December 31, 2023, the Company has a cumulative state NOL of $2,534,987, a portion of which is offset by a valuation allowance from previous years. During the fourth quarter of 2023, the Company determined that it does not believe a portion of its Regulated natural gas segment state NOLs are more likely than not to be realized due to its continuous investments in qualifying infrastructure resulting in the recording of a valuation allowance of $1,381,943. The Company recorded a regulatory asset for the portion of the valuation allowance that is expected to be fully recovered from customers in future rates. At December 31, 2023, the Company has a cumulative state valuation allowance of $1,950,378. The state NOL began expiring in 2023.

At December 31, 2023, the Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $18,264 and $13,566, respectively, which results from the Company's presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions are $1,262,430 and $2,521,421, respectively. The Company records its unrecognized tax benefit as a component of its net deferred income tax liability.

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At December 31, 2023, the Company has a cumulative Federal charitable contribution of $48,014, of which a valuation allowance of $38,798 has been recorded as the Company determined it is more likely than not they will expire before they are utilized within the carryforward period.

At December 31, 2023, the Company has a cumulative state charitable contribution of $77,263 of which a valuation allowance of $71,354 has been recorded as the Company does not believe these state charitable contributions are more likely than not to be realized.

On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was enacted into law, which among other things, implements a 15% minimum tax on book income of certain large corporations, and a 1% excise tax on net stock repurchases after December 31, 2022. The alternative minimum tax would not be applicable in our next fiscal year because it is based on a three-year average annual adjusted financial statement income in excess of $1,000,000. We are continuing to assess the future impact of the provisions of the IRA on our consolidated financial statements. As a regulated utility, taxes have been traditionally recognized by state public utility commissions as appropriate for inclusion in establishing rates.

On July 8, 2022, Pennsylvania enacted House Bill 1342 into law, which among other things, reduces Pennsylvania's corporate income tax rate from 9.99% to 8.99% beginning January 1, 2023, and an additional 0.5% annually through 2031, when it reaches to 4.99%. For the year ended December 31, 2022, the Company evaluated the impacts of the tax rate change and recorded a reduction to our deferred tax liabilities of $244,537 with a corresponding reduction primarily to our regulatory assets.

Note 8 – *Taxes Other than Income Taxes*

The following table provides the components of taxes other than income taxes:

	Years Ended December 31,		
	2023	2022	2021
Property	$ 32,790	$ 33,703	$ 33,946
Gross receipts, excise and franchise	17,985	16,828	15,777
Payroll	21,628	21,343	21,789
Regulatory assessments	7,451	6,771	6,968
Pumping fees	6,405	7,881	5,761
Other	3,949	3,498	2,400
Total taxes other than income taxes	$ 90,208	$ 90,024	$ 86,641

Note 9 – *Commitments and Contingencies*

Commitments –

The Company maintains agreements with other water purveyors for the purchase of water to supplement its water supply, particularly during periods of peak demand. The agreements stipulate purchases of minimum quantities of water to the year 2029. The estimated annual commitments related to such purchases through 2028 are expected to average $3,397, and the aggregate of the years remaining approximates $1,081.

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The Company has entered into purchase obligations, in the ordinary course of business, that include agreements for water treatment processes at some of its wells in a small number of its divisions. The 20 year term agreement provides for the use of treatment equipment and media used in the treatment process and are subject to adjustment based on changes in the Consumer Price Index. The future contractual cash obligations related to these agreements are as follows:

2024	2025	2026	2027	2028	Thereafter
$ 1,136	$ 1,151	$ 1,176	$ 1,203	$ 1,230	$ 1,733

The Company's natural gas supply is provided by sources on the interstate pipeline system and from local western Pennsylvania gas well production. The Company has various interstate pipeline service agreements that provide for firm transportation capacity, firm storage capacity, and other services and include capacity reservation charges based upon the maximum daily and annual contract quantities set forth in the agreements. Some of these agreements have minimum volume obligations and are transacted at applicable tariff and negotiated rates to the year 2034. The estimated annual commitments related to such purchases through 2028 are expected to average $232,760, and the aggregate of the years remaining beyond 2028 approximates $1,355,659.

The purchased water, water treatment, and purchased gas expenses under these agreements were as follows:

	Years Ended December 31,		
	2023	2022	2021
Purchased water under long-term agreements	$ 6,752	$ 5,559	$ 5,867
Water treatment expense under contractual agreement	1,103	1,061	1,017
Purchased natural gas under long-term agreements	352,306	601,995	340,262

Contingencies – The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of December 31, 2023, the aggregate amount of $24,643 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. Further, Essential Utilities has insurance coverage for certain of these loss contingencies, and as of December 31, 2023, estimates that approximately $1,340 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets, net.

During a portion of 2019, the Company initiated a do not consume advisory for some of its customers in one division served by the Company's Illinois subsidiary. The do not consume advisory was lifted in 2019, and, in 2022, the water system was determined to be in compliance with the federal Lead and Copper Rule. During the third quarter of 2023, an amount was accrued for the penalty and other fees that will be paid as a result of a conditional settlement that was reached with the regulators. The settlement is the subject of court approval. In addition, on September 3, 2019, two individuals, on behalf of themselves and those similarly situated, commenced an action against the Company's Illinois subsidiary in the State court in Will County, Illinois related to this do not consume advisory. The complaint seeks class action certification, attorney's fees, and "damages, including, but not limited to, out of pocket damages, and discomfort, aggravation, and annoyance" based upon the water provided by the Company's subsidiary to a discrete service area in University Park Illinois. The complaint contains allegations of damages as a result of supplied water that exceeded the standards established by the federal Lead and Copper Rule. The complaint is in the discovery phase and class certification has not been granted. The Company has an accrual for the amount of loss asserted in the complaint that we determined to be probable and estimable of being incurred. The Company is vigorously defending against this claim. The Company submitted a claim for the expenses incurred to its insurance carrier for potential recovery of a portion of these costs and is currently in litigation with one of its carriers seeking to enforce its claims. The Company continues to assess the potential loss contingency on this matter. While the final outcome of this claim cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of this matter is not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows.

Although the results of legal proceedings cannot be predicted with certainty, other than disclosed above, there are no pending legal proceedings to which the Company or any of its subsidiaries is a party or to which any of its properties is the subject that are material or are expected to have a material effect on the Company's financial position, results of operations or cash flows.

In addition to the aforementioned loss contingencies, the Company self-insures a portion of its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,846 and $2,327 at December 31, 2023 and 2022, respectively, and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

Note 10 – *Leases*

The Company leases land, office facilities, office equipment, and vehicles for use in its operations, which are accounted for as operating leases. Leases with a term of 12 months or less are not recorded on the balance sheet; rather, lease expense is recognized over the lease term. Our leases have remaining lives of 1 to 71 years.

Some of the Company's leases can be extended on a month-to-month basis, which allow us to terminate the lease at any given month without penalty while others include options to extend the leases for up to 50 years. The renewal of a month-to-month lease is at our sole discretion.

The Company accounts for lease and non-lease components of lease arrangements separately. For calculating lease liabilities, we may deem lease terms to include options to extend or terminate the lease when it's reasonably certain that we will exercise that option. The Company's lease agreements do not contain significant residual value guarantees, restrictions or covenants.

Lease liabilities and corresponding right-of-use assets are recorded based on the present value of the lease payments over the expected lease term, including leases with variable payments that are based on a market rate or an index and net of any impairment. All other variable payments are expensed as incurred. Since the Company's lease agreements do not provide an implicit interest rate, we utilize our incremental borrowing rate to determine the discount rate used to present value the lease payments.

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On January 6, 2022, the Company entered into an amendment to an office lease that provided for the partial termination of the Company's obligations with respect to a portion of the leased premises of approximately 37,000 rentable square feet. The Company paid a termination fee of $2,812, reduced its remaining lease payments by $1,753 and recognized a loss on the partial termination of the lease of $1,801.

During the fourth quarter of 2021, the Company determined that there were impairment indicators that required the Company to review a portion of office space that was no longer used by the Company in its operations for impairment. Accordingly, the Company performed undiscounted cash flow analyses on the related right-of-use asset group and determined that such right-of-use asset was impaired. This resulted in a non-cash impairment charge of $4,695, representing the excess of the right-of-use asset over its fair value, and is included within operations and maintenance expense in the consolidated statements of operations and comprehensive income.

	Years Ended December 31,		
	2023	2022	2021
Components of lease expense were as follows:			
Operating lease cost	$ 9,307	$ 9,359	$ 9,716

	Years Ended December 31,	
	2023	2022
Supplemental cash flow information related to leases was as follows:		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 9,149	$ 9,270

	December 31,	
	2023	2022
Supplemental balance sheet information related to leases was as follows:		
Operating leases:		
Operating lease right-of-use assets	$ 37,416	$ 41,734
Other accrued liabilities	$ 7,360	9,316
Operating lease liabilities	34,425	37,666
Total operating lease liabilities	$ 41,785	$ 46,982

	December 31,	
	2023	2022
Weighted average remaining lease term:		
Operating leases	10.1 years	9.7 years
Weighted average discount rate:		
Operating leases	4.87%	3.42%

Maturities of operating lease liabilities and a reconciliation of the operating lease liabilities reported on our consolidated balance sheets as of December 31, 2023 are as follows:

	Operating Leases
2024	$ 9,037
2025	8,955
2026	7,211
2027	7,122
2028	6,811
Thereafter	13,902
Total operating lease payments	$ 53,038
Total operating lease payments	$ 53,038
Less operating lease liabilities	41,785
Present value adjustment	$ 11,253

Note 11 – *Long-term Debt and Loans Payable*

Long-term Debt – The consolidated statements of capitalization provide a summary of long-term debt as of December 31, 2023 and 2022. The supplemental indentures with respect to specific issues of the first mortgage bonds restrict the ability of Aqua Pennsylvania and other operating subsidiaries of the Company to declare dividends, in cash or property, or repurchase or otherwise acquire the stock of these companies. Loan agreements for Aqua Pennsylvania and other operating subsidiaries of the Company have restrictions on minimum net assets. As of December 31, 2023, restrictions on the net assets of the Company were $4,553,903 of the total $5,896,183 in net assets. Included in this amount were restrictions on Aqua Pennsylvania's net assets of $1,747,255 of their total net assets of $2,354,604. As of December 31, 2023, $2,393,249 of Aqua Pennsylvania's retained earnings of $2,413,249 and $335,892 of the retained earnings of $514,416 of other subsidiaries were free of these restrictions. Some supplemental indentures also prohibit Aqua Pennsylvania and some other subsidiaries of the Company from making loans to, or purchasing the stock of, the Company.

Sinking fund payments are required by the terms of specific issues of long-term debt. Excluding amounts due under the Company's revolving credit agreement, the future sinking fund payments and debt maturities of the Company's long-term debt are as follows:

Interest Rate Range	2024	2025	2026	2027	2028	Thereafter
0.00% to 0.99%	$ 309	$ 197	$ 179	$ 146	$ 146	$ 1,958
1.00% to 1.99%	748	759	769	780	791	3,691
2.00% to 2.99%	1,619	1,427	1,304	1,111	906	1,101,550
3.00% to 3.99%	51,710	1,178	740	208,797	416	2,176,091
4.00% to 4.99%	1,658	120,027	1,562	1,567	1,571	1,619,342
5.00% to 5.99%	10,611	202	202	202	3,202	828,326
6.00% to 6.99%	-	-	5,000	20,000	-	6,000
7.00% to 7.99%	-	23,000	-	5,125	-	-
8.00% to 8.99%	760	529	-	-	-	-
9.00% to 9.99%	-	-	11,800	-	-	-
Total	$ 67,415	$ 147,319	$ 21,556	$ 237,728	$ 7,032	$ 5,736,958

On January 8, 2024, the Company issued $500,000 of long-term debt (the "2024 Senior Notes"), less expenses of $4,610, due in 2034 with an interest rate of 5.375%. The Company used the net proceeds from the issuance of 2024 Senior Notes

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(1) to repay a portion of the borrowings under the Company's existing five year unsecured revolving credit facility, and (2) for general corporate purposes.

In August 2023, the Company's subsidiary, Aqua Pennsylvania, issued $225,000 in aggregate principal amount of first mortgage bonds. The bonds consisted of $175,000 of 5.48% first mortgage bonds due in 2053; and $50,000 of 5.56% first mortgage bonds due in 2061. In January 2023 and October 2022, Aqua Pennsylvania issued $75,000 and $125,000 of first mortgage bonds, due in 2043 and 2052, and with interest rates of 5.60% and 4.50%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

On May 20, 2022, the Company issued $500,000 of long-term debt (the "Senior Notes"), less expenses of $5,815, due in 2052 with an interest rate of 5.30%. The Company used the net proceeds from the issuance of Senior Notes (1) to repay $49,700 of borrowings under Aqua Pennsylvania's 364-day revolving credit facility and $410,000 of borrowings under the Company's existing five year unsecured revolving credit facility, and (2) for general corporate purposes.

The weighted average cost of long-term debt at December 31, 2023 and 2022 was 4.14% and 3.94%, respectively. The weighted average cost of fixed rate long-term debt at December 31, 2023 and 2022 was 3.86% and 3.78%, respectively.

On December 14, 2022, the Company entered into a five year $1,000,000 unsecured revolving credit facility, which replaced the Company's prior five year $1,000,000 unsecured revolving credit facility. The Company's new unsecured revolving credit facility was used to repay all indebtedness and fees under our prior unsecured revolving credit facility, and for other general corporate purposes. The facility includes a $100,000 sublimit for daily demand loan. Funds borrowed under this facility are classified as long-term debt and are used to provide working capital as well as support for letters of credit for insurance policies and other financing arrangements. As of December 31, 2023, the Company has the following sublimits and available capacity under the credit facility: $100,000 letter of credit sublimit, $83,162 of letters of credit available capacity, $0 borrowed under the swing-line commitment, $263,162 was available for borrowing and $720,000 of funds borrowed under the agreement. Interest under the facility is equal to either (i) Term simple secured overnight financing rate (SOFR), plus applicable margin; or (ii) an Alternate Base Rate (which is based at the highest of the (a) New York Federal Reserve Bank rate, plus 0.5%, (b) the prime rate, and, (c) the daily SOFR, plus 1.0%,) plus applicable margin. The applicable margin for an Alternate Base Rate loan will be up to 0.5% and for a SOFR loan will be up to 1.5%, in each case depending on the debt ratings in effect as of such date. The Company may elect either the Term SOFR or the Alternate Base Rate at the time of the drawdown, and loans may be converted from one rate to another at any time, subject or certain conditions. A facility fee is charged on the total commitment amount of the agreement. Under these facilities the average cost of borrowings was 6.30% and 3.11%, and the average borrowing was $537,983 and $297,021, during 2023 and 2022, respectively.

The Company is obligated to comply with covenants under some of its loan and debt agreements. These covenants contain a number of restrictive financial covenants, which among other things limit, subject to specific exceptions, the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2023, the Company was in compliance with its debt covenants under its loan and debt agreements. Failure to comply with the Company's debt covenants could result in an event of default, which could result in the Company being required to repay or finance its borrowings before their due date, possibly limiting the Company's future borrowings, and increasing its borrowing costs.

Loans Payable – On June 29, 2023, Aqua Pennsylvania and Peoples Natural Gas Companies amended the terms of their respective $100,000 and $300,000, 364-day revolving credit agreements, as follows: (1) extended the maturity dates to June 27, 2024; and (2) updated the adjustment on the Bloomberg Short-Term Bank Yield Index (BSBY) Rate. The funds borrowed under these agreements are classified as loans payable and are used to provide working capital.

As of December 31, 2023 and 2022, funds borrowed under the Aqua Pennsylvania revolving credit agreement were $23,123 and $20,000, respectively. Interest under this facility is based, at the borrower's option, on the prime rate, an adjusted overnight bank funding rate, or an adjusted Bloomberg Short-Term Bank Yield Index (BSBY) floating rate. This agreement restricts short-term borrowings of Aqua Pennsylvania. A commitment fee of 0.05% is charged on the total

commitment amount of Aqua Pennsylvania's revolving credit agreement. The average cost of borrowing under the facility was 5.36% and 2.40%, and the average borrowing was $19,275 and $31,555, during 2023 and 2022, respectively. The maximum amount outstanding at the end of any one month was $54,472 and $55,000 in 2023 and 2022, respectively.

As of December 31, 2023 and 2022, funds borrowed under the Peoples Natural Gas Companies revolving credit agreement were $137,000 and $208,500, respectively. Interest under this facility is based, at the borrower' option, at the prime rate, an adjusted overnight bank funding rate, or an adjusted BSBY floating rate. A commitment fee of 0.08% is charged on the total commitment amount of Peoples' revolving credit agreement. The average cost of borrowing under the facility was 5.97% and 2.30%, and the average borrowing was $78,952 and $97,458, during 2023 and 2022, respectively. The maximum amount outstanding at the end of any one month was $161,500 and $234,000 in 2023 and 2022, respectively.

At December 31, 2023 and 2022, the Company had other combined short-term lines of credit of $35,500. Funds borrowed under these lines are classified as loans payable and are used to provide working capital. As of December 31, 2023 and 2022, funds borrowed under the short-term lines of credit were $0. The average borrowing under the lines was $0 and $0 during 2023 and 2022, respectively. The maximum amount outstanding at the end of any one month was $0 and $0 in 2023 and 2022, respectively. Interest under the lines is based at the Company's option, depending on the line, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. The average cost of borrowings under all lines during 2023 and 2022 was 0% and 0%, respectively.

Interest Income and Expense– Interest income of $3,401, $3,675, and $2,384 was recognized for the years ended December 31, 2023, 2022, and 2021, respectively. Interest expense was $283,362, $238,116, and $207,709 in 2023, 2022, and 2021, including amounts capitalized for borrowed funds of $5,241, $6,047, and $4,510, respectively.

Note 12 – *Fair Value of Financial Instruments*

Financial instruments are recorded at carrying value in the financial statements and approximate fair value, with the exception of long-term debt, as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of loans payable is determined based on its carrying amount and utilizing Level 1 methods and assumptions. As of December 31, 2023 and 2022, the carrying amount of the Company's loans payable was $160,123 and $228,500, respectively, which equates to their estimated fair value. The fair value of cash and cash equivalents is determined based on Level 1 methods and assumptions. As of December 31, 2023 and 2022, the carrying amounts of the Company's cash and cash equivalents were $4,612 and $11,398, respectively, which equates to their fair value. The Company's assets underlying the deferred compensation and non-qualified pension plans are determined by the fair value of mutual funds, which are based on quoted market prices from active markets utilizing Level 1 methods and assumptions. As of December 31, 2023 and 2022, the carrying amount of these securities was $26,442 and $24,962, respectively, which equates to their fair value, and is reported in the consolidated balance sheet in deferred charges and other assets.

Unrealized gains and losses on equity securities held in conjunction with our non-qualified pension plan is as follows:

	Years ended December 31,		
	2023	2022	2021
Net gain (loss) recognized during the period on equity securities	$ 582	$ (895)	$ 607
Less: net gain (loss) recognized during the period on equity securities sold during the period	-	-	-
Unrealized gain (loss) recognized during the reporting period on equity securities still held at the reporting date	$ 582	$ (895)	$ 607

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The net gain (loss) recognized on equity securities is presented on the consolidated statements of operations and comprehensive income on the line item "Other."

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

	December 31,	
	2023	2022
Carrying amount	$ 6,938,009	$ 6,617,395
Estimated fair value	5,980,722	5,528,131

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $128,755 and $114,732 at December 31, 2023 and 2022, respectively. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels and future rates. Portions of these non-interest bearing instruments are payable annually through 2033 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

Note 13 – *Stockholders' Equity*

At December 31, 2023, the Company had 600,000,000 shares of common stock authorized; par value $0.50. Shares outstanding and treasury shares held were as follows:

	December 31,		
	2023	2022	2021
Shares outstanding	273,296,037	263,737,084	252,867,623
Treasury shares	3,299,191	3,236,237	3,234,765

At-the-Market Offering

On October 14, 2022, the Company entered into at-the market sales agreements ("ATM") with third-party sales agents, under which the Company may offer and sell shares of its common stock, from time to time, at its option, having an aggregate gross offering price of up to $500,000 pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-255235). The Company intends to use the net proceeds from the sales of shares through the ATM for working capital, capital expenditures, water and wastewater utility acquisitions, and repaying outstanding indebtedness. As of December 31, 2022, the Company issued 1,321,994 shares of common stock under the ATM for proceeds of $63,040, net of expenses. During the year ended December 31, 2023, the Company sold 8,938,839 shares of common stock, in exchange for net proceeds of $322,983, under the ATM. As of December 31, 2023, approximately $110,000 remained available for sale under the ATM.

Forward Equity Sale

In August 2020, the Company entered into a forward equity sale agreement for 6,700,000 shares of common stock with a third party (the "forward purchaser"). In connection with the forward equity sale agreement, the forward purchaser borrowed an equal number of shares of the Company's common stock from stock lenders and sold the borrowed shares to the public. The Company did not receive any proceeds from the sale of its common stock by the forward purchaser until settlement of the shares underlying the forward equity sale agreement. The actual proceeds to be received by the Company would have varied depending upon the settlement date, the number of shares designated for settlement on that settlement date and the method of settlement. The forward equity sale agreement was accounted for as an equity

instrument and was recorded at a fair value of $0 at inception. The fair value was not adjusted as the Company continued to meet the accounting requirements for equity instruments.

On August 9, 2021, the Company completely settled forward equity sale agreements by physical share settlement. The Company issued 6,700,000 shares and received cash proceeds of $299,739 at a forward price of $44.74 per share. Pursuant to the agreement, the forward price was computed based upon the initial forward price of $46.00 per share, adjusted for a floating interest rate factor equal to a specified daily rate less a spread and scheduled dividends during the term of the agreement. The Company used the proceeds received upon settlement of the forward equity sale agreement to fund general corporate purposes, including for water and wastewater utility acquisitions, working capital and capital expenditures. There are no remaining shares subject to the forward equity sale agreement.

Common Stock / Tangible Equity Unit Issuances

On April 23, 2019, the Company issued $690,000, less expenses of $16,358, of its tangible equity units (the "Units"), with a stated amount of $50 per unit. This issuance was part of the financing of the Peoples Gas Acquisition. The Company recorded the issuance of the purchase contract portion of the Units as additional paid-in-capital of $570,919, less allocable issuance costs of $13,530, in our financial statements. The Company recorded the amortizing notes portion of the Units of $119,081 as long-term debt and recorded allocable issuance costs of $2,828 as debt issuance costs.

Each Unit consisted of a prepaid stock purchase contract and an amortizing note, each issued by the Company. The amortizing notes had an initial principal amount of $8.62909, or $119,081 in aggregate, and yielded interest at a rate of 3.00% per year, and paid equal quarterly cash installments of $0.75000 per amortizing note (except for the July 30, 2019 installment payment, which was $0.80833 per amortizing note), that constituted a payment of interest and a partial repayment of principal. This cash payment in the aggregate was equivalent to 6.00% per year with respect to each $50 stated amount of the Units. The amortizing notes represented unsecured senior obligations of the Company.

Certain holders of the tangible equity units had early settled their prepaid stock purchase contracts prior to the due date, and, in exchange, the Company issued shares of its common stock. During 2022, 981,919 stock purchase contracts were early settled by the holders of the contracts prior to the mandatory settlement date, resulting in the issuance of 1,166,107 shares of the Company's common stock. On May 2, 2022, the remaining 6,621,315 stock purchase contracts were each mandatorily settled for 1.18758 shares of the Company's common stock, and in the aggregate the Company issued 7,863,354 shares of its common stock. Additionally, the final quarterly installment payment was made, which resulted in the complete pay-off of the amortizing notes.

At December 31, 2023, the Company had 1,770,819 shares of authorized but unissued Series Preferred Stock, $1.00 par value.

In April 2021, the Company filed a universal shelf registration, through a filing with the Securities and Exchange Commission ("SEC"), to allow for the potential future offer and sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities and other securities specified therein at indeterminate prices.

The Company has an acquisition shelf registration statement on file with the SEC which permits the offering, from time to time, of an aggregate of $500,000 in shares of common stock and shares of preferred stock in connection with acquisitions. The balance remaining available for use under the acquisition shelf registration as of December 31, 2023 is $487,155.

The form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement will be determined at the time of issuance.

The Company has a Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") that allows reinvested dividends to be used to purchase shares of common stock at a five percent discount from the current market value. Under the direct stock purchase program, shares are issued throughout the year. The shares issued under the Plan are either shares purchased by the Company's transfer agent in the open-market or original issue shares. In 2023, 2022 and 2021, the Company sold 430,487, 368,278and 374,824 original issue shares of common stock through the dividend reinvestment portion of the Plan, for net proceeds of $16,005, $16,619 and $16,799, respectively.

The Company recorded a regulatory asset for its underfunded status of its pension and other post-retirement benefit plans that would otherwise be charged to other comprehensive income, as it anticipates recovery of its costs through customer rates.

Note 14 – *Net Income per Common Share and Equity per Common Share*

Basic net income per share is based on the weighted average number of common shares outstanding and the weighted average minimum number of shares issued upon settlement of the stock purchase contracts issued under the tangible equity units. Diluted net income per share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation and shares issuable under the forward equity sale agreement (from the date the Company entered into the forward equity sale agreement to the settlement date) are included in the computation of diluted net income per common share. The dilutive effect of stock-based compensation and shares issuable under the forward equity sale agreement are calculated by using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation and settlement of the forward equity sale agreement. The treasury stock method assumes that the proceeds from stock-based compensation and settlement of the forward equity sale agreement are used to purchase the Company's common stock at the average market price during the period. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per share:

	Years ended December 31,		
	2023	2022	2021
Average common shares outstanding during the period for basic computation	267,171	262,246	257,487
Effect of dilutive securities:			
Forward equity sale agreement	-	-	189
Employee stock-based compensation	488	622	504
Average common shares outstanding during the period for diluted computation	267,659	262,868	258,180

The number of outstanding employee stock options that were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive was 148,725 and 77,506 for the year ended December 31, 2023 and 2022, respectively. For the year ended December 31, 2021 , all of the Company's employee stock options were included in the calculation of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods. Additionally, the dilutive effect of performance share units and restricted share units granted are included in the Company's calculation of diluted net income per share.

On May 2, 2022, all of the remaining stock purchase contracts under the tangible equity units were mandatorily settled. For the year ended December 31, 2022, the weighted average impact of 2,932,010 shares was included in the basic computation of the average common shares outstanding based on the number of shares that were issued upon settlement of the stock purchase contracts under the tangible equity units. For the year ended December 31, 2021, the minimum settlement amount of the stock purchase contracts under the tangible equity units of 9,041,687 shares was considered outstanding for the basic computation of the average common shares outstanding.

Equity per common share was $21.57 and $20.39 at December 31, 2023 and 2022, respectively. These amounts were computed by dividing Essential Utilities stockholders' equity by the number of shares of common stock outstanding at the end of each year.

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Note 15 – *Employee Stock and Incentive Plan*

Under the Company's Amended and Restated Equity Compensation Plan, (the "Plan") approved by the Company's shareholders on May 2, 2019, to replace the 2004 Equity Compensation Plan, stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. The Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the Plan may be issued pursuant to stock award, stock units and other stock-based awards, subject to adjustment as provided in the Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the Plan for more than 500,000 shares of common stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the Plan. Awards to employees and consultants under the Plan are made by a committee of the Board of Directors, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At December 31, 2023, 1,527,080 shares were still available for issuance under the Plan. No further grants may be made under the Company's 2004 Equity Compensation Plan.

Performance Share Units – During 2023, 2022 and 2021, the Company granted performance share units. A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three-year performance period specified in the grant, subject to exceptions through the respective vesting periods, which is generally three years. Each grantee is granted a target award of PSUs and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals.

The performance goals of the 2023, 2022 and 2021 PSU grants consisted of the following metrics:

Metric 1 – Company's total shareholder return ("TSR") compared to the TSR for a specific peer group of investor-owned utilities (a market-based condition)	38.46%
Metric 2 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition)	30.77%
Metric 3 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three-year measurement period (a performance-based condition)	30.77%

The following table provides the compensation expense and income tax benefit for PSUs:

	Years ended December 31,		
	2023	2022	2021
Stock-based compensation within operations and maintenance expense	$ 6,942	$ 7,950	$ 7,150
Income tax benefit	1,741	1,997	2,038

The following table summarizes nonvested PSU transactions for the year ended December 31, 2023:

	Number of Share Units	Weighted Average Fair Value
Nonvested share units at beginning of period	556,462	$ 42.77
Granted	162,030	45.06
Performance criteria adjustment	(1,230)	43.97
Forfeited	(17,276)	44.18
Share units issued	(168,549)	53.77
Nonvested share units at end of period	531,437	40.03

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A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions associated with the PSUs using the Monte Carlo valuation method, which assesses the probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs associated with performance-based conditions was based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The fair value of each PSU grant is amortized into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on an estimate of the final expected value of the award and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows. The following table provides the assumptions used in the pricing model for the grant, the resulting grant date fair value of PSUs, and the intrinsic value and fair value of PSUs that vested during the year:

	Years ended December 31,		
	2023	2022	2021
Expected term (years)	3.0	3.0	3.0
Risk-free interest rate	4.43%	1.75%	0.24%
Expected volatility	33.8%	31.9%	32.1%
Weighted average fair value of PSUs granted	$ 45.06	$ 42.33	$ 43.18
Intrinsic value of vested PSUs	$ 7,483	$ -	$ 6,050
Fair value of vested PSUs	$ 9,692	$ -	$ 5,321

As of December 31, 2023, $9,676 of unrecognized compensation costs related to PSUs is expected to be recognized over a weighted average period of approximately 1.8 years. The aggregate intrinsic value of PSUs as of December 31, 2023 was $19,849. The aggregate intrinsic value of PSUs is based on the number of nonvested share units and the market value of the Company's common stock as of the period end date.

Restricted Stock Units – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock and is valued based on the fair market value of the Company's stock on the date of grant. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. In some cases, the right to receive the shares is subject to specific performance goals established at the time the grant is made. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation expense and income tax benefit for RSUs:

	Years ended December 31,		
	2023	2022	2021
Stock-based compensation within operations and maintenance expense	$ 2,877	$ 2,927	$ 3,360
Income tax benefit	722	736	953

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The following table summarizes nonvested RSU transactions for the year ended December 31, 2023:

	Number of Stock Units	Weighted Average Fair Value
Nonvested stock units at beginning of period	180,306	$ 45.94
Granted	75,414	45.53
Stock units vested	(55,886)	49.01
Forfeited	(7,617)	45.33
Nonvested stock units at end of period	192,217	45.06

The following table summarizes the value of RSUs:

	Years ended December 31,		
	2023	2022	2021
Weighted average fair value of RSUs granted	$ 45.53	$ 44.74	$ 44.44
Intrinsic value of vested RSUs	2,427	3,090	2,108
Fair value of vested RSUs	2,665	2,483	1,726

As of December 31, 2023, $3,433 of unrecognized compensation costs related to RSUs is expected to be recognized over a weighted average period of approximately 1.8 years. The aggregate intrinsic value of RSUs as of December 31, 2023 was $7,179. The aggregate intrinsic value of RSUs is based on the number of nonvested stock units and the market value of the Company's common stock as of the period end date.

Stock Options – A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire ten years from the grant date. The vesting of stock options granted in 2023 and 2022 are subject to the achievement of the following performance goal: the Company achieves at least an adjusted return on equity equal to 150 basis points below the return on equity granted by the Pennsylvania Public Utility Commission during the Company's Pennsylvania subsidiary's last rate proceeding. The adjusted return on equity equals net income, excluding net income or loss from acquisitions which have not yet been incorporated into a rate application as of the last year end, divided by equity which excludes equity applicable to acquisitions which are not yet incorporated in a rate application during the award period.

The Company did not grant stock options for the year ended December 31, 2021. The fair value of each stock option is amortized into compensation expense using the graded vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides compensation expense and income tax benefit for stock options:

	Years ended December 31,		
	2023	2022	2021
Stock-based compensation within operations and maintenance expenses	$ 650	$ 451	$ 480
Income tax benefit	162	140	136

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Options under the plans were issued at the closing market price of the stock on the day of the grant. The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model, which relies on assumptions that require management's judgment. The following table provides the assumptions used in the pricing model for grants and the resulting grant date fair value of stock options granted in the period reported:

	2023	2022
Expected term (years)	5.5	5.5
Risk-free interest rate	4.03%	1.92%
Expected volatility	27.80%	26.50%
Dividend yield	2.53%	2.37%
Grant date fair value per option	$ 11.37	$ 9.34

Historical information was the principal basis for the selection of the expected term and dividend yield. The expected volatility is based on a weighted-average combination of historical and implied volatilities over a period that approximates the expected term of the option. The risk-free interest rate was selected based upon the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense.

The following table summarizes stock option transactions for the year ended December 31, 2023:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Life (years)	Aggregate Intrinsic Value
Outstanding, beginning of year	820,061	36.29		
Granted	74,632	45.39		
Forfeited	(3,258)	45.32		
Expired / Cancelled	(819)	37.09		
Exercised	(8,174)	35.13		
Outstanding at end of year	882,442	$ 37.03	5.5	$ 1,458
Exercisable at end of year	761,220	$ 35.72	5.0	$ 1,458

The intrinsic value of stock options is the amount by which the market price of the stock on a given date, such as at the end of the period or on the day of exercise, exceeded the closing market price of stock on the date of grant. The following table summarizes the intrinsic value of stock options exercised and the fair value of stock options which vested:

	Years ended December 31,		
	2023	2022	2021
Intrinsic value of options exercised	$ 64	$ 960	$ 1,709
Fair value of options vested	236	1,203	1,485

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The following table summarizes information about the options outstanding and options exercisable as of December 31, 2023:

	Options Outstanding			Options Exercisable	
	Shares	Weighted Average Remaining Life (years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Range of prices:					
$30.00 - 33.99	53,442	3.2	$ 30.47	53,442	$ 30.47
$34.00 - 34.99	89,139	4.2	34.51	89,139	34.51
$35.00 - 35.99	591,136	5.2	35.93	591,136	35.93
$36.00 and above	148,725	8.6	45.28	27,503	45.18
	882,442	5.5	$ 37.03	761,220	$ 35.72

As of December 31, 2023, there was $496 of total unrecognized compensation costs related to nonvested stock options granted under the plans. The cost is expected to be recognized over a weighted average period of approximately 1.4 years.

Restricted Stock – Restricted stock awards provide the grantee with the rights of a shareholder, including the right to receive dividends and to vote such shares, but not the right to sell or otherwise transfer the shares during the restriction period. Restricted stock awards result in compensation expense that is equal to the fair market value of the stock on the date of the grant and is amortized ratably over the restriction period. The Company expects forfeitures of restricted stock to be de minimis.

The following table provides the compensation cost and income tax benefit for stock-based compensation related to restricted stock:

	Years ended December 31,		
	2023	2022	2021
Stock-based compensation within operations and maintenance expense	$ 43	$ 50	$ 130
Income tax benefit	12	15	37

The following table summarizes restricted stock transactions for the year ended December 31, 2023:

	Number of Shares	Weighted Average Fair Value
Nonvested shares at beginning of period	1,170	$ 42.75
Granted	1,412	35.42
Vested	(1,170)	42.75
Nonvested shares at end of period	1,412	$ 35.42

Stock Awards – Stock awards represent the issuance of the Company's common stock, without restriction. Stock awards are granted to the Company's non-employee directors. The issuance of stock awards results in compensation expense which is equal to the fair market value of the stock on the grant date, and is expensed immediately upon grant. The following table provides compensation cost and income tax benefit for stock-based compensation related to stock awards:

	Years ended December 31,		
	2023	2022	2021
Stock-based compensation within operations and maintenance expense	$ 810	$ 715	$ 700
Income tax benefit	228	207	202

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The following table summarizes the value of stock awards:

	Years ended December 31,		
	2023	2022	2021
Intrinsic and fair value of stock awards vested	$ 810	$ 715	$ 700
Weighted average fair value of stock awards granted	41.58	46.44	47.46

The following table summarizes stock award transactions for year ended December 31, 2023:

	Number of Stock Awards	Weighted Average Fair Value
Nonvested stock awards at beginning of period	-	$ -
Granted	19,488	41.58
Vested	(19,488)	41.58
Nonvested stock awards at end of period	-	-

Note 16 – *Pension Plans and Other Post-retirement Benefits*

The Company maintains a qualified, defined benefit pension plan that covers its full-time employees who were hired prior to the date their respective pension plan was closed to new participants. Retirement benefits under the plan are generally based on the employee's total years of service and compensation during the last five years of employment. The Company's policy is to fund the plan annually at a level which is deductible for income tax purposes and which provides assets sufficient to meet its pension obligations over time. To offset some limitations imposed by the Internal Revenue Code with respect to payments under qualified plans, the Company has a non-qualified Supplemental Pension Benefit Plan for Salaried Employees in order to prevent some employees from being penalized by these limitations, and to provide certain retirement benefits based on employee's years of service and compensation. The net pension costs and obligations of the qualified and non-qualified plans are included in the tables which follow. Employees hired after their respective pension plan was closed, may participate in a defined contribution plan that provides a Company matching contribution on amounts contributed by participants and an annual profit-sharing contribution based upon a percentage of the eligible participants' compensation.

The Company's qualified defined benefit pension plan has a permanent lump sum option to the form of benefit payments offered to participants upon retirement or termination. The plan paid $30,347 and $17,757 to participants who elected this option during 2023 and 2022, respectively. During 2023, we made lump-sum pension benefit distributions exceeding the cumulative amount of service and interest cost components of the net periodic pension cost for the year, which is the settlement accounting threshold. The settlement loss of $5,173 was recorded as a regulatory asset, as it is probable of recovery in future rates, and will be amortized into pension benefit costs. A settlement loss is the recognition of unrecognized pension benefit costs that would have been incurred in subsequent periods.

In addition to providing pension benefits, the Company offers post-retirement benefits other than pensions to employees retiring with a minimum level of service and hired before their respective plan closed to new participants. These benefits include continuation of medical and prescription drug benefits, or a cash contribution toward such benefits, for eligible retirees and life insurance benefits for eligible retirees. The Company funds these benefits through various trust accounts. The benefits of retired officers and other eligible retirees are paid by the Company and not from plan assets due to limitations imposed by the Internal Revenue Code.

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The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid in the years indicated:

	Pension Benefits	Other Post-retirement Benefits
Years:		
2024	$ 26,611	$ 5,287
2025	27,306	5,546
2026	27,098	5,819
2027	28,755	6,086
2028	27,446	6,272
2029-2033	124,461	32,778

The changes in the benefit obligation and fair value of plan assets, the funded status of the plans and the assumptions used in the measurement of the company's benefit obligation are as follows:

	Pension Benefits		Other Post-retirement Benefits	
	2023	2022	2023	2022
Change in benefit obligation:				
Benefit obligation at January 1,	$ 324,690	$ 452,947	$ 83,501	$ 114,651
Service cost	1,507	2,587	1,347	1,911
Interest cost	16,007	13,806	4,476	3,369
Actuarial loss/(gain)	20,418	(105,107)	5,008	(31,995)
Plan participants' contributions	-	-	106	145
Benefits paid	(18,577)	(19,339)	(2,936)	(4,580)
Plan amendments	-	2,121	-	-
Participants' directed transfer of benefit to other plans	-	(4,568)	-	-
Settlements	(30,347)	(17,757)	-	-
Benefit obligation at December 31,	313,698	324,690	91,502	83,501
Change in plan assets:				
Fair value of plan assets at January 1,	333,176	433,121	85,994	107,308
Actual return on plan assets	7,648	(83,297)	12,060	(19,589)
Employer contributions	20,343	20,390	-	1,636
Participants' contributions	-	-	106	145
Benefits paid	(18,517)	(19,281)	(3,155)	(3,506)
Settlements	(30,347)	(17,757)	-	-
Fair value of plan assets at December 31,	312,303	333,176	95,005	85,994
Funded status of plan:				
Net asset / (liability) recognized at December 31,	$ (1,395)	$ 8,486	$ 3,503	$ 2,493

The following table provides the net liability recognized on the consolidated balance sheets at December 31:

	Pension Benefits		Other Post-retirement Benefits	
	2023	2022	2023	2022
Non-current asset	$ 16,325	$ 24,389	$ 26,700	$ 19,438
Current liability	(1,334)	(761)	(733)	(843)
Noncurrent liability	(16,386)	(15,142)	(22,464)	(16,102)
Net asset / (liability) recognized	$ (1,395)	$ 8,486	$ 3,503	$ 2,493

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The following table provides selected information about plans with accumulated benefit obligation and projected benefit obligation in excess of plan assets:

	December 31, 2023		December 31, 2022	
	Pension Benefits	Other Post-retirement Benefits	Pension Benefits	Other Post-retirement Benefits
Selected information for plans with projected benefit obligation in excess of plan assets:				
Projected benefit obligation	$ 17,720	$ N/A	$ 16,041	$ N/A
Fair value of plan assets	-	N/A	-	N/A
Selected information for plans with accumulated benefit obligation in excess of plan assets:				
Accumulated benefit obligation	14,843	35,154	12,126	29,009
Fair value of plan assets	-	11,957	-	12,064

The following table provides the components of net periodic benefit costs for the years ended December 31:

	Pension Benefits			Other Post-retirement Benefits		
	2023	2022	2021	2023	2022	2021
Service cost	$ 1,507	$ 2,587	$ 3,503	$ 1,347	$ 1,911	$ 2,793
Interest cost	16,007	13,806	13,018	4,476	3,369	3,358
Expected return on plan assets	(22,223)	(22,004)	(23,165)	(4,372)	(4,502)	(4,155)
Amortization of prior service cost (credit)	684	536	559	-	-	(432)
Amortization of actuarial loss (gain)	2,962	2,043	2,907	(1,317)	(1,336)	219
Net periodic benefit cost/(credit)	$ (1,063)	$ (3,032)	$ (3,178)	$ 134	$ (558)	$ 1,783

The Company records the underfunded/overfunded status of its pension and other post-retirement benefit plans on its consolidated balance sheets and records a regulatory asset/liability for these costs that would otherwise be charged to stockholders' equity, as the Company anticipates recoverability of the costs through customer rates to be probable. Changes in the plans' funded status will affect the assets and liabilities recorded on the balance sheet. Due to the Company's regulatory treatment, the recognition of the funded status is recorded as a regulatory asset pursuant to the FASB's accounting guidance for regulated operations.

The following table provides the amounts recognized in regulatory assets and regulatory liabilities that have not been recognized as components of net periodic benefit cost as of December 31:

	Pension Benefits		Other Post-retirement Benefits	
	2023	2022	2023	2022
Net actuarial loss (gain)	$ 84,030	$ 56,737	$ (21,257)	$ (19,894)
Prior service cost (credit)	1,866	2,550	-	-
Total recognized in regulatory assets	$ 85,896	$ 59,287	$ (21,257)	$ (19,894)

Accounting for pensions and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from the Company's actuarial consultant who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefit expense that the Company recognizes.

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The significant assumptions related to the Company's benefit obligations are as follows:

	Pension Benefits		Other Post-retirement Benefits	
	2023	2022	2023	2022
Weighted Average Assumptions Used to Determine Benefit Obligations as of December 31,				
Discount rate	5.17%	5.51%	5.09%	5.45%
Rate of compensation increase	3.0-4.0%	3.0-4.0%	n/a	n/a
Assumed Health Care Cost Trend Rates Used to Determine Benefit Obligations as of December 31,				
Health care cost trend rate	n/a	n/a	6.25%	6.50%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	n/a	n/a	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	n/a	n/a	2029	2029

n/a – Assumption is not applicable.

The significant assumptions related to the Company's net periodic benefit costs are as follows:

	Pension Benefits			Other Post-retirement Benefits		
	2023	2022	2021	2023	2022	2021
Weighted Average Assumptions Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Discount rate *	5.51%	2.91%	2.57%	5.45%	2.96%	2.68%
Expected return on plan assets	6.80%	5.40%	5.60%	4.28%-6.8%	3.4%-5.4%	5.60%
Rate of compensation increase	3.0-4.0%	3.0-4.0%	3.0-4.0%	n/a	n/a	n/a
Assumed Health Care Cost Trend Rates Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Health care cost trend rate	n/a	n/a	n/a	6.50%	6.25%	6.3%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	n/a	n/a	n/a	5.0%	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	n/a	n/a	n/a	2029	2027	2025

n/a – Assumption is not applicable.

** In 2023 and 2022, the Company remeasured its qualified pension plan assets and liabilities in accordance with settlement accounting rules. The discount rate used for the remeasurement and for the calculation of the net periodic benefit cost for the remainder of the year in 2023 and 2022 was 5.20% and 5.58%, respectively.*

The Company's discount rate assumption, which is utilized to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high-quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the plan's benefit payments. The Company's pension expense and liability (benefit obligations) increases as the discount rate is reduced.

The Company's expected return on plan assets is determined by evaluating the asset class return expectations with its advisors as well as actual, long-term, historical results of our asset returns. The Company's market related value of plan assets is equal to the fair value of the plan's assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets which is a component of post-retirement benefits expense. The Company's pension expense

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increases as the expected return on plan assets decreases. For 2023, the Company used a 6.8% expected return on plan assets assumption. The Company believes its actual long-term asset allocation on average will approximate the targeted allocation. The Company's investment strategy is to earn a reasonable rate of return while maintaining risk at acceptable levels. Risk is managed through fixed income investments to manage interest rate exposures that impact the valuation of liabilities and through the diversification of investments across and within various asset categories. Over time, as the plan's funded status increases, the target allocation of return-seeking assets (e.g., equities and other instruments with a similar risk profile) may decline and the target allocation of liability-hedging assets (e.g., fixed income and other instruments with a similar risk profile) may increase. Investment returns are compared to a total plan benchmark constructed by applying the plan's asset allocation target weightings to passive index returns representative of the respective asset classes in which the plan invests. The Retirement and Employee Benefits Committee meets quarterly to review plan investments and management monitors investment performance quarterly through a performance report prepared by an external consulting firm.

The target allocation by asset class as of December 31, 2023, along with the actual allocation of the Company's pension plan assets, are as follows:

		Percentage of Plan Assets at December 31,	
	Target Allocation	2023	2022
Return seeking assets	20 to 40%	38%	56%
Liability hedging assets	30 to 70%	62%	44%
Total	100%	100%	100%

The fair value of the Company's pension plans' assets at December 31, 2023 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	$ 14,115	$ -	$ -	$ -	$ 14,115
Return seeking assets:					
Global equities	-	-	-	9,226	9,226
Hedge / diversifying strategies	-	-	-	57,608	57,608
Credit	-	-	-	37,798	37,798
Liability hedging assets	-	-	-	186,317	186,317
Cash and cash equivalents	7,239	-	-	-	7,239
Total pension assets	$ 21,354	$ -	$ -	$ 290,949	$ 312,303

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's pension plans' assets at December 31, 2022 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	$ 18,037	$ -	$ -	$ -	$ 18,037
Return seeking assets:					
Global equities	-	-	-	15,163	15,163
Hedge / diversifying strategies	-	-	-	102,038	102,038
Credit	-	-	-	52,048	52,048
Liability hedging assets	-	-	-	114,220	114,220
Cash and cash equivalents	31,670	-	-	-	31,670
Total pension assets	$ 49,707	$ -	$ -	$ 283,469	$ 333,176

Equity securities include our common stock in the amounts of $14,115 or 4.5% and $18,037 or 5.4% of total pension plans' assets as of December 31, 2023 and 2022, respectively.

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The target allocation by asset class as of December 31, 2023, and actual asset allocation of the Company's other post-retirement benefit plans, are as follows:

		Percentage of Plan Assets at December 31,	
	Target Allocation	2023	2022
Return seeking assets	50 to 70%	68%	62%
Liability hedging assets	30 to 50%	32%	38%
Total	100%	100%	100%

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2023 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Return seeking assets:					
Global equities	$ 34,209	$ -	$ -	$ 19,890	$ 54,099
Real estate securities	7,041	-	-	3,653	10,694
Liability hedging assets	16,949	-	-	9,473	26,422
Cash and cash equivalents	3,790	-	-	-	3,790
Total other post-retirement assets	$ 61,989	$ -	$ -	$ 33,016	$ 95,005

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2022 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Return seeking assets:					
Global equities	$ 27,258	$ -	$ -	$ 16,024	$ 43,282
Real estate securities	6,386	-	-	3,311	9,697
Liability hedging assets	15,131	-	-	9,159	24,290
Cash and cash equivalents	8,725	-	-	-	8,725
Total other post-retirement assets	$ 57,500	$ -	$ -	$ 28,494	$ 85,994

Valuation Techniques Used to Determine Fair Value

- *Common Stocks* - Investments in common stocks are valued using unadjusted quoted prices obtained from active markets.
- *Return Seeking Assets* – Investments in return seeking assets consists of the following:
  - Global equities, which consist of common and preferred shares of stock, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or commingled fund vehicles, consisting of such securities valued using NAV, which are not classified within the fair value hierarchy.
  - Real estate securities, which consist of securities, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or for real estate commingle fund vehicles that are not publicly quoted, the fund administrators value the funds using the NAV per fund share,

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derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
    - Hedge / diversifying strategies, which consist of a multi-manager fund vehicle having underlying exposures that collectively seek to provide low correlation of return to equity and fixed income markets, thereby offering diversification. As a multi-manager fund investment, NAV is derived from underlying manager NAVs, which are derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
    - Credit, which consist of certain opportunistic, return-oriented credits which primarily include below investment grade bonds (i.e. high yield bonds), bank loans, and securitized debt. Credits are valued using the NAV per fund share, derived from either quoted prices in active markets of the underlying securities, or less active markets, or quotes of similar assets, and are not classified within the fair value hierarchy.
- *Liability Hedging Assets* – Investments in liability hedging assets consist of funds investing in high-quality fixed income securities (i.e. U.S. Treasury securities and government bonds), and for funds for which market quotations are readily available, are valued at the last reported closing price on the primary market or exchange on which they are traded. Funds for which market quotations are not readily available, are valued using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
- *Cash and Cash Equivalents* – Investments in cash and cash equivalents are comprised of both uninvested cash and money market funds. The uninvested cash is valued based on its carrying value, and the money market funds are valued utilizing the net asset value per unit obtained from published market prices.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and the Company's funding policy, during 2024 our pension contribution is expected to be $9,393.

The Company has a 401(k) savings plan, which is a defined contribution plan and covers substantially all employees. The Company makes matching contributions that are based on a percentage of an employee's contribution, subject to specific limitations, as well as, non-discretionary contributions based on eligible hourly wages for certain union employees, discretionary year-end contributions based on an employee's eligible compensation, and employer profit sharing contributions. Participants may diversify their Company matching account balances into other investments offered under the 401(k) savings plan. The Company's contributions, which are recorded as compensation expense, were $23,519, $21,758, and $19,569, for the years ended December 31, 2023, 2022, and 2021, respectively.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Note 17 –*Rate Activity*

On January 19, 2024, Aqua New Jersey filed an application with the New Jersey Board of Public Utilities designed to increase water rates by $8,328 or 17.3% on an annual basis. The Company anticipates a final order to be issued by August 2024.

On January 2, 2024, Aqua Illinois filed an application with the Illinois Commerce Commission designed to increase water and wastewater rates by $19,196 or 18.9% on an annual basis. The Company anticipates a final order to be issued by December 2024.

On December 29, 2023, Peoples Natural Gas filed an application with the Pennsylvania Public Utility Commission designed to increase natural gas rates by $156,024 or 18.7% on an annual basis. The Company anticipates a final order to be issued by September 2024.

On December 13, 2023, the Company's regulated water and wastewater utility operating divisions in Ohio received an order from the Public Utilities Commission of Ohio which will increase operating revenues by $4,850 annually. New rates for water and sewer service went into effect on December 13, 2023.

On September 28, 2023, the Company's regulated water and wastewater operating subsidiary in Texas, Aqua Texas, received a final order from the Public Utility Commission of Texas approving infrastructure rehabilitation surcharges designed to increase revenues by $8,388 annually. The rates authorized on March 28, 2023 and implemented on an interim basis effective April 1, 2023 did not change with the final order.

On July 27, 2023, the Company's regulated water and wastewater operating subsidiary in Virginia, Aqua Virginia, filed an application with the State Corporation Commission designed to increase revenues by $6,911 or 29.5% on an annual basis.

On June 5, 2023, the Company's regulated water and wastewater operating subsidiary in North Carolina, Aqua North Carolina, received an order from the North Carolina Utilities Commission designed to increase rates by $14,001 in the first year of new rates being implemented, then by an additional $3,743 and $4,130 in the second and third years, respectively. In February 2023, the Company had implemented interim rates, based on an estimate of the final outcome of the order, and no refunds or additional billings are required for the difference between interim and final approved rates.

On September 21, 2022, the Company's regulated water and wastewater utility operating divisions in Ohio received an order from the Public Utilities Commission of Ohio which increased operating revenues by $5,483 annually. New rates for water and sewer service went into effect on September 21, 2022.

On May 16, 2022, the Company's regulated water and wastewater operating subsidiary in Pennsylvania, Aqua Pennsylvania, received an order from the Pennsylvania Public Utility Commission that allowed base rate increases that would increase total annual operating revenues by $69,251. New rates went into effect on May 19, 2022. At the time the rate order was received, the rates in effect also included $35,470 in Distribution System Improvement Charges ("DSIC"), which was 7.2% above prior base rates. Consequently, the aggregate annual base rates increased by $104,721 since the last base rate increase and DSIC was reset to zero.

On January 3, 2022, the Company's natural gas operating division in Kentucky received an order from the Kentucky Public Service Commission resulting in an increase of $5,238 in annual revenues, and new rates went into effect on January 4, 2022. On June 7, 2022, an additional $260 was approved and made effective by the Commission, resulting from a rehearing requested by the operating division.

In addition to the Texas, North Carolina, Ohio, Pennsylvania, and Kentucky rate awards noted above, the Company's operating subsidiaries were allowed annualized rate increases of $1,703 in 2023, $1,378 in 2022, and $3,390 in 2021, represented by three, two, and six rate decisions, respectively. Revenues recognized in aggregate from all of the rate

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

increases realized in the year of grant were approximately $10,109, $51,163, and $2,995 in 2023, 2022, and 2021, respectively.

Eight states in which the Company operates permit water and wastewater utilities to add a surcharge to their water or wastewater bills to offset the additional depreciation and capital costs related to infrastructure system replacement and rehabilitation projects completed and placed into service between base rate filings. Additionally, Pennsylvania and Kentucky allow for the use of an infrastructure rehabilitation surcharge for natural gas utility systems. The surcharge for infrastructure system replacements and rehabilitations is typically adjusted periodically based on additional qualified capital expenditures completed or anticipated in a future period, is capped as a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. During 2023, the Company received approval to bill infrastructure rehabilitation surcharges designed to increase total operating revenues on an annual basis by $18,814 in its water and wastewater utility operating divisions in Pennsylvania, New Jersey, Illinois and Texas, and $21,272 in its gas utility operating divisions in Pennsylvania and Kentucky. The surcharge for infrastructure system replacements and rehabilitations provided revenues in 2023, 2022, and 2021 of $20,261, $26,902, and $33,771, respectively.

Note 18 – *Segment Information*

The Company has eleven operating segments and has two reportable segments, the Regulated Water segment and the Regulated Natural Gas segment. The Regulated Water segment is comprised of eight operating segments representing its water and wastewater regulated utility companies, which are organized by the states where the Company provides water and wastewater services. The eight water and wastewater utility operating segments are aggregated into one reportable segment, because each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. The Regulated Natural Gas segment is comprised of one operating segment representing natural gas utility companies for which the Company provides natural gas distribution services.

In addition to the Company's two reportable segments, it includes two operating segments within the Other category below. These segments are not quantitatively significant and are comprised of its non-regulated natural gas operations and Aqua Resources. Non-regulated natural gas operations consist of utility service line protection solutions and repair services to households and the operation of gas marketing and production entities. Aqua Resources offers, through a third party, water and sewer service line protection solutions and repair services to households. In addition to these segments, Other is comprised of business activities not included in the reportable segments, corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense. The Company reports these corporate costs within Other as they relate to corporate-focused responsibilities and decisions and are not included in internal measures of segment operating performance used by the Company to measure the underlying performance of the operating segments.

The following table presents information about the Company's reportable segments:

2023	Regulated Water	Regulated Natural Gas	Other and Eliminations	Consolidated
Operating revenues	$ 1,153,376	$ 863,759	$ 36,689	$ 2,053,824
Operations and maintenance expense	$ 368,843	$ 209,073	$ (2,398)	$ 575,518
Purchased gas	$ -	$ 327,548	$ 24,758	$ 352,306
Depreciation and amortization	$ 217,593	$ 125,263	$ 839	$ 343,695
Interest expense, net [(a)]	$ 124,680	$ 92,320	$ 62,961	$ 279,961
Allowance for funds used during construction	$ (14,786)	$ (2,181)	$ -	$ (16,967)
Provision for income taxes (benefit)	$ 57,546	$ (113,353)	$ (10,638)	$ (66,445)
Net income (loss)	$ 340,961	$ 200,563	$ (43,298)	$ 498,226
Capital expenditures	$ 668,720	$ 527,538	$ 2,845	$ 1,199,103
Total assets	$ 9,386,347	$ 6,965,350	$ 489,762	$ 16,841,459

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

2022	Regulated Water	Regulated Natural Gas	Other and Eliminations	Consolidated
Operating revenues	$ 1,082,972	$ 1,143,362	$ 61,698	$ 2,288,032
Operations and maintenance expense	$ 370,850	$ 239,506	$ 3,293	$ 613,649
Purchased gas	$ -	$ 551,009	$ 50,986	$ 601,995
Depreciation and amortization	$ 201,392	$ 118,955	$ 830	$ 321,177
Interest expense, net [(a)]	$ 111,938	$ 87,186	$ 35,317	$ 234,441
Allowance for funds used during construction	$ (20,950)	$ (2,715)	$ -	$ (23,665)
Provision for income taxes (benefit)	$ 47,510	$ (61,942)	$ 103	$ (14,329)
Net income (loss)	$ 314,352	$ 185,276	$ (34,391)	$ 465,237
Capital expenditures	$ 576,314	$ 479,335	$ 7,114	$ 1,062,763
Total assets	$ 8,792,633	$ 6,528,654	$ 397,820	$ 15,719,107

2021	Regulated Water	Regulated Natural Gas	Other and Eliminations	Consolidated
Operating revenues	$ 980,203	$ 859,902	$ 38,039	$ 1,878,144
Operations and maintenance expense	$ 332,598	$ 226,194	$ (8,212)	$ 550,580
Purchased gas	$ -	$ 313,390	$ 26,872	$ 340,262
Depreciation and amortization	$ 182,074	$ 113,238	$ 2,640	$ 297,952
Interest expense, net [(a)]	$ 108,356	$ 75,628	$ 21,341	$ 205,325
Allowance for funds used during construction	$ (19,258)	$ (1,534)	$ -	$ (20,792)
Provision for income taxes (benefit)	$ 26,633	$ (40,013)	$ 3,768	$ (9,612)
Net income (loss)	$ 293,703	$ 148,193	$ (10,284)	$ 431,612
Capital expenditures	$ 621,595	$ 397,419	$ 1,505	$ 1,020,519
Total assets	$ 8,403,586	$ 5,960,602	$ 294,090	$ 14,658,278

[(a)] The regulated water and regulated natural gas segments report interest expense that includes long-term debt that was pushed-down to the regulated operating subsidiaries from Essential Utilities, Inc.

Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

None.

Item 9A. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures – Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this Annual Report are effective to provide reasonable assurance that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure. A controls system cannot provide absolute assurance, however, that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Report on Internal Control Over Financial Reporting
Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. The Company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In assessing the effectiveness of internal control over financial reporting, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework* (2013). As a result of management's assessment and based on the criteria in the framework, management has concluded that, as of December 31, 2023, the Company's internal control over financial reporting was effective.

Attestation Report of the Registered Public Accounting Firm – The effectiveness of our internal control over financial reporting as of December 31, 2023 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control Over Financial Reporting – No change in our internal control over financial reporting occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. *Other Information*

During the quarter ended December 31, 2023, none of the Company's directors or executive officers adopted, modified or terminated any contract, instruction or written plan for the purchase or sale of Company securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any "non-Rule 10b5-1 trading arrangement", except for as follows:

Name & Title	Character of Trading Arrangement	Date of Adoption/ Termination	Aggregate Number of Shares of Common Stock to be Purchased/Sold Pursuant to Trading Arrangement	Duration of Plan [1]
Christopher Luning, Executive Vice President & General Counsel	Rule 10b5-1(c) Trading Arrangement	Terminated - October 3, 2023	Up to 16,770 shares to be sold	1/3/2023 - 7/1/2024
Matthew Rhodes, Executive Vice President, Strategy and Corporate Development	Rule 10b5-1(c) Trading Arrangement	Terminated - December 1, 2023	Up to 7,982 shares to be sold	1/3/2023 - 6/3/2024
Christopher Luning, Executive Vice President & General Counsel	Rule 10b5-1(c) Trading Arrangement	Adopted - November 28, 2023	Up to 30,000 shares to be sold	3/5/2024 - 3/31/2025
Matthew Rhodes, Executive Vice President, Strategy and Corporate Development	Rule 10b5-1(c) Trading Arrangement	Adopted - December 12, 2023	Up to 7,982 shares to be sold	3/8/2024 - 6/3/2024
Robert Rubin, Senior Vice President, Controller and Chief Accounting Officer	Rule 10b5-1(c) Trading Arrangement	Adopted - November 20, 2023	Up to 19,831 shares to be sold	3/5/2024 - 10/31/2024
Daniel Schuller, Executive Vice President and Chief Financial Officer	Rule 10b5-1(c) Trading Arrangement	Adopted - December 18, 2023	Up to 7,327 shares to be sold	3/15/2024 - 12/31/2024

[1] Each trading arrangement marked as a "Rule 10b5-1(c) Trading Arrangement" only permits transactions after the indicated duration start date and, in any case, upon expiration of the applicable mandatory cooling-off period under the Rule, and until the earlier of the indicated duration end date or completion of all sales contemplated in the Rule 10b5-1(c) Trading Arrangement.

Item 9C. *Disclosure Regarding Foreign Jurisdictions that Prevent Inspections*

Not applicable.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information appearing in the sections captioned *Information Regarding Nominees*, *Corporate Governance – Code of Ethics*, *– Board and Board Committees*, and *Section 16(a) Beneficial Ownership Reporting Compliance* of the definitive Proxy Statement relating to our 2024 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Annual Report is incorporated by reference herein.

We make available free of charge within the Corporate Governance portion of the investor relations section of our web site, at www.essential.co, our Corporate Governance Guidelines, the Charters of each Committee of our Board of

Directors, and our Code of Ethical Business Conduct (the Code of Ethics). Amendments to the Code of Ethics, and any grant of a waiver from a provision of the Code requiring disclosure under applicable rules of the SEC, will be disclosed on our web site. The reference to our web site is intended to be an inactive textual reference only, and the contents of such web site are not incorporated by reference herein and should not be considered part of this or any other report that we file with or furnish to the SEC.

Information About Our Executive Officers

The following table and the notes thereto set forth information with respect to our executive officers, including their names, ages, positions with Essential Utilities and business experience during the last five years:

Name	Age	Position with Essential Utilities (1)
Christopher H. Franklin	58	Chairman (January 2018 to present); President and Chief Executive Officer (July 2015 to present); Executive Vice President and President and Chief Operating Officer, Regulated Operations (January 2012 to July 2015); Regional President – Midwest and Southern Operations and Senior Vice President, Corporate and Public Affairs (January 2010 to January 2012); Regional President – Southern Operations and Senior Vice President, Public Affairs and Customer Operations (February 2007 to January 2010); Vice President, Public Affairs and Customer Operations (May 2005 to February 2007); Vice President, Corporate and Public Affairs (February 1997 to May 2005); Manager Corporate and Public Affairs (December 1992 to February 1997)
Daniel J. Schuller	54	Executive Vice President and Chief Financial Officer (October 2018 to present); Executive Vice President, Strategy and Corporate Development (July 2015 to October 2018); Investment Principal – J.P. Morgan Asset Management – Infrastructure Investments Group (2007 to 2015)
Colleen M. Arnold	53	President, Aqua Water (March 2020 to present); Deputy Chief Operating Officer, Aqua (September 2015 to March 2020)
Michael A. Huwar	60	President, Peoples Natural Gas (August 2020 to present); President Columbia Gas of Pennsylvania & Columbia Gas of Maryland (February 2017 to August 2020)
Christopher P. Luning	56	Executive Vice President and General Counsel (August 2022 to present); Executive Vice President, General Counsel, and Secretary (February 2019 to July 2022; Senior Vice President, General Counsel, and Secretary (April 2012 to February 2019); Vice President Corporate Development and Corporate Counsel (June 2008 to April 2012); Vice President and Deputy General Counsel (May 2005 to June 2008); Assistant General Counsel (March 2003 to May 2005)
Matthew R. Rhodes	46	Executive Vice President, Strategy and Corporate Development (June 2018 to present); Managing Director - Goldman Sachs, Global Natural Resources (July 2007 to April 2018)
Robert A. Rubin	61	Senior Vice President, Controller and Chief Accounting Officer (January 2012 to present); Vice President, Controller and Chief Accounting Officer (May 2005 to January 2012); Controller and Chief Accounting Officer (March 2004 to May 2005); Controller (March 1999 to March 2004); Assistant Controller (June 1994 to March 1999); Accounting Manager (June 1989 to June 1994)

(1) In addition to the capacities indicated, the individuals named in the above table hold other offices or directorships with subsidiaries of the Company. Officers serve at the discretion of the Board of Directors.

Item 11. *Executive Compensation*

The information responsive to this item will be included in the definitive Proxy Statement relating to our 2024 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Annual Report, is incorporated by reference herein.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Ownership of Common Stock - The information responsive to this item will be included in the definitive Proxy Statement relating to our 2024 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Annual Report, and is incorporated by reference herein.

Securities Authorized for Issuance under Equity Compensation Plans - The following table provides information for our equity compensation plans as of December 31, 2023:

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	1,606,096 (1)	$ 37.03 (2)	1,527,080
Equity compensation plans not approved by security holders	-	-	-
Total	1,606,096	$ 37.03	1,527,080

(1) Consists of 882,442 shares issuable upon exercise of outstanding options, 531,437 shares issuable upon conversion of outstanding performance share units, and 192,217 shares issuable upon conversion of outstanding restricted share units.

(2) Calculated based upon outstanding options of 882,442 shares to acquire our common stock.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information responsive to this item will be included in the definitive Proxy Statement relating to our 2024 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Annual Report, and is incorporated by reference herein.

Item 14. *Principal Accountant Fees and Services*

The information responsive to this item will be included in the definitive Proxy Statement relating to our 2024 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Annual Report, and is incorporated by reference herein.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

Financial Statements. The consolidated financial statements and supplementary data included in Part II, Item 8 are hereby incorporated by reference herein.

Financial Statement Schedules.

Schedule 1. – Condensed Parent Company Financial Statements. All other schedules are omitted because they are not applicable or not required, or because the required information is included in the consolidated financial statements or notes thereto.

Exhibits, Including Those Incorporated by Reference. A list of exhibits filed as part of this Annual Report is set forth in the Exhibit Index hereto which is incorporated by reference herein. Where so indicated, exhibits which were previously filed are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated in the exhibit index.

Item 16. *Form 10-K Summary*

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has elected not to include such summary information in this Annual Report.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference to			
		Form	File No.	Exhibit(s)	Filing Date
2.1	Purchase Agreement, dated October 22, 2018 by and between LDC Parent LLC, a Delaware limited liability company ("Seller") and the Registrant, a Pennsylvania corporation	8-K	001-06659	2.1	October 23, 2018
3.1	Utilities, Inc. Amended and Restated Articles of Incorporation Essential as of May 12, 2020	8-K	001-06659	3.1	May 18, 2020
3.2	Amended and Restated Bylaws of Essential Utilities, Inc. dated February 16, 2022	8-K	001-06659	3.1	February 18, 2022
4.1	Description of Securities of Essential Utilities, Inc.	10-K	001-06659	4.1	March 1, 2021
4.2	Indenture of Mortgage dated as of January 1, 1941 between Aqua Pennsylvania, Inc. (f/k/a Philadelphia Suburban Water Company) and The Bank of New York Mellon Trust Company, as successor trustee to First Pennsylvania Bank, N.A. (f/k/a The Pennsylvania Company for Insurance on Lives and Granting Annuities)	10-K	001-06659	4.1.1	February 26, 2016
4.2.1	Twenty-sixth Supplemental Indenture dated as of November 1, 1991	10-K	001-06659	4.1.3	February 26, 2016
4.2.2	Twenty-ninth Supplemental Indenture dated as of March 30, 1995	10-Q	001-06659	4.17	May 10, 1995
4.2.3	Thirty-third Supplemental Indenture, dated as of November 15, 1999	10-K	001-06659	4.27	March 29, 2000
4.2.4	Thirty-fifth Supplemental Indenture, dated as of January 1, 2002	10-K	001-06659	4.22	March 20, 2002
4.2.5	Forty-seventh Supplemental Indenture, dated as of October 15, 2012	10-K	001-06659	4.24	February 28, 2013
4.2.6	Forty-eighth Supplemental Indenture, dated as of October 1, 2013	10-K	001-06659	4.1.17	March 3, 2014
4.2.7	Form of Supplemental Indenture during and after 2014	10-K	001-06659	4.1.15	February 26, 2016
4.2.7.1	Schedule of Outstanding Supplemental Indentures during and after 2014	^	^	^	^
4.3	Bond Purchase Agreement, dated November 8, 2012, by and among Aqua Pennsylvania, Inc., Teachers Insurance and Annuity Association, John Hancock Life Insurance Company, John Hancock Life Insurance Company of New York, John Hancock Life & Health Insurance Company, The Lincoln National Life Insurance Company, Lincoln Life & Annuity Company of New York, New York Life Insurance Company, New York Life Insurance and Annuity Corporation, Minnesota Life Insurance Company, United Health Care Insurance Company, American Republic Insurance Company, Western Fraternal Life Association	10-K	001-06659	10.54	February 28, 2013

4.4	Bond Purchase Agreement, dated October 24, 2013, by and among Aqua Pennsylvania, Inc., John Hancock Life Insurance Company (U.S.A), John Hancock Life Insurance Company of New York, John Hancock Life & Health Insurance Company, The Lincoln National Life Insurance Company, Thrivent Financial for Lutherans, United Insurance Company of America, Equitable Life & Casualty Insurance Company, Catholic United Financial, and Great Western Insurance Company	10-K	001-06659	10.45	March 3, 2014
4.5	Bond Purchase Agreement, dated December 29, 2014, by and among Aqua Pennsylvania, Inc., Thrivent Financial for Lutherans, State Farm Life Insurance Company, John Hancock Life Insurance Company (U.S.A), Phoenix Life Insurance Company, PHL Variable Insurance Company, United of Omaha Life Insurance Company, Mutual of Omaha Insurance Company, and Companion Life Insurance Company	10-K	001-06659	10.58	February 27, 2015
4.6	Bond Purchase Agreement, dated December 3, 2015 by and among Aqua Pennsylvania, Inc., Thrivent Financial for Lutherans, State Farm Life Insurance Company, John Hancock Life Insurance Company (U.S.A), The Lincoln National Life Insurance Company, Teachers Insurance And Annuity Association Of America, CMFG Life Insurance Company, Genworth Life Insurance Company, Phoenix Life Insurance Company, PHL Variable Insurance Company, United Of Omaha Life Insurance Company, The State Life Insurance Company, Pioneer Mutual Life Insurance Company, MONY Life Insurance Company	10-K	001-06659	4.12	February 26, 2016
4.7	Note Purchase Agreement, dated November 3, 2016, by and among the Registrant and the note purchasers thereto	10-K	001-06659	4.13	February 24, 2017
4.8	Bond Purchase Agreement, dated December 15, 2016 by and among Aqua Pennsylvania, Inc., Teachers Insurance and Annuity Association of America, New York Life Insurance Company, New York Life Insurance and Annuity Corporation, John Hancock Life Insurance Company, American Equity Investment Life Insurance Company, Genworth Life and Annuity Insurance Company, Phoenix Life Insurance Company, PHL Variable Insurance Company, American United Life Insurance Company, The State Life Insurance Company, and Pioneer Mutual Life Insurance Company	10-K	001-06659	4.14	February 24, 2017
4.9	Bond Purchase Agreement, dated July 10, 2017 by and among Aqua Illinois, Inc., Teachers Insurance and Annuity Association of America	10-Q	001-06659	4.1	November 2, 2017
4.10	Bond Purchase Agreement, dated July 20, 2017 by and among Aqua Pennsylvania, Inc., New York Life Insurance Company, New York Life Insurance and Annuity Corporation, New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Account (BOLI 3), New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Account (BOLI 3-2)	10-Q	001-06659	4.2	November 2, 2017

4.11	Bond Purchase Agreement, dated June 29, 2018, by and among Aqua Pennsylvania, Inc., CMFG Life Insurance Company, Manufactures Life Reinsurance Limited, The Lincoln National Life Insurance Company, New York Life Insurance Company, The State Life Insurance Company, and Phoenix Life Insurance Company	10-Q	001-06659	4.1	August 3, 2018
4.12	Bond Purchase Agreement, dated November 15, 2018, by and among Aqua Pennsylvania, Inc., Teachers Insurance and Annuity Associated of America, American United Life Insurance Company, Pioneer Mutual Life Insurance Company, The State Life Insurance Company, The Lincoln National Life Insurance Company, Lincoln Life & Annuity Company of New York, and United of Omaha Life Insurance Company	10-K	001-06659	4.15	February 26, 2019
4.13	Purchase Contract Agreement, dated April 23, 2019, between the Registrant. and U.S. Bank N.A, as purchase contract agent, as attorney-in-fact for the Holders from time to time as provided therein and as trustee under the indenture referred to therein	8-K	001-06659	4.1	April 23, 2019
4.13.1	Form of Unit (included in Exhibit 4.13 above)	8-K	001-06659	4.1	April 23, 2019
4.13.2	Form of Purchase Contract (included with Exhibit 4.13 above)	8-K	001-06659	4.1	April 23, 2019
4.14	Indenture, dated as of April 23, 2019, between the Registrant and U.S. Bank N.A., as trustee	8-K	001-06659	4.4	April 23, 2019
4.14.1	First Supplemental Indenture, dated as of April 23, 2019, between the Registrant and U.S. Bank N.A., as trustee	8-K	001-06659	4.5	April 23, 2019
4.14.2	Second Supplemental Indenture, dated as of April 23, 2019, between the Registrant and U.S. Bank N.A., as trustee	8-K	001-06659	4.6	April 23, 2019
4.14.3	Form of Amortizing Note (included with Exhibit 4.14.2 above)	8-K	001-06659	4.7	April 23, 2019
4.14.4	Third Supplemental Indenture, dated as of April 26, 2019, between the Registrant and U.S. Bank N.A., as trustee	8-K	001-06659	4.3	April 26, 2019
4.14.5	Form of Global Note for the 2029 Notes (included in Exhibit 4.14.4 above)	8-K	001-06659	4.4	April 26, 2019
4.14.6	Form of Global Note for the 2049 Notes (included in Exhibit 4.14.4 above)	8-K	001-06659	4.5	April 26, 2019
4.14.7	Fourth Supplemental Indenture, dated April 13, 2020, by and between Essential Utilities, Inc. and U.S. Bank N.A.	8-K	001-06659	4.3	April 15, 2020
4.14.8	Fifth Supplemental Indenture, dated April 19, 2021, between Essential Utilities, Inc. and U.S. Bank N.A., as trustee	8-K	001-06659	4.3	April 19, 2021
4.14.9	Sixth Supplemental Indenture, dated May 20, 2022, between Essential Utilities, Inc. and U.S. Bank Trust Company N.A, as trustee	8-K	001-06659	4.3	May 20, 2022
4.14.10	Seventh Supplemental Indenture, dated January 8, 2024, between Essential Utilities, Inc. and U.S. Bank Trust Company N.A., as trustee	8-K	001-06659	4.3	January 8, 2024

4.15	Bond Purchase Agreement, dated May 31, 2019, by and among Aqua Pennsylvania, Inc., Athene Annuity and Life Company, Athene Annuity & Life Assurance Company, Genworth Life and Annuity Insurance Company, Genworth Life Insurance Company, John Hancock Life Insurance Company (U.S.A), John Hancock Life Insurance Company of New York, John Hancock Life & Health Insurance Company, Metropolitan Life Insurance Company, Metropolitan Tower Life Insurance Company, MetLife Insurance K.K., Brighthouse Life Insurance Company, United of Omaha Life Insurance Company, New York Life Insurance Company, New York Life Insurance and Annuity Corporation, New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Accounts (BOLI 30C, 30E, 3-2), The Northwestern Mutual Life Insurance Company, The Northwestern Mutual Life Insurance Company, and Life Insurance Company of the Southwest	10-Q	001-06659	4.11	August 8, 2019
4.16	Bond Purchase Agreement, dated December 20, 2019, by and among Aqua Pennsylvania, Inc., MetLife Insurance K.K., Metropolitan Life Insurance Company, The Ohio National Life Insurance Company, Ohio National Life Assurance Corporation, National Guardian Life Insurance Company, Country Life Insurance Company, Horizon Blue Cross Blue Shield of New Jersey, and Farm Bureau Life Insurance Company	10-K	001-06659	4.18	February 28, 2020
4.17	Bond Purchase Agreement, dated May 1, 2020, by and among Aqua Pennsylvania, Inc. and bond purchasers thereto	10-Q	001-06659	4.4	May 8, 2020
4.18	Bond Purchase Agreement, dated October 13, 2020, by and among Aqua Pennsylvania, Inc., American General Life Insurance Company, The Variable Life Insurance Company, The United States Life Insurance Company in the City of New York, MetLife Insurance K.K., Pacific Life Insurance Company, Equitable Financial Life Insurance Company, Transamerica Life Insurance Company, Transamerica Life (Bermuda) LTD, Principal Life Insurance Company, Ameritas Life Insurance Company, Ameritas Life Insurance Corp. of New York, The State Life Insurance Company, Nassau Life Insurance Company, Life Insurance Company of the Southwest, United Farm Family Life Insurance Company, and Farm Bureau Life Insurance Company	10-K	001-06659	4.18	March 1, 2021
4.19	Bond Purchase Agreement, dated April 15, 2021, by and among Aqua Ohio, Inc., Teachers Insurance and Annuity Association of America, State Farm Life Insurance Company, State Farm Life and Accident Assurance Company, and State Farm Insurance Companies Employee Retirement Trust	10-K	001-06659	4.19	March 1, 2022
4.20	Bond Purchase Agreement, dated September 19, 2022, by and among Aqua Pennsylvania, Inc. and the Purchasers	10-Q	001-06659	4.1	November 9, 2022
4.21	Bond Purchase Agreement, dated December 15, 2022, by and among Aqua Pennsylvania, Inc. and State Farm Life Insurance Company, State Farm Life and Accident Assurance Company, State Farm Insurance Companies Employee Retirement Trust	10-K	001-06659	4.21	March 1, 2023

10.1	Credit Agreement, dated December 14, 2022, between Essential Utilities, Inc., PNC Bank, National Association, CoBank, ACB, Bank of America, N.A., Royal Bank of Canada, The Huntington National Bank, Barclays Bank PLC, Citizens Bank, N.A., The Toronto-Dominion Bank, and Wells Fargo Bank, N.A	10-K	001-06659	10.1	March 1, 2023
10.2	Amended and Restated Revolving Credit Agreement, dated as of November 17, 2016 between Aqua Pennsylvania and PNC Bank, National Association, TD Bank, N.A., Citizens Bank of Pennsylvania, and Huntington National Bank	10-K	001-06659	10.2.4	February 24, 2017
10.2.1	First Amendment to Revolving Credit Agreement, dated as of November 16, 2017, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank of Pennsylvania, TD Bank, N.A., and Huntington National Bank	10-K	001-06659	10.1.5	February 28, 2018
10.2.2	Second Amendment to Revolving Credit Agreement, dated as of November 9, 2018, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank of Pennsylvania, TD Bank, N.A., and Huntington National Bank	10-K	001-06659	10.2.2	February 26, 2019
10.2.3	Third Amendment to Credit Agreement, dated as of November 8, 2019, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank of Pennsylvania, TD Bank, N.A., and Huntington National Bank	10-Q	001-06659	10.1	May 8, 2020
10.2.4	Fourth Amendment to Credit Agreement, dated as of November 6, 2020, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank, N.A., TD Bank, N.A., and Huntington National Bank	10-K	001-06659	10.2.4	March 1, 2022
10.2.5	Fifth Amendment to Credit Agreement, dated as of November 5, 2021, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank, N.A., TD Bank, N.A., and Huntington National Bank	10-K	001-06659	10.2.5	March 1, 2022
10.2.6	Sixth Amendment to Credit Agreement, dated as of June 30, 2022, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank, N.A., TD Bank, N.A., and The Huntington National Bank	10-Q	001-06659	10.2	August 9, 2022
10.2.7	Seventh Amendment to Credit Agreement, dated as of June 29, 2023, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank, N.A., TD Bank, N.A., and The Huntington National Bank	10-Q	001-06659	10.2	August 8, 2023
10.3	The Registrant's Deferred Compensation Plan Master Trust Agreement with PNC Bank, National Association, dated as of December 31, 1996*	10-K	001-06659	10.24	March 25, 1997
10.3.1	Amendment 2008-1 to the Registrant's Deferred Compensation Plan Master Trust Agreement, dated as of December 15, 2008*	10-K	001-06659	10.50	February 27, 2009
10.4	The Registrant's 2009 Executive Deferral Plan (as amended and restated effective January 1, 2009)*	S-8	333-156047	4.1	December 10, 2008
10.5	The Registrant's Supplemental Pension Benefit Plan for Salaried Employees (as amended and restated effective January 1, 2011)*	10-K	001-06659	10.58	February 27, 2012
10.6	The Registrant's Dividend Reinvestment and Direct Stock Purchase Plan	S-3ASR	333-240088	N/A	July 24, 2020
10.7.1	Performance-Based Share Unit Grant Terms and Conditions*	10-K	001-06659	10.7.1	March 1, 2023

10.7.2	Restricted Stock Unit Grant Terms and Conditions for Chief Executive Officer*	10-Q	001-06659	10.2	May 4, 2017
10.7.3	Restricted Stock Unit Grant Terms and Conditions for all other executive officers*	10-K	001-06659	10.7.3	March 1, 2023
10.7.4	Stock Option Grant Terms and Conditions*	10-K	001-06659	10.7.4	March 1, 2023
10.8	The Registrant's 2012 Employee Stock Purchase Plan*	10-K	001-06659	10.10	February 26, 2016
10.9	The Registrant's Annual Cash Incentive Compensation Plan (adopted February 26, 2013)*	10-K	001-06659	10.56	February 28, 2013
10.10	Form of Change in Control Agreement between the Company and executive officers*	10-K	001-06659	10.10	March 1, 2023
10.10.1	Schedule of Change in Control Agreement between the Company and executive officers*	10-K	001-06659	10.10.1	March 1, 2023
10.11	Non-Employee Directors' Compensation, effective January 1, 2023*	8-K	001-06659	10.1	December 9, 2022
10.12	Employment Agreement dated July 1, 2021, between the Registrant and Christopher Franklin*	8-K	001-06659	10.1	June 25, 2021
10.13	Form of Sales Agreements, dated October 14, 2022, among Essential Utilities, Inc. and each Sales Agent	8-K	001-06659	10.1	June 25, 2021
10.14	The Registrant Amended and Restated Omnibus Equity Compensation Plan	8-K	001-06659	10.1	May 3, 2019
10.15	Essential Utilities, Inc. Stock Award Grant Instrument dated as of March 16, 2020*	10-Q	001-06659	10.4	May 8, 2020
10.16	The Registrant's Compensation Recoupment Policy	^	^	^	^
10.17	Incremental Facility Amendment Agreement, dated March 13, 2020, by and among Essential Utilities, Inc., Incremental Lender, and the PNC Bank, National Association	8-K	001-06659	10.1	March 16, 2020
10.18	Credit Agreement, dated March 13, 2020, by and among Essential Utilities, Inc., Lenders, and the PNC Bank, National Association	8-K	001-06659	10.2	March 16, 2020
10.19	Note Purchase Agreement, dated February 26, 2010, by and between PNG Companies, LLC and the note purchasers thereto	8-K/A	001-06659	10.1	April 13, 2020
10.19.1	First Amendment to Note Purchase Agreement, dated August 10, 2011, by and between PNG Companies, LLC and the noteholders	8-K/A	001-06659	10.1.1	April 13, 2020
10.19.2	Second Amendment to Note Purchase Agreement, dated August 22, 2013, by and between PNG Companies, LLC and the noteholders	8-K/A	001-06659	10.1.2	April 13, 2020
10.19.3	Third Amendment to Note Purchase Agreement, dated November 9, 2017, by and between PNG Companies, LLC and the noteholders	8-K/A	001-06659	10.1.3	April 13, 2020
10.19.4	First Supplement to Note Purchase Agreement, dated December 12, 2013, by and between PNG Companies, LLC and the note purchasers thereto	8-K/A	001-06659	10.1.4	April 13, 2020
10.19.5	Second Supplement to Note Purchase Agreement, dated July 14, 2017, by and between PNG Companies, LLC and the note purchasers thereto	8-K/A	001-06659	10.1.5	April 13, 2020
10.19.6	Third Supplement to Note Purchase Agreement, dated September 20, 2017, by and between PNG Companies, LLC and the note purchasers thereto	8-K/A	001-06659	10.1.6	April 13, 2020

10.19.7	Fourth Supplement to Note Purchase Agreement, dated November 9, 2017, by and between PNG Companies, LLC and the note purchasers thereto	8-K/A	001-06659	10.1.7	April 13, 2020
10.19.8	Sixth Amendment to Credit Agreement, dated June 30, 2022, between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank, N.A., TD Bank, N.A., and The Huntington National Bank	10-Q	002-06659	10.2	August 9, 2022
10.19.9	Credit Agreement, dated November 25, 2020, by and between PNG Companies, LLC and PNC Bank, National Association and TD Bank, N.A.	10-K	001-06659	10.21.9	March 1, 2022
10.19.10	First Amendment to Credit Agreement, dated November 5, 2021, by and between PNG Companies, LLC and PNC Bank, National Association and TD Bank, N.A.	10-K	001-06659	10.21.10	March 1, 2022
10.19.11	Second Amendment to Credit Agreement, dated June 30, 2022, by and between PNG Companies, LLC and PNC Bank National Association, TD Bank, N.A. and Citizens Bank N.A.	10-Q	001-06659	10.1	August 9, 2022
21.1	Subsidiaries of Essential Utilities, Inc.	^	^	^	^
23.1	Consent of Independent Registered Public Accounting Firm – PricewaterhouseCoopers LLP	^	^	^	^
31.1	Certification of Chief Executive Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934	^	^	^	^
31.2	Certification of Chief Financial Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934	^	^	^	^
32.1	Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350	^^	^^	^^	^^
32.2	Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350	^^	^^	^^	^^
101.INS	Inline XBRL Instance Document	^	^	^	^
101.SCH	Inline XBRL Taxonomy Extension Schema Document	^	^	^	^
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	^	^	^	^
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	^	^	^	^
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	^	^	^	^
101.PRES	Inline XBRL Taxonomy Extension Presentation Linkbase Document	^	^	^	^
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2023 formatted in Inline XBRL (included in Exhibit 101)	^	^	^	^

In accordance with Item 601(b)(4)(iii)(A) of Regulation S-K, copies of specific instruments defining the rights of holders of long-term debt of the Company or its subsidiaries are not filed herewith. Pursuant to this regulation, we hereby agree to furnish a copy of any such instrument to the SEC upon request.

*Indicates management contract or compensatory plan or arrangement

^ Filed herewith

^^Furnished herewith

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ESSENTIAL UTILITIES, INC.

/s/ Christopher H. Franklin

Christopher H. Franklin

Chairman, President and Chief Executive Officer

Date: February 29, 2024

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report on Form 10-K has been signed below by the following persons on behalf of the Registrant on February 29, 2024 in the capacities indicated below.

Signature	Title
/s/ Christopher H. Franklin Christopher H. Franklin	Chairman, President and Chief Executive Officer, Director (Principal Executive Officer)
/s/ Daniel J. Schuller Daniel J. Schuller	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ Robert A. Rubin Robert A. Rubin	Senior Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)
/s/ Elizabeth B. Amato Elizabeth B. Amato	Director
/s/ David Ciesinski David Ciesinski	Director
/s/ Daniel J. Hilferty Daniel J. Hilferty	Director
/s/ Edwina Kelly Edwina Kelly	Director
/s/ W. Bryan Lewis W. Bryan Lewis	Director
/s/ Ellen T. Ruff Ellen T. Ruff	Director
/s/ Lee C. Stewart Lee C. Stewart	Director
/s/ Roderick K. West Roderick K. West	Director

Essential Utilities, Inc.
Schedule 1 – Condensed Parent Company Financial Statements
Condensed Balance Sheets
(In thousands of dollars)

	December 31, 2023	December 31, 2022
Assets		
Current assets:		
Accounts receivable, net	$ 284	$ 575
Accounts receivable - affiliates	907,302	1,601,064
Prepayments and other current assets	15,383	14,256
Total current assets	922,969	1,615,895
Deferred charges and other assets, net	66,826	69,455
Notes receivable - affiliates	2,765,670	2,276,670
Deferred income tax asset	183,179	42,206
Investment in subsidiaries	6,517,312	6,512,224
Total assets	$ 10,455,956	$ 10,516,450
Liabilities and Equity		
Stockholders' equity	$ 5,896,183	$ 5,377,386
Long-term debt, excluding current portion, net of debt issuance costs	3,740,427	3,503,636
Current liabilities:		
Accrued interest	21,635	20,923
Accounts payable - affiliates	562,101	1,418,574
Dividends payable	83,929	75,808
Other accrued liabilities	24,462	21,234
Total current liabilities	692,127	1,536,539
Other liabilities	127,219	98,889
Total liabilities and equity	$ 10,455,956	$ 10,516,450

The accompanying condensed notes are an integral part of these condensed financial statements.

Essential Utilities, Inc.
Schedule 1 – Condensed Parent Company Financial Statements
Condensed Statements of Income and Comprehensive Income
(In thousands, except per share amounts)

	Years ended December 31,		
	2023	2022	2021
Other income	$ 2,985	$ 5,368	$ 8,388
Operating expense and other expenses	6,479	10,724	5,821
Operating income (loss)	(3,494)	(5,356)	2,567
Interest expense	64,031	35,817	21,729
Interest income	(348)	(107)	(9)
Other (income) expense	(584)	893	(609)
Loss before equity in earnings of subsidiaries and income taxes	(66,593)	(41,959)	(18,544)
Equity in earnings of subsidiaries	547,617	495,556	445,951
Income before income taxes	481,024	453,597	427,407
Income tax benefit	(17,202)	(11,640)	(4,205)
Net income	$ 498,226	$ 465,237	$ 431,612
Comprehensive income	$ 498,226	$ 465,237	$ 431,612
Net income per common share:			
Basic	$ 1.86	$ 1.77	$ 1.68
Diluted	$ 1.86	$ 1.77	$ 1.67
Average common shares outstanding during the period:			
Basic	267,171	262,246	257,487
Diluted	267,659	262,868	258,180

The accompanying condensed notes are an integral part of these condensed financial statements.

Essential Utilities, Inc.
Schedule 1 – Condensed Parent Company Financial Statements
Condensed Statements of Cash Flows
(In thousands of dollars)

	Years ended December 31,		
	2023	2022	2021
Net cash flows used in operating activities	$ (179,556)	$ (169,778)	$ (239,320)
Cash flows from investing activities:			
Acquisitions of utility systems and other, net	(32,431)	(116,627)	(36,237)
Decrease (increase) in investment in subsidiaries	(36,740)	(162,662)	(53,467)
Other	554	299	(987)
Net cash flows used in investing activities	(68,617)	(278,990)	(90,691)
Cash flows from financing activities:			
Proceeds from long-term debt	906,856	1,522,157	995,458
Repayments of long-term debt	(677,000)	(865,469)	(725,033)
Proceeds from issuance of common stock from at-the market sale agreement	322,983	63,040	-
Proceeds from issuance of common stock under dividend reinvestment plan	16,005	16,619	16,799
Proceeds from exercised stock options	287	2,475	4,172
Proceeds from issuance of common stock from forward equity sale agreement	-	-	299,739
Repurchase of common stock	(3,981)	(1,192)	(3,291)
Dividends paid on common stock	(316,806)	(288,632)	(258,650)
Other	(171)	(230)	817
Net cash flows from financing activities	248,173	448,768	330,011
Net change in cash and cash equivalents	-	-	-
Cash and cash equivalents at beginning of year	-	-	-
Cash and cash equivalents at end of year	$ -	$ -	$ -

See Note 1 - *Basis of Presentation*

The accompanying condensed notes are an integral part of these condensed financial statements.

Essential Utilities, Inc.
Schedule 1 – Condensed Parent Company Financial Statements
Notes to Condensed Financial Statements
(In thousands, except per share amounts)

Note 1 – *Basis of Presentation* – The accompanying condensed financial statements of Essential Utilities, Inc. (the "Parent") should be read in conjunction with the consolidated financial statements and notes thereto of Essential Utilities, Inc. and subsidiaries (collectively, the "Registrant") included in Part II, Item 8 of the Annual Report. The Parent's significant accounting policies are consistent with those of the Registrant.

The Parent borrows from third parties and provides funds to its subsidiaries, in support of their operations. Amounts owed to the Parent for borrowings under this facility are reflected as inter-company receivables on the condensed balance sheets. The interest rate charged to the subsidiaries is sufficient to cover the Parent's interest costs under its associated borrowings.

As of December 31, 2023 and 2022, the Parent had a current accounts receivable – affiliates balance of $907,302 and $1,601,064, respectively. As of December 31, 2023 and 2022, the Parent had a notes receivable – affiliates balance of $2,765,670 and $2,276,670, respectively. The changes in these balances represent non-cash adjustments that are recorded through the Parent's investment in subsidiaries.

In the ordinary course of business, the Parent indemnifies a third-party for surety bonds issued on behalf of subsidiary companies, guarantees the performance of one of its regulated utilities in a jurisdiction that requires such guarantees, and guarantees several projects associated with the treatment of water in a jurisdiction.

Note 2 – *Dividends from subsidiaries* – Dividends in the amount of $0, $0, and $0 were paid to the Parent by its wholly-owned subsidiaries during the years ended December 31, 2023, 2022, and 2021, respectively.

Note 3 – *Long-term debt* – The Parent has long-term debt under unsecured note purchase agreements with investors in addition to its $1,000,000 revolving credit agreement. Excluding amounts due under the revolving credit agreement, the debt maturities of the Parent's long-term debt are as follows:

Year	Debt Maturity
2024	$ -
2025	-
2026	-
2027	-
2028	-
Thereafter	3,025,000

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended September 30, 2023

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission File Number	Name of Registrant, Address of Principal Executive Offices and Telephone Number	State of Incorporation	I.R.S. Employer Identification Number
1-16681	**Spire Inc.** 700 Market Street St. Louis, MO 63101 314-342-0500	Missouri	74-2976504
1-1822	**Spire Missouri Inc.** 700 Market Street St. Louis, MO 63101 314-342-0500	Missouri	43-0368139
2-38960	**Spire Alabama Inc.** 605 Richard Arrington Blvd N Birmingham, AL 35203 205-326-8100	Alabama	63-0022000

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") (only applicable to Spire Inc.):

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock $1.00 par value	SR	New York Stock Exchange LLC
Depositary Shares, each representing a 1/1,000th interest in a share of 5.90% Series A Cumulative Redeemable Perpetual Preferred Stock, par value $25.00 per share	SR.PRA	New York Stock Exchange LLC

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if each registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933, as amended.
Spire Inc. Yes ☒ No ☐ Spire Missouri Inc. Yes ☐ No ☒ Spire Alabama Inc. Yes ☐ No ☒

Indicate by check mark if each registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.
Spire Inc. Yes ☐ No ☒ Spire Missouri Inc. Yes ☐ No ☒ Spire Alabama Inc. Yes ☐ No ☒

Indicate by check mark whether each registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Spire Inc. Yes ☒ No ☐ Spire Missouri Inc. Yes ☒ No ☐ Spire Alabama Inc. Yes ☒ No ☐

Indicate by check mark whether each registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Spire Inc. Yes ☒ No ☐ Spire Missouri Inc. Yes ☒ No ☐ Spire Alabama Inc. Yes ☒ No ☐

Indicate by check mark whether each registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

	Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
Spire Inc.	☒	☐	☐	☐	☐
Spire Missouri Inc.	☐	☐	☒	☐	☐
Spire Alabama Inc.	☐	☐	☒	☐	☐

If an emerging growth company, indicate by check mark if each registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.
Spire Inc. ☐ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

Indicate by check mark whether each registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.
Spire Inc. ☒ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

If securities are registered pursuant to Section 12(b) of the Exchange Act, indicate by check mark whether the financial statements of each registrant included in the filing reflect the correction of an error to previously issued financial statements.
Spire Inc. ☐ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).
Spire Inc. ☐ Spire Missouri Inc. ☐ Spire Alabama Inc. ☐

Indicate by check mark whether each registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Spire Inc. Yes ☐ No ☒ Spire Missouri Inc. Yes ☐ No ☒ Spire Alabama Inc. Yes ☐ No ☒

The aggregate market value of the common equity held by non-affiliates of Spire Inc. amounted to $3,580,140,878 as of March 31, 2023. All of Spire Missouri Inc.'s and Spire Alabama Inc.'s equity securities are owned by Spire Inc., their parent company and a reporting company under the Exchange Act.

The number of shares outstanding of each registrant's common stock, as of November 10, 2023, was as follows:

Spire Inc.	Common Stock, par value $1.00 per share	53,176,840
Spire Missouri Inc.	Common Stock, par value $1.00 per share (all owned by Spire Inc.)	25,855
Spire Alabama Inc.	Common Stock, par value $0.01 per share (all owned by Spire Inc.)	1,972,052

This combined Form 10-K represents separate filings by Spire Inc., Spire Missouri Inc., and Spire Alabama Inc. Information contained herein relating to an individual registrant is filed by that registrant on its own behalf. Each registrant makes no representation as to information relating to the other registrants, except that information relating to Spire Missouri Inc. and Spire Alabama Inc. is also attributed to Spire Inc.

Spire Missouri Inc. and Spire Alabama Inc. meet the conditions set forth in General Instructions I(1)(a) and (b) of Form 10-K and are therefore filing this Form 10-K with the reduced disclosure format specified in General Instructions I(2) to Form 10-K.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of proxy statement for Spire Inc. to be filed on or about December 13, 2023 — Part III.
Certain exhibits as indicated in Part IV.

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GLOSSARY OF KEY TERMS AND ABBREVIATIONS

AOCI	Accumulated other comprehensive income or loss
APSC	Alabama Public Service Commission
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
CCF	A gas measurement which represents a unit of volume equal to one hundred cubic feet
CCM	Cost Control Measure
Company	Spire and its subsidiaries unless the context suggests otherwise
EPS	Earnings per share
ESR	Enhanced Stability Reserve
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
GAAP	Accounting principles generally accepted in the United States of America
Gas Marketing	Segment including Spire Marketing, which provides natural gas marketing services
Gas Utility	Segment including the operations of the Utilities
GSA	Gas Supply Adjustment
ICE	Intercontinental Exchange
ISRS	Infrastructure System Replacement Surcharge
Midstream	Segment including Spire STL Pipeline and Spire Storage
MMBtu	Million British thermal units
MoPSC	Missouri Public Service Commission
MSPSC	Mississippi Public Service Commission
NYMEX	New York Mercantile Exchange, Inc.
NYSE	New York Stock Exchange
O&M	Operation and maintenance expense
OCI	Other comprehensive income or loss
OFO	Operational Flow Order
PGA	Purchased Gas Adjustment
RSE	Rate Stabilization and Equalization
SEC	U.S. Securities and Exchange Commission
Spire	Spire Inc.
Spire Alabama	Spire Alabama Inc.
Spire EnergySouth	Spire EnergySouth Inc., parent of Spire Gulf and Spire Mississippi
Spire Gulf	Spire Gulf Inc.
Spire Marketing	Spire Marketing Inc.
Spire Mississippi	Spire Mississippi Inc.
Spire Missouri	Spire Missouri Inc.
Spire STL Pipeline	Spire STL Pipeline LLC, or the 65-mile FERC-regulated pipeline it owns and operates to deliver natural gas into eastern Missouri
Spire Storage	The physical natural gas storage operations of Spire Storage West LLC and Spire Storage Salt Plains LLC
U.S.	United States
Utilities	Spire Missouri, Spire Alabama and the subsidiaries of Spire EnergySouth

PART I

FORWARD-LOOKING STATEMENTS

Certain matters discussed in this report, excluding historical information, include forward-looking statements. Certain words, such as “may,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “seek,” “target,” and similar words and expressions identify forward-looking statements that involve uncertainties and risks. Future developments may not be in accordance with our current expectations or beliefs and the effect of future developments may not be those anticipated. Among the factors that may cause results or outcomes to differ materially from those contemplated in any forward-looking statement are:

- Weather conditions and catastrophic events, particularly severe weather in U.S. natural gas producing areas;
- Volatility in gas prices, particularly sudden and sustained changes in natural gas prices, including the related impact on margin deposits associated with the use of natural gas derivative instruments, and the impact on our competitive position in relation to suppliers of alternative heating sources, such as electricity;
- Changes in gas supply and pipeline availability, including as a result of decisions by natural gas producers to reduce production or shut in producing natural gas wells and expiration or termination of existing supply and transportation arrangements that are not replaced with contracts with similar terms and pricing, as well as other changes that impact supply for and access to the markets in which our subsidiaries transact business;
- Acquisitions may not achieve their intended results;
- Legislative, regulatory and judicial mandates and decisions, some of which may be retroactive, including those affecting:
    - allowed rates of return and recovery of prudent costs,
    - incentive regulation,
    - industry structure,
    - purchased gas adjustment provisions,
    - rate design structure and implementation,
    - capital structures established for rate-setting purposes,
    - regulatory assets,
    - non-regulated and affiliate transactions,
    - franchise renewals,
    - authorization to operate facilities,
    - environmental or safety matters, including the potential impact of legislative and regulatory actions related to climate change and pipeline safety and security,
    - taxes,
    - pension and other postretirement benefit liabilities and funding obligations, or
    - accounting standards;
- The results of litigation;
- The availability of and access to, in general, funds to meet our debt obligations prior to or when they become due and to fund our operations and necessary capital expenditures, either through (i) cash on hand, (ii) operating cash flow, or (iii) access to the capital markets;
- Retention of, ability to attract, ability to collect from, and conservation efforts of, customers;
- Our ability to comply with all covenants in our indentures and credit facilities any violations of which, if not cured in a timely manner, could trigger a default of our obligations;
- Energy commodity market conditions;
- Discovery of material weakness in internal controls;
- The disruption, failure or malfunction of our operational and information technology systems, including due to cyberattacks; and
- Employee workforce issues, including but not limited to labor disputes, the inability to attract and retain key talent, and future wage and employee benefit costs, including costs resulting from changes in discount rates and returns on benefit plan assets.

Readers are urged to consider the risks, uncertainties, and other factors that could affect our business as described in this report. All forward-looking statements made in this report rely upon the safe harbor protections provided under the Private Securities Litigation Reform Act of 1995. We do not, by including this statement, assume any obligation to review or revise any particular forward-looking statement in light of future events.

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Item 1. Business

OVERVIEW

Spire Inc. ("Spire") was formed in 2000 and is the holding company for Spire Missouri Inc. ("Spire Missouri"), Spire Alabama Inc. ("Spire Alabama"), other gas utilities, and gas-related businesses. Spire Missouri was formed in 1857 and Spire Alabama was formed in 1948 by the merger of two gas companies. Spire is committed to transforming its business and pursuing growth through growing organically, investing in infrastructure, and advancing through innovation. The Company has three reportable business segments: Gas Utility, Gas Marketing and Midstream.

The Gas Utility segment includes the regulated operations of Spire Missouri, Spire Alabama, Spire Gulf Inc. ("Spire Gulf") and Spire Mississippi Inc. ("Spire Mississippi") (collectively, the "Utilities"). The business of the Utilities is subject to seasonal fluctuations with the peak period occurring in the winter heating season, typically November through April of each fiscal year. Spire Missouri is a public utility engaged in the purchase, retail distribution and sale of natural gas, with primary offices located in St. Louis, Missouri. Spire Missouri is the largest natural gas distribution utility system in Missouri, serving approximately 1.2 million residential, commercial and industrial customers in St. Louis, Kansas City, and other areas in Missouri. Spire Alabama is a public utility engaged in the purchase, retail distribution and sale of natural gas principally in central and northern Alabama, serving more than 0.4 million residential, commercial and industrial customers with primary offices located in Birmingham, Alabama. Spire Gulf and Spire Mississippi are utilities engaged in the purchase, retail distribution and sale of natural gas to 0.1 million customers in the Mobile, Alabama area and south-central Mississippi.

The Gas Marketing segment includes Spire Marketing Inc. ("Spire Marketing"), a wholly owned subsidiary providing natural gas marketing services.

The Midstream segment includes Spire STL Pipeline LLC ("Spire STL Pipeline") and Spire Storage (consisting of the operations of Spire Storage West LLC and Spire Storage Salt Plains LLC), which are subsidiaries engaged in the transportation and storage of natural gas.

As of September 30, 2023, Spire had 3,589 employees, including 1,967 for Spire Missouri and 802 for Spire Alabama. We believe that:

1. the safety and well-being of our employees is one of our most important responsibilities,
2. the development, education and advancement of employees is key to our sustainability, and
3. embracing an inclusive workforce full of diverse backgrounds and perspectives drives innovation.

We continue to implement processes, procedures and programs that reflect our focus on consistently reducing our employee injury and motor vehicle accident rates. In 2023, we held our 10th annual safety summit, and we encourage employees to identify potential safety improvements in the workplace, which is one of the driving forces behind reducing motor vehicle incidents and work-related injuries. We have also installed safety cameras in all Company vehicles, which are accompanied by driver coaching initiatives, to promote safe driving habits. To support employee wellness, we offer incentives for weight management and gym membership, as well as employee assistance programs to provide counseling services and emotional support, and we have a formalized comprehensive well-being program that focuses on the physical, emotional, social and financial health of every employee.

All employees have access to developmental assessments, customized training, specialized degree programs, and partnerships with best-in-class organizations related to industry courses, leadership and management workshops and computer application development seminars. In addition, all employees are eligible for up to $6,000 per year in tuition assistance and have access to the Spire Learning Center, our robust internal learning management system. In their first year, each construction and maintenance employee receives 80 hours of safety training, while each service and installation employee receives 200 hours of training. Field operations employees average 24 hours of technical and procedural training annually.

We regularly review and adjust our affirmative action plans based on placement and utilization rates, and we strive to create an even more diverse and inclusive work environment. Our Human Rights Policy demonstrates that Spire understands its universal responsibility to respect human rights and provides the basis for publicly affirming our values and embedding the responsibility into Spire's operations and the way we do business.

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Spire uses its website, SpireEnergy.com, as its primary channel for distribution of important information including news releases, analyst presentations and financial information. The information Spire, Spire Missouri and Spire Alabama file or furnish to the United States (U.S.) Securities and Exchange Commission (SEC), including annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and their amendments, and proxy statements are available free of charge under "Filings & reports" in the Investors section of Spire's website, SpireEnergy.com, as soon as reasonably practical after the information is filed with or furnished to the SEC. Information contained on Spire's website is not incorporated by reference in this report. The SEC also maintains a website that contains Spire's SEC filings (sec.gov).

GAS UTILITY

Natural Gas Supply

The Utilities' fundamental gas supply strategy is to meet the two-fold objective of 1) ensuring a dependable gas supply is available for delivery when needed and 2) insofar as is compatible with that dependability, purchasing gas that is economically priced. In structuring their natural gas supply portfolio, the Utilities focus on natural gas assets that are strategically positioned to meet the Utilities' primary objectives.

Spire Missouri focuses its gas supply portfolio around a number of large natural gas suppliers with equity ownership or control of assets strategically situated to complement its regionally diverse firm transportation arrangements. Spire Missouri utilizes Midcontinent, Gulf Coast, Northeast, and Rocky Mountain gas sources to provide a level of supply diversity that facilitates the optimization of pricing differentials as well as protecting against the potential of regional supply disruptions. Further, Spire STL Pipeline may deliver up to 400,000 million British thermal units (MMBtu) per day of natural gas into eastern Missouri, of which Spire Missouri is the foundation shipper with a contractual commitment of 350,000 MMBtu per day.

In fiscal 2023, Spire Missouri purchased natural gas from 24 different suppliers to meet its total service area current gas sales and storage injection requirements. Spire Missouri entered into firm agreements with suppliers including major producers and marketers providing flexibility to meet the temperature-sensitive needs of its customers. Natural gas purchased by Spire Missouri for delivery to its service areas included 50.3 billion cubic feet (Bcf) through the Southern Star Central Gas Pipeline, Inc. (Southern Star) system, 35.8 Bcf through the Enable Mississippi River Transmission LLC (MRT) system, 22.9 Bcf through the Spire STL Pipeline, 6.0 Bcf through the Tallgrass Interstate Gas Transmission, LLC (TIGT) system, 4.3 Bcf through the Panhandle Eastern Pipe Line Company, LP (PEPL) system, and 2.8 Bcf through the Rockies Express Pipeline, LLC (REX) system. Spire Missouri also holds firm transportation arrangements on several other interstate pipeline systems that provide access to gas supplies upstream. Some of Spire Missouri's commercial and industrial customers purchased their own gas with Spire Missouri transporting 51.2 Bcf to them through its distribution system.

The fiscal 2023 peak day send out of natural gas to Spire Missouri East customers, including transportation customers, occurred on December 23, 2022. The average temperature was 6 degrees Fahrenheit in St. Louis, and on that day Spire Missouri East customers consumed 1.04 Bcf of natural gas. This peak day demand was met with natural gas transported to St. Louis through the MRT, Missouri Gas Pipeline LLC, Spire STL Pipeline, and Southern Star transportation systems, and from Spire Missouri's on-system storage.

The fiscal 2023 peak day send out of natural gas to Spire Missouri West customers, including transportation customers, occurred on December 22, 2022. The average temperature was -3 degrees Fahrenheit in Kansas City, and on that day Spire Missouri West customers consumed 0.91 Bcf of natural gas. This peak day demand was met with natural gas transported to Kansas City through the Southern Star, PEPL, TIGT, and REX transportation systems.

Spire Alabama's distribution system is connected to two major interstate natural gas pipeline systems, Southern Natural Gas Company, L.L.C. (Southern Natural Gas) and Transcontinental Gas Pipe Line Company, LLC (Transco). It is also connected to two intrastate natural gas pipeline systems.

Spire Alabama purchases natural gas from various natural gas producers and marketers. Certain volumes are purchased under firm contractual commitments with other volumes purchased on a spot market basis. The purchased volumes are delivered to Spire Alabama's system using a variety of firm transportation, interruptible transportation and storage capacity arrangements designed to meet the system's varying levels of demand.

In fiscal 2023, Spire Alabama purchased natural gas from 24 different suppliers to meet current gas sales, storage injection, and liquefied natural gas (LNG) liquefaction requirements, of which one supplier is under a long-term supply agreement. Approximately 47.8 Bcf was purchased for delivery by Southern Natural Gas, 5.6 Bcf by BBT-AlaTenn, 3.8 Bcf by Transco, and 18.2 Bcf through intrastate pipelines to the Spire Alabama delivery points for its residential, commercial, and industrial customers.

The fiscal 2023 peak day send out for Spire Alabama was 0.6 Bcf of natural gas on December 23, 2022, when the average temperature was 13 degrees Fahrenheit in Birmingham, of which 80% was met with supplies transported through Southern Natural Gas, Transco, and intrastate facilities. The remaining 20% was fulfilled with LNG.

Spire Gulf's distribution system is directly connected to interstate pipelines, natural gas processing plants and gas storage facilities. Spire Gulf buys from a variety of producers and marketers, with BP Energy Company being the primary supplier.

Natural Gas Storage

Spire Missouri believes it currently has ample storage capacity to meet the demands of its distribution system, particularly to augment its supply during peak demand periods. Spire Missouri has a contractual right to store 21.6 Bcf of gas in MRT's storage facility located in Unionville, Louisiana, 16.0 Bcf of gas storage in Southern Star's system storage facilities located in Kansas and Oklahoma, 1.4 Bcf of firm storage on PEPL's system storage, and 1.0 Bcf of firm storage with Spire Storage Salt Plains. MRT's tariffs allow injections into storage from May 1 through November 1 and require the withdrawal from storage of all but 4.3 Bcf from November 1 through May 1. Southern Star tariffs allow both injections and withdrawals into storage year-round with ratchets that restrict the associated flows dependent upon the underlying inventory level per the contracts.

In addition, Spire Missouri supplements pipeline gas with natural gas withdrawn from its own underground storage field located in St. Louis and St. Charles Counties in Missouri. The field is designed to provide approximately 0.35 Bcf of natural gas withdrawals on a peak day and provides the ability to reinject natural gas during the heating season to replenish or increase deliverability, subject to maximum annual net withdrawals of approximately 4.0 Bcf of natural gas based on the inventory level that Spire Missouri plans to maintain.

Spire Alabama has a contractual right to store 12.7 Bcf of gas with Southern Natural Gas, 0.5 Bcf of gas with Gulf South Pipeline, 0.2 Bcf of gas with Transco and 0.2 Bcf of gas with Tennessee Gas Pipeline. In addition, Spire Alabama has 2.0 Bcf of on-system LNG storage that can provide the system with up to an additional 0.2 Bcf of natural gas daily to meet peak day demand.

Spire Gulf obtains adequate storage capacity through Gulf South Pipeline Company, LP, and Enstor Gas, LLC's Bay Gas Storage.

Union Agreements

The Company believes labor relations with its employees are good. Should that condition change, the Company could experience labor disputes, work stoppages or other disruptions that could negatively impact the Company's system operations, customer service, results of operations and cash flows.

The following table presents the Company's various labor agreements as of September 30, 2023:

Union	Local	Employees Covered	Contract Start Date	Contract End Date
Spire Missouri				
United Steel, Paper and Forestry, Rubber Manufacturing, Allied-Industrial and Service Workers International Union (USW)	884	67	August 10, 2021	July 31, 2024
USW	11-6	873	August 1, 2021	July 31, 2024
USW	11-6-03	98	August 1, 2021	July 31, 2024
USW	12561	132	August 1, 2022	July 31, 2025
USW	14228	40	August 1, 2022	July 31, 2025
USW	11-267	28	August 1, 2022	July 31, 2025
International Brotherhood of Electrical Workers	53	1	October 1, 2022	September 30, 2025
Gas Workers Metal Trades locals of the United Association of Journeyman and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada	781-Kansas City	215	August 1, 2022	July 31, 2025
Gas Workers Metal Trades locals of the United Association of Journeyman and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada	781-Monett	49	August 1, 2022	July 31, 2025
Total Spire Missouri		1,503		
Spire Alabama				
USW	12030	210	May 1, 2023	April 30, 2026
United Association of Gas Fitters	548	207	May 1, 2022	April 30, 2025
Total Spire Alabama		417		
Spire Gulf				
USW	541	61	August 1, 2023	July 31, 2026
Total Spire		1,981		

Operating Revenues and Customer Information

The following tables present information on Spire's revenues and volume sold and transported (before intersegment eliminations), and annual average numbers of customers for the three years ended September 30, 2023, 2022 and 2021.

Gas Utility Operating Revenues

(% of Total)	2023	2022	2021
Residential	67%	73%	58%
Commercial & Industrial	25%	17%	28%
Transportation	5%	6%	6%
Other	3%	4%	8%
Total	100%	100%	100%

Gas Utility Volume Sold and Transported

(In millions of CCF)	2023	2022	2021
Residential	965.3	994.7	1,069.6
Commercial & Industrial	468.7	468.9	479.0
Transportation	1,662.9	1,617.6	1,614.7
Interruptible	10.9	11.8	15.0
Total System	3,107.8	3,093.0	3,178.3
Off-System	112.9	82.0	69.4
Total	3,220.7	3,175.0	3,247.7

Gas Utility Customers	2023	2022	2021
Residential	1,621,822	1,618,515	1,612,385
Commercial & Industrial	112,753	113,077	112,635
Transportation	1,013	1,023	846
Interruptible	45	50	63
Total	1,735,633	1,732,665	1,725,929

Total annual average number of customers for Spire Missouri and Spire Alabama for fiscal 2023 was 1,203,003 and 430,290, respectively.

Regulatory Matters

For details on regulatory matters, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

Other Pertinent Matters

Spire Missouri is the only distributor of natural gas within its franchised service areas, while Spire Alabama is the main distributor of natural gas in its service areas. Spire Missouri and Spire Alabama have franchises in nearly all the communities where they provide service with terms varying from five years to an indefinite duration. A franchise is essentially a municipal permit to install and maintain pipes and construct other facilities in the community. All of the franchises are free from unduly burdensome restrictions and are adequate for the conduct of Spire Missouri's and Spire Alabama's current public utility businesses in their respective states. In recent years, although certain franchise agreements have expired, the Utilities have continued to provide service in those communities without formal franchises.

The principal competition for the Utilities comes from the local electric companies. Other competitors in the service areas include suppliers of fuel oil, coal, and propane, as well as natural gas pipelines that can directly connect to large volume customers. Coal has been price competitive as a fuel source for very large boiler plant loads, but environmental requirements have shifted the economic advantage to natural gas. Oil and propane can be used to fuel boiler loads and certain direct-fired process applications, but these fuels require on-site storage, thus limiting their competitiveness. Competition also comes from district steam systems in the downtown areas of both St. Louis and Kansas City and from municipally or publicly owned natural gas distributors located adjacent to

the Alabama service territories. Direct use of renewables will continue to grow in the future and compete against distributed generation using natural gas.

Residential, commercial, and industrial customers represent approximately 95% and 83% of fiscal 2023 operating revenues for Spire Missouri and Spire Alabama, respectively. Given the current level of natural gas supply and market conditions, the Utilities believe that the relative comparison of natural gas equipment and operating costs with those of competitive fuels will not change significantly in the foreseeable future, and that these markets will continue to be supplied by natural gas. In new multi-family and commercial rental markets, the Utilities' competitive exposures are presently limited to space and water heating applications.

Spire Missouri and Spire Alabama offer gas transportation service to its large commercial and industrial customers. Transportation customers represent approximately 2% and 14% of fiscal 2023 operating revenues for Spire Missouri and Spire Alabama, respectively. The Spire Missouri tariff approved for that type of service produces a margin similar to that which Spire Missouri would have received under their regular sales rates. Similarly, Spire Alabama's tariff is based on Spire Alabama's sales profit margin so that operating margins are unaffected.

The Utilities are subject to various environmental laws and regulations that, to date, have not materially affected the Utilities' or the Company's financial position and results of operations. For a detailed discussion of environmental matters, see Note 16, Commitment and Contingencies, of the Notes to Financial Statements in Item 8.

GAS MARKETING

Spire Marketing is engaged in the marketing of natural gas and related services throughout the U.S., which includes customers within and outside of the Utilities' service areas. For fiscal 2023 and 2022, Spire Marketing volumes averaged 1.40 Bcf/day and 1.73 Bcf/day, respectively. The majority of Spire Marketing's business is derived from the procurement and physical delivery of natural gas to a diverse customer base, primarily in the central and southern U.S. Through its retail operations, Spire Marketing offers natural gas marketing services to large commercial and industrial customers, while its wholesale business consists of producers, pipelines, power generators, municipalities, storage operators, and utility companies. Wholesale activities currently represent a majority of the total Gas Marketing business. The Gas Marketing strategy is to leverage its market expertise and risk management skills to manage and optimize the value of its portfolio of commodity, transportation, park and loan, and storage contracts while controlling costs and acting on new marketplace opportunities.

In the course of its business, Spire Marketing enters into agreements to purchase natural gas at a future date in order to lock up supply to cover future sales commitments to its customers. To secure access to the markets it serves, Spire Marketing contracts for transportation capacity on various pipelines from pipeline companies directly and from other parties through the secondary capacity market. Throughout fiscal 2023, Spire Marketing held approximately 1 Bcf per day of firm transportation capacity. In addition, to ensure reliability of service and to provide operational flexibility, Spire Marketing enters into firm storage contracts and interruptible park and loan transactions with various companies, where it is able to buy and retain gas to be delivered at a future date, at which time it sells the natural gas to third parties. As of September 30, 2023, Spire Marketing has contracted for approximately 18 Bcf of such storage and park and loan capacity for the 2023-2024 winter season.

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MIDSTREAM

Spire Midstream consists of three facilities located in the U.S.: Spire STL Pipeline, Spire Storage West, and Spire Storage Salt Plains.

Spire STL Pipeline owns and operates a 65-mile pipeline connecting the Rockies Express Pipeline in Scott County, Illinois, to multiple delivery points in St. Louis County, Missouri, including Spire Missouri. Spire STL Pipeline's operating revenue is derived primarily from Spire Missouri as its foundation shipper. The pipeline is under the jurisdiction of the Federal Energy Regulatory Commission (FERC).

Spire Storage West is engaged in the storage of natural gas serving markets primarily in the western region of the U.S. The facility is located in southwestern Wyoming and consists of two storage fields operating under one FERC market-based rate tariff currently authorized to provide up to 55 Bcf of storage capacity to customers. The actual storage capacity was 23 Bcf as of September 30, 2023, and management is in the process of expanding it to 39 Bcf by 2025.

Spire Storage Salt Plains is located in north central Oklahoma and serves markets in the midcontinent and midwestern U.S. The facility operates under intrastate regulation and has a certificated capacity of 13 Bcf and working capacity of 10 Bcf.

OTHER

Other components of the Company's consolidated information include Spire's subsidiaries engaged in the operation of a propane pipeline and risk management, among other activities, and unallocated corporate items, including certain debt and associated interest costs.

Item 1A. Risk Factors

Spire's, Spire Missouri's and Spire Alabama's businesses and financial results are subject to a number of risks and uncertainties, including those set forth below. The risks described below are those management considers to be material. When considering any investment in these companies' securities, investors should carefully consider the following information, as well as information contained in the caption "Forward-Looking Statements," Item 7A, and other documents Spire, Spire Missouri, and Spire Alabama file with the SEC. This list is not exhaustive, and management places no priority or likelihood based on the risk descriptions, order of presentation or grouping.

RISKS AND UNCERTAINTIES THAT RELATE TO REGULATORY, LEGISLATIVE AND LITIGATION FACTORS

Regulatory and legislative developments in the energy industry related to climate change or in support of increased energy efficiency may adversely affect operations and financial results.

There have been a number of federal, state and local legislative and regulatory initiatives proposed in recent years in an attempt to control or limit the effects of global warming and overall climate change, including greenhouse gas emissions, such as methane and carbon dioxide. Adoption of this type of legislation by Congress or similar legislation by states or localities, or the adoption of related regulations by federal, state or local governments mandating a substantial reduction in greenhouse gas emissions, restricting the use of fossil fuels, such as natural gas, or restricting the construction of infrastructure could have far-reaching and significant impacts on the energy industry. Such new legislation or regulations could result in increased compliance costs or additional operating restrictions, adversely affect the demand for natural gas and/or midstream services, or impact the prices charged to customers, potentially reducing customer growth opportunities and/or increasing the cost of doing business.

In addition, legislative and regulatory initiatives by the federal, state and local governments addressing greenhouse gas emissions or restricting the use of natural gas could adversely affect customer demand. The promulgation of regulations of the emissions of greenhouse gases and efficiency for residential gas furnaces and other gas appliances or the potential enactment of congressional legislation addressing global warming and climate change may decrease customer usage, encourage fuel switching from gas to other energy forms, and may result in future additional compliance costs that could impact the Utilities' financial conditions and results of operations. At this time, we cannot predict the potential impact of such laws or regulations that may be adopted on the Company's and the Utilities' future business, financial condition or financial results.

Regulation of the Utilities' businesses may impact rates they are able to charge, costs, and profitability.

The Utilities are subject to regulation by federal, state and local authorities. At the state level, the Utilities are regulated in Missouri by the Missouri Public Service Commission (MoPSC), in Alabama by the Alabama Public Service Commission (APSC), and in Mississippi by the Mississippi Public Service Commission (MSPSC). These state public service commissions regulate many aspects of the Utilities' distribution operations, including construction and maintenance of facilities, operations, safety, the rates the Utilities may charge customers, the terms of service to their customers, transactions with their affiliates, the rate of return they are allowed to realize, and the accounting treatment for certain aspects of their operations. For further discussion of these accounting matters, see Regulatory Accounting under Critical Accounting Estimates in Item 7.

Accounting for the economics of rate regulation affects multiple financial statement line items (such as property, plant, and equipment; regulatory assets and liabilities; operating revenues; and operating expenses) and affects multiple disclosures in the Company's financial statements. There is a risk that the state public service commissions will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. A material disallowance of deferred costs could adversely affect the Utilities' results of operations.

The MoPSC also approves Spire Missouri's Infrastructure System Replacement Surcharge (ISRS). The ISRS allows Spire Missouri expedited recovery for its investment to upgrade its infrastructure and enhance its safety and reliability without the necessity of a formal rate case. Such investments are subject to review, and there is risk that any material disallowance of costs under ISRS could adversely affect the timing of revenues and cash flows.

The Utilities' ability to obtain and timely implement rate increases and rate supplements to maintain the current rate of return is subject to regulatory review and approval. There can be no assurance that they will be able to obtain rate increases or rate supplements or continue earning the current authorized rates of return. Spire Alabama's and Spire Gulf's rate setting process, Rate Stabilization and Equalization (RSE), is subject to regulation by the APSC and is implemented pursuant to APSC orders expiring September 30, 2025. RSE adjustments would continue after that date unless the APSC enters an order to the contrary in a manner consistent with the law. Spire Mississippi is subject to regulation by the MSPSC and utilizes the Rate Stabilization Adjustment (RSA) Rider. For further details, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

The Utilities could incur additional costs if required to adjust to new laws or regulations, revisions to existing laws or regulations or changes in interpretations of existing laws or regulations. In addition, as the regulatory environment for the natural gas industry increases in complexity, the risk of inadvertent noncompliance could also increase. If the Utilities fail to comply with applicable laws and regulations, whether existing or new, they could be subject to fines, penalties, business interruption or other enforcement action by the authorities that regulate the Utilities' operations.

Federal safety and integrity regulations related to pipeline and storage operators and owners of critical infrastructure may impose significant costs and liabilities on the Company.

The U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) requires pipeline and natural gas storage operators to develop integrity management programs to evaluate their pipelines comprehensively and to take additional measures to protect pipeline segments located in areas where a leak or rupture could potentially do the most harm.

The Company is required to maintain programs that are intended to assess pipeline integrity. Any repair, remediation, preventative or mitigating actions may require significant capital and operating expenditures. PHMSA constantly updates its regulations to ensure the highest levels of pipeline safety. As the operator of pipelines, Spire is required to:

- perform ongoing assessments of pipeline integrity;
- identify and characterize applicable threats to pipelines;
- improve data collection, integration and analysis;
- repair and remediate the pipeline as necessary; and
- implement preventative and mitigating actions.

The Transportation Security Administration (TSA) requires owners and operators of specified pipeline facilities to take action to prevent disruption and degradation to their infrastructure to achieve the following security outcomes:

- develop network segmentation policies and controls;
- create access control measures to secure and prevent unauthorized access to critical cyber systems;
- build continuous monitoring and detection policies and procedures to detect threats and correct anomalies; and
- reduce the risk of exploitation of unpatched systems in a timely manner using a risk-based methodology.

As such, pipeline owners and operators are required to establish and execute a TSA-approved Cybersecurity Implementation Plan, develop and maintain a Cybersecurity Incident Response Plan, and establish a Cybersecurity Assessment Program.

Costs to comply with these and other such future safety and integrity regulations are significant. Additionally, should the Company fail to comply with applicable statutes, rules, regulations and orders, it could be subject to significant fines, penalties, business interruption or other enforcement actions.

Environmental laws and regulations may require significant expenditures or increase operating costs.

The Utilities and Midstream companies are subject to federal, state and local environmental laws and regulations affecting many aspects of their present and future operations. These laws and regulations require these businesses to obtain and comply with a wide variety of environmental licenses, permits, inspections, and approvals. Failure to comply with these laws and regulations and failure to obtain any required permits and licenses may result in costs in the form of fines, penalties, business interruptions or other enforcement actions, which may be material. In addition, existing environmental laws and regulations could be revised or reinterpreted and/or new laws and

regulations could be adopted or become applicable to these companies or their facilities, thereby impacting the cost of compliance. The discovery of presently unknown environmental conditions, including former manufactured gas plant sites, and adverse claims under environmental laws and regulations may result in expenditures and liabilities, which could be material. To the extent environmental compliance costs are self-insured, or not fully covered by insurance or recovered in rates from customers, those costs may have an adverse effect on financial condition and results of operations.

The Utilities' liquidity may be adversely affected by delays in recovery of their costs, due to regulation.

In the normal course of business, there is a lag between when the Utilities incur increases in certain of their costs and the time in which those costs are considered for recovery in the ratemaking process. Cash requirements for increased gas supply costs, operating costs, increased funding levels of defined benefit pension and postretirement costs, capital expenditures, interest expense and other increases in the costs of doing business, including inflation, can require outlays of cash prior to the authorization of increases in rates charged to customers, as approved by the MoPSC, APSC, or MSPSC. Accordingly, the Utilities' liquidity can be adversely impacted to the extent higher costs are not timely recovered from their customers.

Changes to income tax policy, certain tax elections, tax regulations and future taxable income could adversely impact the Company's financial condition and results of operations.

The Company has significantly reduced its current federal and state income tax obligations over the past few years through tax planning strategies and application of tax rules which included the use of bonus depreciation deductions for certain expenditures for property. As a result, the Company generated large annual taxable losses that have resulted in significant federal and state net operating losses. The Company plans to utilize these net operating losses in the future. The value of these net operating losses could be reduced if the Company cannot generate enough taxable income in the future to utilize all of the net operating losses generated prior to the Tax Cuts and Jobs Act of 2017 before they expire due to income tax policy changes, lower-than-expected financial performance and/or regulatory actions.

Changes to income tax policy, laws and regulations, including but not limited to changes in tax rates, the deductibility of certain expenses including interest and/or changes in the deductibility of certain expenditures for property, could adversely impact the Company. Those impacts could include reducing the value of its net operating losses and could result in material charges to earnings. Further, the Company's financial condition and results of operations may be adversely impacted. Notably, the Inflation Reduction Act became effective on August 16, 2022. This new law provides various tax credits and incentives with respect to clean energy. The Company is still evaluating the impact and applicability of these programs to its operations, but they are not expected to have a material impact on the Company.

The Company may be involved in legal or administrative proceedings before various courts and governmental bodies that could adversely affect its results of operations and financial condition.

The Company may be involved in legal or administrative proceedings before various courts and governmental bodies with respect to general claims, rates, environmental issues, gas cost prudence reviews and other matters. For further details, see Contingencies in Note 16 to the financial statements in Item 8. Adverse decisions regarding these matters, to the extent they require the Company to make payments in excess of amounts provided for in its financial statements, or to the extent they are self-insured or not covered by insurance, could adversely affect the results of operations and financial condition.

Commodity markets and derivative instruments are regulated by federal agencies, and new developments in this area may adversely impact Spire Marketing's results of operations and financial condition.

As a participant in the natural gas market, Spire Marketing is subject to applicable statutes, rules, regulations and orders administered by FERC and the Commodity Futures Trading Commission (CFTC), including those directed generally to prevent fraud or manipulation involving natural gas transactions (physical or financial transactions). Spire Marketing could be subject to fines, penalties, business interruption or other enforcement actions by the FERC or CFTC, or both, for failure to comply with such rules. New regulatory and legislative actions may adversely impact Spire Marketing's results of operations and financial condition by potentially reducing customer growth opportunities and/or increasing the costs of doing business.

Spire Marketing uses bilateral contracts and derivative instruments such as futures contracts, options and swaps to hedge or mitigate ongoing commercial risks. Most standardized swaps, under the Dodd-Frank Act and regulations from the CFTC, are required to be cleared through a registered clearing facility and traded on a designated exchange or swap execution facility, subject to certain exceptions. These regulations may also require compliance with certain margin requirements for over-the-counter derivative contracts with certain regulated

entities, which could adversely affect liquidity and ability to use derivatives to hedge risks. In addition, the CFTC's rules require companies, including Spire Marketing, to maintain regulatory records of swap transactions, and to report swaps to centralized swap data repositories, among other compliance obligations.

Although Spire Marketing may qualify for exceptions to certain of these CFTC rules, its derivatives counterparties are likely subject to capital, margin, documentation and business conduct requirements imposed as a result of the Dodd-Frank Act. These obligations may increase transaction costs and may make it more difficult for Spire Marketing to enter into hedging transactions on favorable terms or affect the number and/or creditworthiness of available swap counterparties. In that event, Spire Marketing's inability to enter into derivatives instruments or other commercial risk hedging transactions on favorable terms, or at all, could increase operating expenses and expose it to unhedged commercial risks, including potential adverse changes in commodity prices.

In October 2020, the CFTC finalized its rules that modify and expand the applicability of speculative position limits on the amounts of certain futures contracts (including options thereon), cash-settled "lookalike" contracts for or linked to the commodities underlying the foregoing futures contracts, as well as economically equivalent swaps containing "identical material" contractual specifications, terms and conditions as the foregoing contracts. While Spire Marketing anticipates qualifying for a bona fide hedging exemption from such limits, the CFTC's final rules and earlier adopted aggregation rules may cause Spire Marketing's hedging strategies described above to be limited if Spire Marketing is unable to qualify for an exemption.

RISKS THAT RELATE TO OPERATIONAL FACTORS

The Company's ability to meet its customers' natural gas requirements may be impaired if contracted gas supplies, interstate pipeline and/or storage services are not available or delivered in a timely manner.

In order to meet their customers' annual and seasonal natural gas demands, the Utilities must obtain sufficient supplies, interstate pipeline capacity, and storage capacity. If they are unable to obtain these, either from their suppliers' inability to deliver the contracted commodity or the inability to secure replacement quantities, to the extent not mitigated by tariffs, contractual indemnification or insurance, the Utilities' financial condition and results of operations may be adversely impacted. If a substantial disruption in interstate natural gas pipelines' transmission and storage capacity were to occur during periods of heavy demand, the Utilities' financial results could be adversely impacted.

Spire Marketing's ability to deliver natural gas to its customers is contingent upon the performance of its suppliers and capability of pipeline and storage operators to fulfill delivery obligations to Spire Marketing under firm contracts. To the extent that it is unable to obtain the necessary supplies, Spire Marketing's financial position and results of operations may be adversely impacted.

Midstream is dependent upon third-party pipelines and other facilities to provide delivery options to and from its facilities. If any pipeline connection were to become unavailable for volumes of natural gas due to repairs, damage to the facility, lack of capacity or any other reason, the ability to continue receiving or delivering natural gas could be restricted, and to the extent not mitigated by contractual indemnification, insurance or tariffs, would thereby reduce its revenues. Any permanent interruption that causes a material reduction in volumes could result in an impairment loss that could have a material adverse effect on the financial condition and results of operations.

Transporting, distributing, and storing natural gas and propane involves numerous risks that may result in accidents and other operating risks.

Natural gas transportation, distribution and storage activities inherently involve a variety of integrity issues, hazards and operations risks, such as leaks, accidental explosions, blowouts, damage caused by third parties, and mechanical problems, which could cause substantial financial losses. In addition, these risks could result in serious injury to employees and non-employees, loss of human life, significant damage to property, environmental pollution, impairment of operations, and substantial losses to the Company and its subsidiaries. The location of pipelines and storage facilities near populated areas, including residential areas, commercial business centers, and industrial sites, could increase the level of damages resulting from these risks. Similar risks also exist for Spire Missouri's propane storage, transmission and minor distribution operations. These activities may subject the Company to litigation or administrative proceedings. Such litigation or proceedings could result in substantial monetary judgments, fines, penalties, business interruption or other enforcement actions against the Company and its subsidiaries or be resolved on unfavorable terms. In accordance with customary industry practices, the Utilities and other Spire businesses maintain insurance against a significant portion, but not all, of these risks and losses. To the extent the occurrence of any of these events is self-insured or not fully covered by

insurance, it could adversely affect the financial condition and results of operations of the Company and its subsidiaries.

Because of competition, the Company may not be able to retain existing customers or acquire new customers, or may be unsuccessful in retaining or acquiring contractual assets on favorable terms, which could have an adverse impact on its business, results of operations and financial condition.

The Utilities face the risk that larger commercial or industrial customers may bypass gas distribution services by directly connecting with interstate pipelines or, in the case of Spire Alabama and Spire Gulf, also from municipally or publicly owned gas distributors located adjacent to its service territory. The Utilities cannot provide any assurance that increased competition will not have a material adverse effect on their business, financial condition or results of operations.

The Utilities compete with distributors offering a broad range of services and prices, from full-service distributors to those offering delivery only. The Utilities also compete for retail customers with suppliers of alternative energy products, principally propane and electricity, and to a growing extent, distributed sources of renewable energy. If they are unable to compete effectively, the Utilities may lose existing customers and/or fail to acquire new customers, which in the aggregate could have a material adverse effect on their business, results of operations and financial condition. Along those lines, changes in wholesale natural gas prices compared with prices for electricity, fuel oil, coal, propane, or other energy sources can significantly impact the cost of delivered natural gas, which may affect the Utilities' retention of natural gas customers and may adversely impact their financial condition and results of operations.

Spire Storage is subject to competition from similar services provided by pipelines and from competing independent storage providers capable of serving its customers. Natural gas storage is a competitive business, with competitors having the ability to expand storage capacity. Increased competition in the natural gas storage business could reduce the demand and drive rates down for the Company's natural gas storage services.

Also, Spire Marketing profitability may be impacted by the effects of the expiration, in the normal course of business, of certain of its natural gas supply, sales, transportation and storage contracts if, because of competition or other reasons, those contracts cannot be replaced and/or renewed with arrangements with similar terms and pricing.

Significantly warmer-than-normal weather conditions and the effects of climate change may affect the Utilities' sale of heating energy and adversely impact their financial position and results of operations.

The Utilities' earnings are primarily generated by the sale of heating energy. Spire Missouri and Spire Mississippi each have a Weather Normalization Adjustment rider, Spire Alabama has a Temperature Adjustment Rider, and Spire Gulf has a Weather Impact Normalization Factor. These mechanisms, approved by the respective state regulatory body, provide better assurance of the recovery of fixed costs and margins during winter months despite variations in sales volumes due to the impacts of weather, while the annual rate designs of Alabama and Mississippi help adjust for other factors that affect customer usage. However, significantly warmer-than-normal weather conditions in the Utilities' service areas and other factors, such as climate change, alternative energy sources and increased efficiency of gas furnaces and other appliances, may result in reduced profitability and decreased cash flows attributable to lower gas sales. Furthermore, these mechanisms do not fully mitigate the impact of warmer weather and continuation of these adjustment factors is subject to regulatory discretion.

To the extent climate change results in warmer temperatures, financial results could be adversely affected through lower gas volumes and revenues and reduced marketing opportunities. Management believes it is likely that any such resulting impacts would occur over a long period of time and thus would be difficult to quantify with any degree of specificity. Another possible impact of climate change may be more frequent and more severe weather events, such as significant wind or flooding events, which could increase costs to repair damaged facilities and restore service to customers or result in lost revenues if the Company were unable to deliver natural gas to customers. Such weather events could also disrupt our usual gas supplies and make it impossible or extremely costly to find replacement gas for our customers. To the extent such impacts are self-insured, or not covered by insurance or recovered in rates, the foregoing events could have a material adverse effect on the Company's financial condition and results of operations.

The Company's natural gas storage business includes inherent geologic and operational risks.

The Company plans to continue to increase capacity, improve operating performance, and improve the integrity of its storage fields and associated above-ground facilities of Spire Storage. Construction of such assets is subject to various risks and uncertainties, including supply chain and labor disruptions, weather conditions during construction, equipment failures and construction quality issues. Any such disruptions, as well as any negative effects from the risks discussed below, could result in an impairment of Spire's investment in the project, and such impairment could have a material adverse effect on the Company's financial condition and results of operations.

Any damage to the Spire Storage facilities or pipelines, or lack of integrity to its storage fields, including damages caused by a blow-out, to the extent such impacts are self-insured or not covered by insurance, could have a material adverse effect on the Company's financial condition and results of operations.

The Company does not own all the land on which its storage facilities were constructed, and it is, therefore, subject to the possibility of more onerous terms or increased costs to retain necessary land use, if and when applicable property rights expire or are renewed. Changes in the terms of such land use could have an adverse impact on the financial condition and results of operations of the Company's storage business.

Increased dependence on technology may hinder the Company's business operations and adversely affect their financial condition and results of operations if such technologies fail.

The Company has implemented or acquired a variety of technological tools including both Company-owned information technology and technological services provided by outside parties. These tools and systems support critical functions including the Company's integrated planning, scheduling and dispatching of field resources, its automated meter reading system, customer care and billing, procurement and accounts payable, operational plant logistics, management reporting, and external financial reporting. The failure of these or other similarly important technologies, or the Company's inability to have these technologies supported, updated, expanded, or integrated into other technologies, could hinder its business operations and, to the extent such impacts are self-insured or not covered by insurance, could adversely impact its financial condition and results of operations.

Although the Company has, when possible, developed alternative sources of technology and built redundancy into its computer networks and tools, there can be no assurance these efforts to date would protect against all potential issues related to the loss of any such technologies or the Company's use of such technologies.

A cyberattack may disrupt the Company's operations or lead to a loss or misuse of confidential and proprietary information or potential liability.

The Company is subject to cybersecurity risks primarily related to breaches of security pertaining to sensitive customer, employee, and vendor information maintained by the Company, its subsidiaries, or its third-party vendors in the normal course of business, as well as breaches in the technology that manages natural gas supply and control operations and other business processes. A loss of confidential or proprietary data or security breaches of technology for operations or business processes could adversely affect the Company's reputation, diminish customer confidence, disrupt operations, and subject the Company to possible financial liability, any of which could have a material effect on its financial condition and results of operations.

The Company acknowledges increased dependence on technology increases its exposure to cyberattack. The Company closely monitors both preventive and detective measures to manage these risks and maintain cyber risk insurance to mitigate a significant portion, but not all, of these risks and losses. To the extent that the occurrence of any of these cyber events is self-insured or not covered by insurance, it could adversely affect the Company's financial condition and results of operations.

The Company's business activities are concentrated in a few states and regions.

The Utilities provide natural gas distribution services to customers in Alabama, Mississippi, and Missouri. Midstream is focused on the Rocky Mountain/Western and Midcontinent regions. Changes in the regional economies, politics, regulations and weather patterns of these states could negatively impact growth opportunities and the usage patterns and financial condition of customers and could adversely affect earnings, cash flows, and financial position.

RISKS THAT RELATE TO FINANCIAL, ECONOMIC AND MARKET FACTORS

As a holding company, Spire depends on its operating subsidiaries to meet its financial obligations.

Spire is a holding company with no significant assets other than the stock of its operating subsidiaries and cash investments. Spire, and Spire Missouri prior to the holding company's formation in 2000, has paid common stock dividends continuously since 1946. Spire's ability to pay dividends to its shareholders is dependent on the ability

of its subsidiaries to generate sufficient net income and cash flows to pay upstream dividends and make loans or loan repayments.

A downgrade in Spire's and/or its subsidiaries' credit ratings and/or reduced access to credit and capital markets may negatively affect its cost of capital or prevent it from executing operating strategies.

Currently, Spire, Spire Missouri, and Spire Alabama have investment-grade credit ratings. There is no assurance such credit ratings for any of these companies will remain in effect for any given period of time or such ratings will not be lowered, suspended or withdrawn entirely by the rating agencies, if, in each rating agency's judgment, circumstances so warrant. Spire has a working capital line of credit to meet its short-term liquidity needs. Spire's line of credit may be used to meet the liquidity needs of any of its subsidiaries, subject to sublimits. If the rating agencies lowered the credit rating at any of these entities, particularly below investment grade, it might significantly limit that entity's ability to secure new or additional credit facilities and would increase its costs of borrowing. Spire's and the Utilities' ability to borrow under current or new credit facilities and costs of that borrowing have a direct impact on their ability to execute their operating strategies.

Spire Marketing relies on its cash flows, ability to effect net settlements with counterparties, parental guaranties, and access to Spire's liquidity resources to satisfy its credit and working capital requirements. Spire Marketing's ability to rely on parental guaranties is dependent upon Spire's financial condition and credit ratings. If Spire's credit ratings were lowered, particularly below investment grade, counterparty acceptance of parental guaranties may diminish, resulting in decreased availability of credit. Additionally, under such circumstances, certain counterparties may require Spire Marketing to provide prepayments or cash deposits, amounts of which would be dependent upon natural gas market conditions. Reduced access to credit or increased credit requirements, which may also be caused by factors such as higher overall natural gas prices, may limit Spire Marketing's ability to enter into certain transactions. In addition, Spire Marketing has concentrations of counterparty credit risk in that a significant portion of its transactions are with (or are associated with) utility companies and their marketing affiliates. The concentration of counterparties has the potential to affect the Company's overall exposure to credit risk, either positively or negatively, in that customers in this group may be affected similarly by changes in economic, industry, or other conditions. Spire Marketing also has concentrations of credit risk in certain individually significant counterparties. Spire Marketing closely monitors its credit exposure and, although uncollectible amounts have not been significant, increased counterparty defaults are possible and may result in financial losses and/or capital limitations.

Regional supply/demand imbalances, fluctuations in natural gas commodity prices, changes in the terms and rates charged by midstream facilities, and infrastructure projects may adversely impact the future profitability of the Company.

Competition in the marketplace and fluctuations in natural gas commodity prices have a direct impact on Spire Marketing. Changing market conditions and prices, the narrowing of regional and seasonal price differentials and limited future price volatility may adversely impact its sales margins or affect its ability to procure gas supplies and/or to serve certain customers, which may reduce sales profitability and/or increase certain credit requirements caused by reductions in netting capability. Although the FERC regulates the interstate transportation of natural gas and establishes the general terms and conditions under which Spire Marketing may use interstate gas pipeline capacity to purchase and transport natural gas, Spire Marketing must occasionally renegotiate its transportation agreements with a concentrated group of pipeline companies. Renegotiated terms of new agreements, or increases in FERC-authorized rates of existing agreements, may impact Spire Marketing's future profitability. Profitability may also be adversely impacted if pipeline capacity or future storage capacity secured is not fully utilized.

Storage businesses are affected by various gas market fundamentals which impact the level of demand for storage services and the rates that can be charged for these services. These market fundamentals include: seasonal price spread; monthly, daily and hourly price volatility; locational basis for pricing points on pipelines connected to a storage facility; seasonal, daily and hourly weather; and operational impacts in supply and market areas served by a storage facility and its connected pipelines. These fundamentals have varying and potentially material adverse impacts on the various services offered by storage facilities and the rates that can be charged for these services in the market. These services include long-term firm storage, short-term park and loan, wheeling, and optimization. Rates below the variable costs to operate a storage facility could result in a decision to not operate all the capacity in the facility or to operate the facility at a loss if required to fulfill firm customer contract obligations. A sustained decline in these rates or a shut-in of all or a portion of one or more facilities' capacity could have an adverse impact on the Company's financial condition and results of operations.

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Spire Missouri's and Spire Alabama's income from off-system sales and capacity release is subject to fluctuations in market conditions and changing supply and demand conditions in areas the Utilities hold pipeline capacity rights. Specific factors impacting the Utilities' income from off-system sales and capacity release include the availability of attractively priced natural gas supply, availability of pipeline capacity, and market demand. Income from off-system sales and capacity release is shared with customers. Spire Missouri and Spire Alabama are allowed to retain 25% of the net margins achieved as a result of such off-system sales and capacity release. The Utilities' ability to retain such income in the future is also subject to regulatory discretion.

Rapid significant increases in natural gas prices may adversely affect the Utilities' liquidity and, in certain circumstances, results of operations.

The tariff rate schedules of Spire Missouri, Spire Gulf and Spire Mississippi contain Purchased Gas Adjustment (PGA) clauses and Spire Alabama's tariff rate schedule contains a Gas Supply Adjustment (GSA) rider that permit the Utilities to file for rate adjustments to recover the cost of purchased gas. Changes in the cost of purchased gas are flowed through to customers and may affect uncollectible amounts and cash flows and can therefore impact the amount of capital resources.

Currently, Spire Missouri is allowed to adjust the gas cost component of rates up to four times each year while Spire Alabama and Spire Gulf (collectively, the "Alabama Utilities") and Spire Mississippi may adjust the gas cost component of their rates on a monthly basis. Spire Missouri must make a mandatory gas cost adjustment at the beginning of the winter, in November, and during the next twelve months may make up to three additional discretionary gas cost adjustments, so long as each of these adjustments is separated by at least two months.

The MoPSC typically approves the Spire Missouri PGA changes on an interim basis, subject to refund and the outcome of a subsequent audit and prudence review. Due to such review process, there is a risk of a disallowance of full recovery of these costs. Any material disallowance of purchased gas costs would adversely affect results of operations. The Alabama Utilities' gas supply charges are submitted for APSC review on a monthly basis, regardless of whether there is a request for a change, so prudence review occurs on an ongoing basis. Spire Mississippi's PGA is adjusted on a monthly basis for the most recent charges and is filed at the MSPSC on a monthly basis.

Increases in the prices the Utilities charge for gas may also adversely affect revenues because they could lead customers to reduce usage and cause some customers to have trouble paying the resulting higher bills. These higher prices may increase bad debt expenses and ultimately reduce earnings. Rapid increases in the price of purchased gas may result in an increase in short-term debt.

To lower financial exposure to commodity price fluctuations, Spire Missouri enters into contracts to hedge the forward commodity price of its natural gas supplies. As part of this strategy, Spire Missouri may use fixed-price forward physical purchase contracts, swaps, futures, and option contracts. However, Spire Missouri does not hedge the entire exposure of energy assets or positions to market price volatility, and the coverage will vary over time. Any costs, gains, or losses experienced through hedging procedures, including carrying costs, generally flow through the PGA clause, thereby limiting Spire Missouri's exposure to earnings volatility. However, variations in the timing of collections of such gas costs under the PGA clause and the effect of cash payments for margin deposits associated with Spire Missouri's use of natural gas derivative instruments may cause short-term cash requirements to vary. These procedures remain subject to prudence review by the MoPSC.

Other than fixed-price forward physical purchase contracts, Spire Alabama, Spire Gulf, and Spire Mississippi currently do not utilize risk mitigation strategies that incorporate commodity hedge instruments, but Spire Alabama has the ability to do so through its GSA.

Risk management policies, including the use of derivative instruments, may not fully protect Spire Marketing's sales and results of operations from volatility and may result in financial losses.

In the course of its business, Spire Marketing enters into contracts to purchase and sell natural gas at fixed prices and index-based prices. Commodity price risk associated with these contracts has the potential to impact earnings and cash flows. To minimize this risk, Spire Marketing has a risk management policy that provides for daily monitoring of a number of business measures, including fixed price commitments.

Spire Marketing currently manages the commodity price risk associated with fixed-price commitments for the purchase or sale of natural gas by either closely matching the offsetting physical purchase or sale of natural gas at fixed prices or through the use of natural gas futures, options, and swap contracts traded on or cleared through the New York Mercantile Exchange, Inc. and/or the Intercontinental Exchange to lock in margins. These exchange-traded/cleared contracts may be designated as cash flow hedges of forecasted transactions. However, market conditions and regional price changes may cause ineffective portions of matched positions to result in financial losses. Additionally, to the extent that Spire Marketing's natural gas contracts are classified as trading activities or do not otherwise qualify for the normal purchases or normal sales designation (or the designation is not elected), the contracts are recorded as derivatives at fair value each period. Accordingly, the associated gains and losses are reported directly in earnings and may cause volatility in results of operations. Gains or losses (realized and unrealized) on certain wholesale purchase and sale contracts, consisting of those classified as trading activities, are required to be presented on a net basis (instead of a gross basis) in the statements of consolidated income. Such presentation could result in volatility in the Company's operating revenues.

Spire's pension and other postretirement benefit plans are subject to investment and interest rate risk that could negatively impact its financial condition.

Spire and its subsidiaries have pension and other postretirement benefit plans that provide benefits to many of their employees and retirees. Costs of providing benefits and related funding requirements of these plans are subject to changes in the market value of the assets that fund the plans. The funded status of the plans and the related costs reflected in the Company's financial statements are affected by various factors, which are subject to an inherent degree of uncertainty, including economic conditions, financial market performance, interest rates, life expectancies and demographics. Recessions and volatility in the domestic and international financial markets have negatively affected the asset values of the Company's pension plans at various times in the past. Poor investment returns or lower interest rates may necessitate accelerated funding of the plans to meet minimum federal government requirements, which could have an adverse impact on the Company's financial condition and results of operations. For more information, including regulatory provisions affecting the Utilities' plans, see Note 13, Pension Plans and Other Postretirement Benefits, of the Notes to Financial Statements in Item 8.

In connection with acquisitions, Spire and Spire Missouri recorded goodwill and long-lived assets that could become impaired and adversely affect its financial condition and results of operations.

Spire and Spire Missouri assess goodwill for impairment annually or more frequently if events or circumstances occur that would more likely than not reduce the fair value of a reporting unit below its carrying value. The Company and Spire Missouri assess their long-lived assets for impairment whenever events or circumstances indicate an asset's carrying amount may not be recoverable. To the extent the value of goodwill or long-lived assets becomes impaired, the Company and Spire Missouri may be required to incur impairment charges that could have a material impact on their results of operations.

Since interest rates are a key component, among other assumptions, in the models used to estimate the fair values of the Company's reporting units, rises in interest rates would generally decrease the calculated fair values and future impairments may occur. Due to the subjectivity of the assumptions and estimates underlying the impairment analysis, Spire and Spire Missouri cannot provide assurance that future analyses will not result in impairment. These assumptions and estimates include projected cash flows, current and future rates for contracted capacity, growth rates, weighted average cost of capital and market multiples.

GENERAL RISK FACTORS

Resources expended to pursue or integrate business acquisitions, investments or other business arrangements may adversely affect Spire's financial position and results of operations and return on investments made may not meet the Company's expectations.

From time to time, Spire may seek to grow through strategic acquisitions, investments or other business arrangements. Attractive acquisition and investment opportunities may be difficult to complete on economically acceptable terms. It is possible for Spire to expend considerable resources pursuing acquisitions and investments that for a variety of reasons do not move forward. Similarly, investment opportunities may be hindered or halted by regulatory or legal actions. To the extent acquisitions or investments are made, such transactions involve a number of risks, including but not limited to, the assumption of material liabilities, the diversion of management's attention from daily operations, difficulties in assimilation and retention of employees, securing adequate capital to support the transaction, and obtaining regulatory approval. Uncertainties exist in assessing the value, risks, profitability, and liabilities associated with certain businesses or assets and there is a possibility that anticipated operating and financial efficiencies expected to result from an acquisition or investment do not develop. Additionally, there are no assurances resources expended will achieve their intended result.

The failure to complete an acquisition successfully or to integrate acquisitions or investments it may undertake could have an adverse effect on the Spire's financial condition and results of operations and the market's perception of the Company's execution of its strategy. To the extent Spire engages in any of the above activities together with or through one or more of its subsidiaries, including the Utilities, such subsidiaries may face the same risks.

Unexpected losses may adversely affect Spire's or its subsidiaries' financial condition and results of operations.

As with most businesses, there are operations and business risks inherent in the activities of Spire's subsidiaries. If, in the normal course of business, Spire or any of its subsidiaries becomes a party to litigation, such litigation could result in substantial monetary judgments, fines, penalties, business interruption or other enforcement actions or be resolved on unfavorable terms. In accordance with customary practice, Spire and its subsidiaries maintain insurance against a significant portion of, but not all, risks and losses, though it does reinsure a portion of the risk from certain of Spire's insurers through its captive insurance company. Spire and its operating companies employ many strategies to gain assurance such risks are appropriately managed, mitigated, or insured, as appropriate. To the extent a loss is self-insured or not fully covered by insurance or other risk mitigation strategies, that loss could adversely affect Spire's and/or its subsidiaries' financial condition and results of operations.

Catastrophic events may adversely affect the Company's facilities and operations.

Catastrophic events such as fires, earthquakes, explosions, floods, tornadoes, hurricanes, tropical storms, winter storms, terrorist acts, acts of civil unrest, pandemic illnesses or other similar occurrences could adversely affect the Utilities' facilities and operations, as well as those of Midstream. Emergency planning and training programs are in place to respond to events that could cause business interruptions; however, unanticipated events or a combination of events, failure in resources needed to respond to events, or slow or inadequate response to events may have an adverse impact. To the extent the impacts of such catastrophic events are not covered by insurance or recovered in rates, this could have a material adverse effect on the Company's financial condition and results of operations.

Workforce risks may affect the Company's financial results.

The Company and its subsidiaries are subject to various workforce risks, including, but not limited to, the risk that it will be unable to attract and retain qualified personnel; that it will be unable to effectively transfer to new personnel the knowledge and expertise of an aging workforce as those workers retire; and that it will be unable to reach collective bargaining arrangements with the unions that represent certain of its workers, which could result in work stoppages.

The Company may be adversely affected by economic conditions.

Periods of slowed economic activity generally result in decreased energy consumption, particularly by industrial and large commercial companies, a loss of existing customers, and fewer new customers. As a consequence, national or regional recessions or other downturns in economic activity could adversely affect revenues and cash flows or restrict future growth. Economic conditions in the Utilities' service territories may also adversely impact the Utilities' ability to collect accounts receivable, resulting in an increase in bad debt expense.

Changes in accounting standards may adversely impact the Company's financial condition and results of operations.

Spire and its subsidiaries are subject to changes in U.S. generally accepted accounting principles (GAAP), SEC regulations and other interpretations of financial reporting requirements for public utilities. Neither the Company nor any of its subsidiaries have any control over the impact these changes may have on their financial condition or results of operations nor the timing of such changes. The potential issues associated with rate-regulated accounting, along with other potential changes to GAAP that the U.S. Financial Accounting Standards Board (FASB) continues to consider may be significant.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Spire

Refer to the information below about the principal properties of Spire Missouri and Spire Alabama. The Spire EnergySouth utilities own more than 5,000 miles of pipelines. Other properties of Spire and its subsidiaries do not constitute a significant portion of its properties. The current leases for office space in downtown St. Louis commenced in early 2015, with terms ranging from 10 to 20 years, with multiple renewal options. For further information on leases see Note 17, Leases, of the Notes to Financial Statements in Item 8.

Spire Missouri

The principal properties of Spire Missouri consist of its gas distribution system, which includes more than 32,000 miles of main and related service lines, odorization and regulation facilities, and customer meters. The mains and service lines are located in municipal streets or alleys, public streets or highways, or on lands of others for which Spire Missouri has obtained the necessary legal rights to place and operate its facilities on such property. Spire Missouri has an underground natural gas storage facility, several operating centers, and other related properties. Substantially all of Spire Missouri's utility plant is subject to the liens of its mortgage. All the properties of Spire Missouri are held in fee, by easement, or under lease agreements.

Spire Alabama

The properties of Spire Alabama consist primarily of its gas distribution system, which includes more than 24,000 miles of main and related service lines, odorization and regulation facilities, and customer meters. The mains and service lines are located in municipal streets or alleys, public streets or highways, or on lands of others for which Spire Alabama has obtained the necessary legal rights to place and operate its facilities on such property. Spire Alabama also has four LNG facilities, several operating centers, and other related properties. All of the properties of Spire Alabama are held in fee, by easement, or under lease agreements.

Item 3. Legal Proceedings

For a description of pending regulatory matters of Spire, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8. For a description of environmental and other legal matters, see Contingencies in Note 16 of the Notes to Financial Statements in Item 8.

Item 4. Mine Safety Disclosures

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS – Listed below are executive officers as defined by the SEC for Spire as of November 16, 2023, along with their ages (as of September 30, 2023), positions and business experience during the past five years.

Name	Age	Position with Company [1]	Appointed [2]
S. L. Lindsey	57	President and Chief Executive Officer	October 2023
		Executive Vice President, Chief Operating Officer (until October 2023)	January 2020
		Executive Vice President, Chief Executive Officer of Gas Utilities and Distribution Operations (until December 2019)	October 2012
		Chief Executive Officer, Spire Missouri	December 2018
		Chief Executive Officer, Spire Alabama	September 2014
S. Sitherwood [3]	63	Executive Vice President, Senior Advisor	October 2023
		President and Chief Executive Officer (until October 2023)	February 2012
		Chairman of the Board, Spire Missouri	January 2015
		Chairman of the Board, Spire Alabama	September 2014
S. P. Rasche	63	Executive Vice President and Chief Financial Officer	November 2013
		Chief Financial Officer, Spire Missouri (until January 2020)	May 2012
		Chief Financial Officer, Spire Alabama (until January 2020)	September 2014
M. C. Darrell [4]	65	Senior Vice President, Chief Legal and Compliance Officer	May 2012
M. C. Geiselhart	64	Senior Vice President, Chief Strategy and Corporate Development Officer	January 2015

(1) The information provided relates to the Company and its principal subsidiaries. Many of the executive officers have served or currently serve as officers or directors for other subsidiaries of the Company.

(2) Officers of Spire are normally reappointed by its Board of Directors in November of each year. Officers of Spire Missouri and Spire Alabama are normally reappointed by their boards of directors in January of each year.

(3) Ms. Sitherwood has announced she will retire effective January 1, 2024.

(4) Mr. Darrell has announced he will retire effective December 1, 2023.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

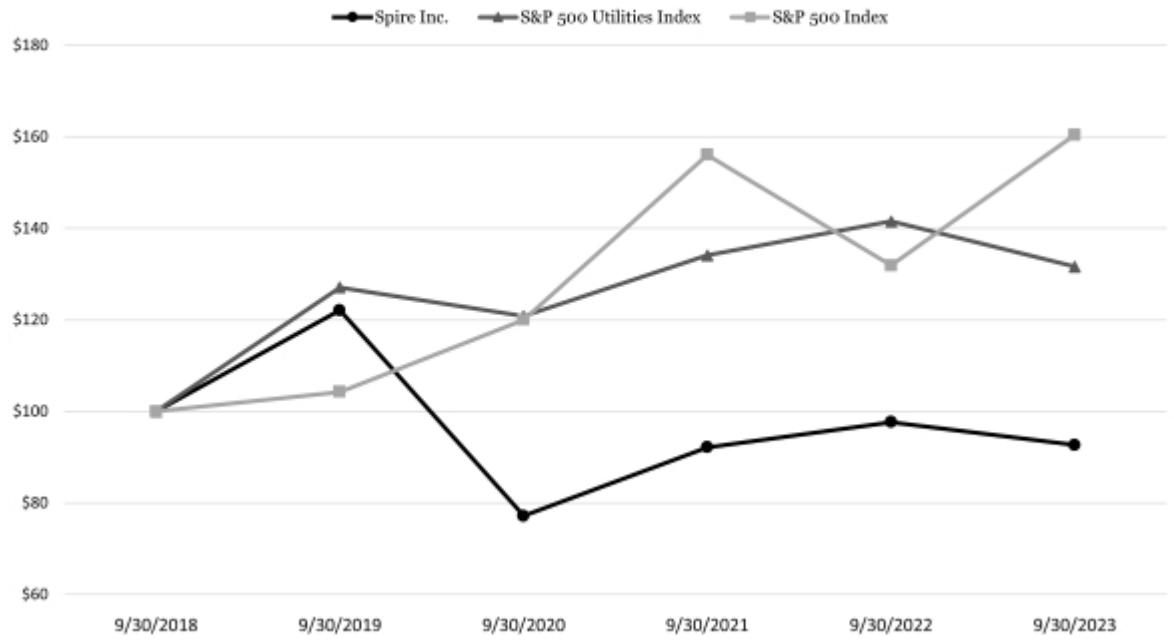
Spire

Spire's common stock trades on The New York Stock Exchange (NYSE) under the symbol "SR". The number of holders of record as of November 10, 2023 was 2,531.

Dividends are payable on the Company's common stock at the discretion of its Board of Directors (the "Board"). Spire, and Spire Missouri prior to the holding company's formation in 2000, has paid common stock dividends continuously since 1946, with 2023 marking the 20th consecutive year of increasing dividends on an annualized basis. Although the Board expects to continue paying dividends on the common stock for the foreseeable future, the declaration of dividends is not guaranteed. The amount of dividends on the common stock, if any, will depend upon the Company's financial condition, results of operations, capital requirements, and other factors.

Performance Graph

COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN*



September 30	2018	2019	2020	2021	2022	2023
Spire Inc.	$ 100.00	$ 122.09	$ 77.17	$ 92.14	$ 97.66	$ 92.65
S&P 500 Utilities Index	100.00	127.10	120.79	134.09	141.56	131.63
S&P 500 Index	100.00	104.25	120.05	156.07	131.92	160.44

* Cumulative total return is based on a $100 investment on September 30, 2018, assuming reinvestment of dividends.

The S&P 500 Utilities Index is comprised of 30 utilities heavily weighted to large capitalization (median market cap of $22.3 billion) electric utilities. In 2023, stocks of small and mid cap electric utilities and gas utility companies (like Spire) in general traded lower relative to the large cap electric sector.

For disclosures related to securities authorized for issuance under equity compensation plans, see Note 3, Stock-Based Compensation, of the Notes to Financial Statements in Item 8.

During the three months ended September 30, 2023, the only repurchases of the Company's common stock were pursuant to elections by employees to have shares of stock withheld to cover employee tax withholding obligations upon the vesting of performance-based and time-vested restricted stock and stock units. The following table provides information on those repurchases:

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
July 1, 2023 – July 31, 2023	—	—	—	—
August 1, 2023 – August 31, 2023	—	—	—	—
September 1, 2023 – September 30, 2023	749	$60.65	—	—
Total	749	$60.65	—	—

Spire Missouri

Spire Missouri common stock is owned by its parent, Spire Inc., and is not traded on any stock exchange.

Spire Missouri's mortgage contains restrictions on its ability to pay cash dividends on its common stock, as described in further detail in Note 5, Shareholders' Equity, of the Notes to Financial Statements in Item 8. As of September 30, 2023 and 2022, the amount under the mortgage's formula that was available to pay dividends was $1,678.5 million and $1,579.4 million, respectively.

Spire Alabama

Spire Alabama common stock is owned by its parent, Spire Inc., and is not traded on any stock exchange.

Item 6. (Reserved)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

(Dollars in millions, except per share and per unit amounts)

INTRODUCTION

This section analyzes the financial condition and results of operations of Spire Inc. (the "Company"), Spire Missouri Inc., and Spire Alabama Inc. Spire Missouri, Spire Alabama and Spire EnergySouth are wholly owned subsidiaries of the Company. Spire Missouri, Spire Alabama and the subsidiaries of Spire EnergySouth are collectively referred to as the "Utilities." The subsidiaries of Spire EnergySouth are Spire Gulf and Spire Mississippi. This section includes management's view of factors that affect the respective businesses of the Company, Spire Missouri and Spire Alabama, explanations of financial results including changes in earnings and costs from the prior periods, and the effects of such factors on the Company's, Spire Missouri's and Spire Alabama's overall financial condition and liquidity. Unless otherwise indicated, references to years herein are references to the fiscal years ending September 30 for the Company and its subsidiaries.

Reference is made to "Item 1A. Risk Factors" and "Forward-Looking Statements," which describe important factors that could cause actual results to differ from expectations and non-historical information contained herein. In addition, the following discussion should be read in conjunction with the audited financial statements and accompanying notes thereto of Spire, Spire Missouri and Spire Alabama included in "Item 8. Financial Statements and Supplementary Data."

OVERVIEW

The Company has three reportable segments: Gas Utility, Gas Marketing, and Midstream. Most of Spire's earnings are derived from its Gas Utility segment, which reflects the regulated activities of the Utilities. Due to the seasonal nature of the Utilities' business and the volumetric Spire Missouri rate design, earnings of Spire and each of the Utilities are typically concentrated during the heating season of November through April each fiscal year.

Gas Utility - Spire Missouri

Spire Missouri is Missouri's largest natural gas distribution utility and is regulated by the MoPSC. Spire Missouri serves St. Louis, Kansas City, and other areas throughout the state. Spire Missouri purchases natural gas in the wholesale market from producers and marketers and ships the gas through interstate pipelines into its own distribution facilities for sale to residential, commercial and industrial customers. Spire Missouri also transports gas through its distribution system for certain larger customers who buy their own gas on the wholesale market. Spire Missouri delivers natural gas to customers at rates and in accordance with tariffs authorized by the MoPSC. The earnings of Spire Missouri are primarily generated by the sale of heating energy.

Gas Utility - Spire Alabama

Spire Alabama is the largest natural gas distribution utility in the state of Alabama and is regulated by the APSC. Spire Alabama's service territory is located in central and northern Alabama. Among the cities served by Spire Alabama are Birmingham, the center of the largest metropolitan area in the state, and Montgomery, the state capital. Spire Alabama purchases natural gas through interstate and intrastate suppliers and distributes the purchased gas through its distribution facilities for sale to residential, commercial, and industrial customers and other end-users of natural gas. Spire Alabama also transports gas through its distribution system for certain large commercial and industrial customers for a transportation fee. Effective December 1, 2020, for most of these transportation service customers, Spire Alabama also purchases gas on the wholesale market for sale to the customer upon delivery to the Spire Alabama distribution system. All Spire Alabama services are provided to customers at rates and in accordance with tariffs authorized by the APSC.

Gas Utility - Spire EnergySouth

Spire Gulf and Spire Mississippi are utilities engaged in the purchase, retail distribution and sale of natural gas to approximately 100,000 customers in southern Alabama and south-central Mississippi. Spire Gulf is regulated by the APSC, and Spire Mississippi is regulated by the MSPSC.

Gas Marketing

Spire Marketing is engaged in the marketing of natural gas and related activities on a non-regulated basis and is reported in the Gas Marketing segment. Spire Marketing markets natural gas to customers across the U.S. (and into Canada), including customers inside and outside of the Utilities' service areas. It holds firm transportation and storage contracts in order to effectively manage its transactions with counterparties, which primarily include producers, municipalities, electric and gas utility companies, and large commercial and industrial customers.

Midstream

Spire's midstream operations consist of Spire STL Pipeline and Spire Storage (composed of Spire Storage West LLC and Spire Salt Plains Storage LLC). Spire STL Pipeline owns and operates a FERC-regulated 65-mile pipeline connecting the Rockies Express Pipeline in Scott County, Illinois, to delivery points in St. Louis County, Missouri, including Spire Missouri's storage facility. Spire STL Pipeline's operating revenue is derived primarily from Spire Missouri as its foundation shipper. Spire Storage is engaged in the storage of natural gas in the western region of the U.S. Spire Storage consists of two storage fields in Wyoming operating under one FERC market-based rate tariff, and a storage field in Oklahoma that operates under intrastate jurisdiction with authorizations from FERC under Section 311 of the Natural Gas Policy Act to provide certain interstate storage, transportation, and hub services.

Other

Other components of the Company's consolidated information include Spire's subsidiaries engaged in the operation of a propane pipeline and risk management, among other activities, and unallocated corporate items, including certain debt and associated interest costs.

Business Evaluation Factors

Based on the nature of the business of the Company and its subsidiaries, as well as current economic conditions, management focuses on several key variables in evaluating the financial condition and results of operations and managing the business.

For the Gas Utility segment, these include:

- the Utilities' ability to recover from their customers the costs of purchasing and distributing natural gas;
- the impact of weather and other factors, such as customer conservation, on revenues and expenses;
- changes in the regulatory environment at the federal, state, and local levels, as well as decisions by regulators, that impact the Utilities' ability to earn the authorized rate of return and recover prudent costs in each of the service territories they serve;
- the Utilities' ability to access credit markets and maintain working capital sufficient to meet operating requirements;
- the effect of natural gas price volatility on the business; and
- the ability to manage costs, integrate and standardize operations, and upgrade infrastructure.

In the Gas Marketing segment, these include:

- the risks of competition;
- fluctuations and volatility in natural gas prices;
- the changing flow and availability of natural gas;
- new national infrastructure projects;
- the ability to procure firm transportation and storage services at reasonable rates;
- credit and/or capital market access; and
- counterparty risks.

In the Midstream segment, these include:

- the impact of seasonal weather patterns;
- fluctuations and volatility in natural gas prices;
- the changing flow and availability of natural gas;
- the efficiency of the injection and withdrawal processes for natural gas storage;
- competitive factors in the energy industry;
- energy and other regulation in Spire's storage and transportation service areas; and
- counterparty risks.

Further information regarding how management seeks to manage these key variables is discussed below.

Gas Utility

The Utilities seek to provide reliable natural gas services at a reasonable cost, while maintaining and building secure and dependable infrastructures. The Utilities' strategies focus on improving both performance and the ability to recover their authorized distribution costs and rates of return. The Utilities' distribution costs are the essential, primarily fixed, expenditures they must incur to operate and maintain more than 60,000 miles of mains and services comprising their natural gas distribution systems and related storage facilities.

The Utilities' distribution costs include wages and employee benefit costs, depreciation and maintenance expenses, and other regulated utility operating expenses, excluding natural and propane gas expense. Distribution costs are considered in the rate-making process, and recovery of these types of costs is included in revenues generated through the Utilities' tariff rates. Spire Missouri's tariff rates are approved by the MoPSC, whereas Spire Alabama's tariff rates are approved by the APSC. Spire Gulf and Spire Mississippi have tariff rates that are approved by the APSC and MSPSC, respectively.

Spire Missouri and Spire Alabama also have off-system sales and capacity release income streams that are regulated by tariff but remain subject to fluctuations in market conditions. Some of the factors impacting the level of off-system sales include the availability and cost of Spire's natural gas supply, the weather in its service areas and the weather in other markets. When Spire's service areas experience warmer-than-normal weather while other markets experience colder weather or supply constraints, some of Spire's natural gas supply is available for sale to third parties not on Spire's system.

The Utilities work actively to reduce the impact of wholesale natural gas price volatility on their costs by strategically structuring their natural gas supply portfolios to increase their gas supply availability and pricing alternatives. They may also use derivative instruments to hedge against significant changes in the commodity price of natural gas. Nevertheless, the overall cost of purchased gas remains subject to fluctuations in market conditions. The Purchased Gas Adjustment (PGA) clause of Spire Missouri, Spire Gulf and Spire Mississippi and the Gas Supply Adjustment (GSA) rider of Spire Alabama allow the Utilities to flow through to customers, subject to prudence review by the public service commissions, the cost of purchased gas supplies, including costs, cost reductions and related carrying costs associated with the use of derivative instruments to mitigate volatility in the cost of natural gas. As of September 30, 2023, Spire Missouri had active derivative positions, but Spire Alabama has had no gas supply derivative instrument activity since 2010. The Utilities believe they will continue to be able to obtain sufficient gas supply. The price of natural gas supplies and other economic conditions may affect sales volumes, due to the conservation efforts of customers, and cash flows associated with the timing of collection of gas costs and related accounts receivable from customers.

The Utilities rely on short-term credit and long-term capital markets, as well as cash flows from operations, to satisfy their seasonal cash requirements and fund their capital expenditures. The Utilities access the commercial paper market through a program administered by the holding company, which then loans borrowed funds to the Utilities. The Utilities directly access the long-term bond market. Access to debt markets is dependent on current conditions in the credit and capital markets. Management focuses on maintaining a strong balance sheet and believes the Utilities currently have adequate access to credit and capital markets and will have sufficient liquidity and capital resources to meet their foreseeable obligations. See the "Liquidity and Capital Resources" section for additional information.

Gas Marketing

Spire Marketing utilizes its natural gas supply agreements, transportation agreements, park and loan agreements, storage agreements and other executory contracts to support a variety of services to its customers at competitive prices. It closely monitors and manages the natural gas commodity price and volatility risks associated with providing such services to its customers through the use of a variety of risk management activities, including the use of exchange-traded/cleared derivative instruments and other contractual arrangements. Spire Marketing is committed to managing commodity price risk while it seeks to expand the services that it now provides. Nevertheless, income from the Gas Marketing operations is subject to more fluctuations in market conditions than the Utilities' operations.

The Gas Marketing business is directly impacted by the effects of competition in the marketplace, the impacts of new infrastructure, surplus natural gas supplies, and the addition of new demand from exports, power generation and industrial load. Spire Marketing's management expects a growing need for marketing services across the country as customers manage seasonal variability and marketplace volatility.

In addition to its own operating cash flows, Spire Marketing relies on Spire's parental guaranties to secure its purchase and sales obligations of natural gas, and it also has access to Spire's liquidity resources. A large portion of Spire Marketing's receivables are from customers in the energy industry. It also enters into netting arrangements with many of its energy counterparties to reduce overall credit and collateral exposure. On a net dollar exposure basis, the majority of Spire Marketing's customers are utilities or utility affiliates. Although Spire Marketing's uncollectible amounts are closely monitored and have not been significant, increases in uncollectible amounts from customers are possible and could adversely affect Spire Marketing's liquidity and results of operations.

Spire Marketing carefully monitors the creditworthiness of counterparties to its transactions. It performs in-house credit reviews of potential customers and may require credit assurances such as prepayments, letters of credit or parental guaranties when appropriate. Credit limits for customers are established and monitored.

Spire Marketing cannot be certain that all of its wholesale purchase and sale transactions will settle physically. As such, these transactions are designated as trading activities for financial reporting purposes, due to their settlement characteristics. Results of operations from trading activities are reported on a net basis in natural gas expenses.

In the course of its business, Spire Marketing enters into commitments associated with the purchase or sale of natural gas. In accordance with U.S. GAAP, some of its purchase and sale transactions are not recognized in earnings until the natural gas is physically delivered, while other energy-related transactions, including those designated as trading activities, are required to be accounted for as derivatives with the changes in their fair value (representing unrealized gains or losses) recorded in earnings in periods prior to settlement. Because related transactions of a purchase and sale strategy may be accounted for differently, there may be timing differences in the recognition of earnings under GAAP and economic earnings realized upon settlement. The Company reports both GAAP and net economic earnings (non-GAAP), as discussed in the section "Non-GAAP Measures".

Midstream

In its Midstream segment, Spire seeks to drive growth through supporting natural gas grid reliability, the ability to manage exposure to gas price volatility, and providing access to key supply basins for the shipment of natural gas. These transportation and storage operations serve a variety of natural gas customers, including Spire's other businesses.

Absolute natural gas prices do not directly impact the results of this segment, but there is a relationship between natural gas prices and the revenues derived from the transportation and storage of natural gas. Natural gas price trends and demand for natural gas influence these price relationships through market volatility or changes in absolute prices of one supply/market point to another. Further, natural gas price differences between the various hubs Spire serves could influence the volumes of gas transported or stored on Spire's system and the related transportation and storage rates.

Spire carefully monitors the creditworthiness of counterparties to its transactions. It performs in-house credit reviews of potential customers and may require credit assurances such as prepayments, letters of credit or

parental guaranties when appropriate. Credit limits for customers are established and monitored.

NON-GAAP MEASURES

Net income, earnings per share and operating income reported by Spire, Spire Missouri and Spire Alabama are determined in accordance with GAAP. Spire, Spire Missouri and Spire Alabama also provide the non-GAAP financial measures of net economic earnings, net economic earnings per share and contribution margin. Management and the Board of Directors use non-GAAP financial measures, in addition to GAAP financial measures, to understand and compare operating results across accounting periods, for financial and operational decision making, for planning and forecasting, to determine incentive compensation and to evaluate financial performance. These non-GAAP operating metrics should not be considered as alternatives to, or more meaningful than, the related GAAP measures. Reconciliations of non-GAAP financial measures to the most directly comparable GAAP measures are provided on the following pages.

Net Economic Earnings and Net Economic Earnings Per Share

Net economic earnings and net economic earnings per share are non-GAAP measures that exclude from net income, as applicable, the impacts of fair value accounting and timing adjustments associated with energy-related transactions, the impacts of acquisition, divestiture and restructuring activities, and the largely non-cash impacts of impairments and other non-recurring or unusual items such as certain regulatory, legislative or GAAP standard-setting actions. In addition, net economic earnings per share would exclude the impact, in the fiscal year of issuance, of any shares issued to finance acquisitions that have yet to be included in net economic earnings.

The fair value and timing adjustments are made in instances where the accounting treatment differs from what management considers the economic substance of the underlying transaction, including the following:

- Net unrealized gains and losses on energy-related derivatives that are required by GAAP fair value accounting associated with current changes in the fair value of financial and physical transactions prior to their completion and settlement. These unrealized gains and losses result primarily from two sources:
  1) changes in the fair values of physical and/or financial derivatives prior to the period of settlement; and
  2) ineffective portions of accounting hedges, required to be recorded in earnings prior to settlement, due to differences in commodity price changes between the locations of the forecasted physical purchase or sale transactions and the locations of the underlying hedge instruments;
- Lower of cost or market adjustments to the carrying value of commodity inventories resulting when the net realizable value of the commodity falls below its original cost, to the extent that those commodities are economically hedged; and
- Realized gains and losses resulting from the settlement of economic hedges prior to the sale of the physical commodity.

These adjustments eliminate the impact of timing differences and the impact of current changes in the fair value of financial and physical transactions prior to their completion and settlement. Unrealized gains or losses are recorded in each period until being replaced with the actual gains or losses realized when the associated physical transactions occur. Management believes that excluding the earnings volatility caused by recognizing changes in fair value prior to settlement and other timing differences associated with related purchase and sale transactions provides a useful representation of the economic effects of only the actual settled transactions and their effects on results of operations. While management uses these non-GAAP measures to evaluate all of its businesses, the net effect of these fair value and timing adjustments on the Utilities' earnings is minimal because gains or losses on their natural gas derivative instruments are deferred pursuant to state regulation.

Contribution Margin

In addition to operating revenues and operating expenses, management also uses the non-GAAP measure of contribution margin when evaluating results of operations. Contribution margin is defined as operating revenues less natural gas costs and gross receipts tax expense. The Utilities pass to their customers (subject to prudence review by, as applicable, the MoPSC, APSC or MSPSC) increases and decreases in the wholesale cost of natural gas in accordance with their PGA clauses or GSA riders. The volatility of the wholesale natural gas market results in fluctuations from period to period in the recorded levels of, among other items, revenues and natural gas cost expense. Nevertheless, increases and decreases in the cost of gas associated with system gas sales volumes and gross receipts tax expense (which are calculated as a percentage of revenues), with the same amount (excluding immaterial timing differences) included in revenues, have no direct effect on operating income. Therefore,

management believes that contribution margin is a useful supplemental measure, along with the remaining operating expenses, for assessing the Company's and the Utilities' performance.

EARNINGS

This section contains discussion and analysis of the results for the year ended September 30, 2023 compared to the results for the year ended September 30, 2022. The discussion and analysis of the results for the year ended September 30, 2022 compared to the results of the year ended September 30, 2021 can be found in Part II, Item 7 of Spire Inc.'s fiscal 2022 Annual Report on Form 10-K, filed with the U.S. Securities and Exchange Commission (SEC) on November 16, 2022.

The following sections present and discuss the financial metrics in total and by registrant and segment.

Spire

The following tables reconcile the Company's net economic earnings to the most comparable GAAP number, net income.

	Gas Utility	Gas Marketing	Midstream	Other	Consol-idated	Per Diluted Share**
Year Ended September 30, 2023						
Net Income (Loss) [GAAP]	$ 200.5	$ 39.1	$ 12.0	$ (34.1)	$ 217.5	$ 3.85
Adjustments, pre-tax:						
Fair value and timing adjustments	—	11.4	—	—	11.4	0.21
Acquisition activities	—	—	2.5	—	2.5	0.05
Income tax effect of adjustments*	—	(2.9)	(0.4)	—	(3.3)	(0.06)
Net Economic Earnings (Loss) [Non-GAAP]	$ 200.5	$ 47.6	$ 14.1	$ (34.1)	$ 228.1	$ 4.05
Year Ended September 30, 2022						
Net Income (Loss) [GAAP]	$ 198.6	$ 35.6	$ 11.1	$ (24.5)	$ 220.8	$ 3.95
Adjustments, pre-tax:						
Fair value and timing adjustments	—	(11.4)	—	—	(11.4)	(0.22)
Income tax effect of adjustments*	4.1	2.8	—	—	6.9	0.13
Net Economic Earnings (Loss) [Non-GAAP]	$ 202.7	$ 27.0	$ 11.1	$ (24.5)	$ 216.3	$ 3.86
Year Ended September 30, 2021						
Net Income (Loss) [GAAP]	$ 237.2	$ 44.8	$ 11.1	$ (21.4)	$ 271.7	$ 4.96
Adjustments, pre-tax:						
Missouri regulatory adjustments	(9.0)	—	—	—	(9.0)	(0.17)
Fair value and timing adjustments	0.3	3.0	—	—	3.3	0.06
Divestiture activities	—	—	—	(1.3)	(1.3)	(0.02)
Income tax effect of adjustments*	2.1	(0.8)	—	0.3	1.6	0.03
Net Economic Earnings (Loss) [Non-GAAP]	$ 230.6	$ 47.0	$ 11.1	$ (22.4)	$ 266.3	$ 4.86

* Income tax effect is calculated by applying federal, state and local income tax rates applicable to ordinary income to the amounts of the pre-tax reconciling items and then adding any estimated effects of enacted state or local income tax laws for periods before the related effective date and, in the case of fiscal 2022, includes the $4.1 Spire Missouri regulatory adjustment discussed below.

** Net economic earnings per share is calculated by replacing consolidated net income with consolidated net economic earnings in the GAAP diluted earnings per share calculation, which includes reductions for cumulative preferred dividends and participating shares.

Reconciliations of contribution margin to the most directly comparable GAAP measure are shown below.

	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Year Ended September 30, 2023						
Operating Income (Loss)	$ 350.8	$ 49.3	$ 24.3	$ (5.8)	$ —	$ 418.6
Operation and maintenance expenses	461.8	19.4	30.5	21.9	(16.0)	517.6
Depreciation and amortization	244.4	1.5	8.4	0.5	—	254.8
Taxes, other than income taxes	210.3	1.2	2.9	0.1	—	214.5
Less: Gross receipts tax expense	(131.5)	(0.3)	—	—	—	(131.8)
Contribution Margin [Non-GAAP]	1,135.8	71.1	66.1	16.7	(16.0)	1,273.7
Natural gas costs	1,189.6	107.7	—	—	(36.5)	1,260.8
Gross receipts tax expense	131.5	0.3	—	—	—	131.8
Operating Revenues	$ 2,456.9	$ 179.1	$ 66.1	$ 16.7	$ (52.5)	$ 2,666.3

	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Year Ended September 30, 2022						
Operating Income	$ 339.9	$ 46.9	$ 20.8	$ 0.6	$ —	$ 408.2
Operation and maintenance expenses	413.3	14.6	22.2	14.9	(15.4)	449.6
Depreciation and amortization	227.9	1.4	7.5	0.5	—	237.3
Taxes, other than income taxes	176.2	0.6	2.6	0.1	—	179.5
Less: Gross receipts tax expense	(109.6)	(0.2)	—	—	—	(109.8)
Contribution Margin [Non-GAAP]	1,047.7	63.3	53.1	16.1	(15.4)	1,164.8
Natural gas costs	788.8	171.4	—	—	(36.3)	923.9
Gross receipts tax expense	109.6	0.2	—	—	—	109.8
Operating Revenues	$ 1,946.1	$ 234.9	$ 53.1	$ 16.1	$ (51.7)	$ 2,198.5

	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Year Ended September 30, 2021						
Operating Income (Loss)	$ 374.0	$ 58.5	$ 19.5	$ (1.8)	$ —	$ 450.2
Operation and maintenance expenses	422.2	17.1	24.2	16.0	(13.7)	465.8
Depreciation and amortization	204.4	1.2	6.9	0.6	—	213.1
Taxes, other than income taxes	157.0	0.9	2.0	0.2	—	160.1
Less: Gross receipts tax expense	(93.9)	(0.1)	—	—	—	(94.0)
Contribution Margin [Non-GAAP]	1,063.7	77.6	52.6	15.0	(13.7)	1,195.2
Natural gas costs	961.7	18.8	—	0.1	(34.3)	946.3
Gross receipts tax expense	93.9	0.1	—	—	—	94.0
Operating Revenues	$ 2,119.3	$ 96.5	$ 52.6	$ 15.1	$ (48.0)	$ 2,235.5

Select changes from the year ended September 30, 2022 to the year ended September 30, 2023 are summarized in the following table and discussed below.

Changes FY23 from FY22	Gas Utility	Gas Marketing	Midstream	Other, Net of Eliminations	Consolidated
Net Income	$ 1.9	$ 3.5	$ 0.9	$ (9.6)	$ (3.3)
Net Economic Earnings [Non-GAAP]	(2.2)	20.6	3.0	(9.6)	11.8
Operating Revenues	510.8	(55.8)	13.0	(0.2)	467.8
Contribution Margin [Non-GAAP]	88.1	7.8	13.0	(0.0)	108.9
Operation and Maintenance Expenses	48.5	4.8	8.3	6.4	68.0
Other Income (Expense)					32.1
Interest Expense					65.9
Income Tax					(20.1)

The increase in interest expense reflects the significant increase in short-term interest rates and higher long-term debt levels versus the prior year, combined with higher average levels of short-term borrowings in the current year. Weighted-average short-term interest rates were 5.0% in the current year, versus 1.1% in the prior year.

The change in other income was $22.6 after removing the impact of the Postretirement Non-Service Cost Transfer (NSC Transfer) of $9.5. This increase was driven primarily by Spire Missouri, the result of increased inventory carrying-cost credits combined with favorable mark-to-market valuations on non-qualified retirement trusts. The year-over-year growth also benefited from investment gains experienced by other subsidiaries.

Income tax expense decreased $20.1. The current year benefited from lower pre-tax income and a one-time tax credit study, while the prior year included $4.1 expense related to the 2021 Missouri rate order.

Gas Utility

For the twelve months ended September 30, 2023, Gas Utility net income was $1.9 higher than the prior-year period, as the $2.6 and $1.8 growth at Spire Missouri and Spire EnergySouth, respectively, was partly offset by the $2.5 decrease at Spire Alabama. Net economic earnings in the current year was $2.2 lower than the prior year, which tracks net income after removing the Spire Missouri $4.1 GAAP regulatory tax adjustment in the prior-year period. These results are described in further detail below.

The increase in Gas Utility operating revenues for fiscal 2023 was attributable to the following factors:

Spire Missouri and Spire Alabama – Higher PGA/GSA gas cost recoveries	$ 436.1
Spire Missouri – 2021 and 2022 rate case outcomes	60.7
Spire Alabama – RSE: net adjustments	22.0
Spire Missouri and Spire Alabama – Higher gross receipts taxes	21.5
Spire EnergySouth	6.9
Spire Missouri – Volumetric usage including weather mitigation impact	4.1
Spire Alabama – Volumetric usage including weather mitigation impact	(30.6)
Spire Missouri and Spire Alabama – Lower off-system sales	(12.3)
All other factors	2.4
Total Variation	$ 510.8

The primary driver of revenue growth in the current year was $436.1 in higher gas cost recoveries at the utilities of Spire Missouri and Spire Alabama, reflecting higher average gas costs being passed through to customers. The current year also benefited from a $60.7 increase at Spire Missouri resulting from the current-year impacts of the 2022 and 2021 rate orders. The current year results also include $22.0 in net favorable rate adjustments under the RSE mechanism at Spire Alabama, higher gross receipts taxes of $21.5 at Spire Missouri and Spire Alabama, growth of $6.9 at Spire EnergySouth, and favorable volume/usage of $4.1 at Spire Missouri. These benefits were only partly offset by a $30.6 reduction due to volume/usage at Spire Alabama, and a combined $12.3 reduction in off-system sales between Spire Missouri and Spire Alabama.

The year-over-year increase in Gas Utility contribution margin was attributable to the following factors:

Spire Missouri – 2021 and 2022 rate case outcomes	$	60.7
Spire Alabama – RSE: net adjustments		19.6
Spire Missouri - Volumetric usage including weather mitigation impact		5.4
Spire EnergySouth		3.3
Spire Alabama – Volumetric usage including weather mitigation impact		(2.2)
All other factors		1.3
Total Variation	$	88.1

The contribution margin growth was primarily driven by the $60.7 increase from the Spire Missouri 2022 and 2021 rate order implementations, $19.6 from favorable rate adjustments within the RSE framework at Spire Alabama, and a $3.3 increase at Spire EnergySouth. The $5.4 favorable volume impact at Spire Missouri was partly offset by the $2.2 volume decline at Spire Alabama, both net of weather mitigation impacts.

O&M expenses for the twelve months ended September 30, 2023, were $48.5 higher than the prior year. Expenses increased $15.4 after removing the $9.1 impact of the NSC Transfer and approximately $24 due to the change in treatment of Spire Missouri general overheads that were being deferred in the prior-year period. The O&M increase was driven by a $22.1 increase in operations and customer experience costs and a $5.0 increase in bad debt expense. These increases were only partly offset by a $5.3 reduction in outside services, favorable administrative and general (A&G) expenses, and lower employee-related expenses.

Taxes, other than income taxes, increased $34.1, and were driven by $21.9 in higher pass-through gross receipts taxes, along with higher property taxes resulting from the continued infrastructure build-out by the Utilities. Depreciation and amortization expenses for fiscal 2023 were $16.5 higher than the same period in the prior year primarily driven by continued infrastructure capital expenditures across all the Utilities.

Gas Marketing

Net income growth of $3.5 reflects the strong operating results experienced in the current-year, driven by favorable market conditions in the first half of fiscal 2023 that allowed the business to take advantage of regional basis differentials to optimize storage and transportation positions. These gains were partly offset by unfavorable year-over-year after-tax unrealized fair market value adjustments of $17.1, and slightly higher O&M costs associated with higher employee-related expenses. Net economic earnings exceeds net income growth as net economic earnings excludes the impacts of the unrealized fair market value adjustments.

The decline in operating revenues primarily reflects lower commodity pricing in fiscal 2023 versus the prior year.

Gas Marketing contribution margin increased $7.8 from the same period last year, driven by incremental optimization of storage and transportation assets in the current year, which were only partly offset by unfavorable year-over-year fair value adjustments of $22.8.

Midstream

Net income and net economic earnings for the Company's Midstream segment increased $0.9 and $3.0, respectively, for the year ended September 30, 2023 versus the prior-year period. Strong net income performance at Spire Storage West reflecting optimized operational and withdrawal commitments that were partly offset by the acquisition of Spire Storage Salt Plains, whose impacts are excluded from net economic earnings.

The $13.0 increase in operating revenues and contribution margin is attributable to the $8.1 growth at Spire Storage West and to the Spire Storage Salt Plains acquisition in April 2023. The O&M increase of $8.3 is driven by a $2.1 increase at Spire Storage West supporting the higher level of billable storage activity, with the remaining increase due principally to Spire Storage Salt Plains operations as well as acquisition and transaction costs for the previously announced and pending Missouri Gas Company (MoGas) acquisition.

Other

The Company's other activities incurred a $34.1 loss for the twelve months ended September 30, 2023, $9.6 higher than the prior-year period. The larger current-year loss was driven by higher interest expense, reflecting both higher borrowings and interest rates, combined with higher corporate costs, partly offset by lower income tax expense.

Spire Missouri

	Year Ended September 30,	
	2023	2022
Operating Income	$ **207.1**	$ **204.0**
Operation and maintenance expenses	296.2	255.7
Depreciation and amortization	158.7	145.3
Taxes, other than income taxes	157.5	129.0
Less: Gross receipts tax expense	(96.7)	(79.6)
Contribution Margin [Non-GAAP]	**722.8**	**654.4**
Natural gas costs	943.4	587.0
Gross receipts tax expense	96.7	79.6
Operating Revenues	$ **1,762.9**	$ **1,321.0**
Net Income	$ **117.5**	$ **114.9**

Operating revenues for the twelve months ended September 30, 2023 were $441.9 higher than the comparable prior-year period. A key driver was an increase in gas recovery costs totaling $362.3. Further, $60.7 of the increase attributable to fiscal 2023 results represent the cumulative impacts of the implementation of the 2022 and 2021 rate orders. Higher gross receipts taxes contributed a $17.1 increase, and volume (net of weather mitigation) contributed $4.1 growth. These revenue growth drivers were only partially offset by lower off-system sales of $5.2.

Temperatures in Spire Missouri's service areas during fiscal 2023 were 1.4% warmer than during fiscal 2022 and 10.4% warmer than normal. The Spire Missouri total system volume sold and transported was 1,592.0 million centum of cubic feet (CCF) for the year ended September 30, 2023, compared with 1,602.8 million CCF last year. Total off-system volume sold and transported was 14.5 million CCF for fiscal 2023, compared with 19.1 million for fiscal 2022.

Contribution margin for the fiscal year ended September 30, 2023 increased $68.4 from the same period in the prior year. The increase was the result of the previously mentioned timing of the 2022 and 2021 rate case implementations generating $60.7 incremental contribution margin, combined with favorable volumetric impacts of $5.4.

Reported O&M expenses for the current year period increased $40.5 versus the prior year. Expenses increased $8.6 after removing the $7.9 impact of the NSC Transfer and the approximately $24 of general overheads that were deferred in the prior year. The increase reflects higher non-employee operations expense of $14.7 and higher bad debt expense of $2.2, partly offset by lower outside service costs and favorable A&G expenses in the current year.

Depreciation and amortization expenses were up $13.4, the result of continued investment in infrastructure upgrades. Other income was higher by $18.4, after removing the $7.9 due to the NSC Transfer. This variance is primarily attributable to increased natural gas inventory carrying cost credits, combined with favorable mark-to-market valuations on non-qualified retirement trusts. Interest expense increased $36.5, primarily reflecting higher short-term interest rates and net long-term debt issuances in the current year.

Net income increased $2.6 over the comparable prior-year period.

Spire Alabama

	Year Ended September 30,	
	2023	2022
Operating Income	$ **119.7**	$ **112.6**
Operation and maintenance expenses	136.4	130.1
Depreciation and amortization	69.3	66.8
Taxes, other than income taxes	43.0	38.1
Less: Gross receipts tax expense	(29.9)	(25.5)
Contribution Margin [Non-GAAP]	**338.5**	**322.1**
Natural gas costs	202.7	161.5
Gross receipts tax expense	29.9	25.5
Operating Revenues	$ **571.1**	$ **509.1**
Net Income	$ **66.0**	$ **68.5**

The $62.0 increase in operating revenues reflects a $73.8 increase in gas cost recoveries pursuant to the GSA mechanism, $22.0 higher net rate adjustments under the RSE mechanism, and higher gross receipts taxes of $4.4. These favorable impacts were partly offset by a $30.6 reduction attributable to weather/volumetric impacts, and a $7.1 decrease in off-system sales.

Temperatures in Spire Alabama's service area during fiscal 2023 were 10.7% warmer than during fiscal 2022 and 18.8% warmer than normal. Spire Alabama's total system volume sold and transported was 1,026.2 million CCF during the year ended September 30, 2023, compared with 1,010.8 million CCF during the prior year. Off-system sales volume for fiscal 2023 totaled 98.8 million CCF compared with 63.1 million CCF for fiscal 2022.

Contribution margin increased $16.4, which was principally a result of net favorable RSE adjustments of $19.6. This growth was tempered by unfavorable weather/volumetric impacts totaling $2.2, after applying weather mitigation.

Excluding the impact of the NSC Transfer of $1.1, the increase in O&M of $5.2 was largely due to a $2.3 increase in bad debt expense. Depreciation expense was up $2.5 reflecting the continued infrastructure investments in the service territory.

The variance in other income is primarily the impact of the year-over-year change in the NSC Transfer. Interest expense increased $13.6, primarily reflecting higher short-term interest rates and long-term debt issuances in the current year. Resulting fiscal 2023 net income declined $2.5 versus fiscal 2022.

LIQUIDITY AND CAPITAL RESOURCES

Recent Cash Flows

	2023	2022	2021
Net cash provided by operating activities	$ 440.2	$ 55.0	$ 249.8
Net cash used in investing activities	(695.5)	(546.7)	(622.0)
Net cash provided by financing activities	260.6	500.9	379.4

Net cash provided by operating activities increased $385.2 from 2022 to 2023 after decreasing $194.8 from 2021 to 2022. In addition to the changes in net income between the respective periods (discussed above), the remaining changes were related to regulatory timing and fluctuations in working capital items, as discussed below in the Future Cash Requirements section. Specifically, the timing and amounts of regulatory adjustments for purchased gas costs resulted in a large change in deferred recovery in 2022, greatly reducing net cash provided by operating activities that year.

In 2023, the Company's net cash used in investing activities was $148.8 more than in 2022, primarily driven by a $110.3 increase in capital expenditures and the $37.0 acquisition of Spire Storage Salt Plains. Capital expenditures increased $60.0 in the Gas Utility segment (primarily due to meter and other infrastructure upgrades) and $51.0 in the Midstream segment (primarily due to the ongoing Wyoming storage facility expansion).

In 2022, the Company used $75.3 less cash in investing activities than in 2021, primarily driven by a $72.6 decrease in capital expenditures, with Gas Utility down $61.8 and Midstream down $10.4.

Net cash provided by financing activities was down $240.3 in 2023 compared to 2022 as a result of lower net debt issuances, lower common stock issuances, and higher dividends. Although the net increase in long-term debt was $473.8 in fiscal 2023 compared to only $244.2 in fiscal 2022, Spire reduced short-term debt by $82.0 in fiscal 2023 after increasing short-term borrowings $365.5 in 2022.

Net cash provided by financing activities was up $121.5 in 2022 compared to 2021. As noted above, 2022 net short-term debt issuances were $365.5, which was $341.5 higher than in 2021. In addition, the combination of lower net repayments of long-term debt ($59.6) and higher cash generated from the issuance of common stock ($50.9) in 2022 contributed $110.5 to the year-over-year increase. A significant offset to these increases was a $329.1 decline in cash generated from the issuance of long-term debt, coupled with $8.7 higher common stock dividend payments.

Future Cash Requirements

The Company’s short-term borrowing requirements typically peak during colder months when the Utilities borrow money to cover the lag between when they purchase natural gas and when their customers pay for that gas. Changes in the wholesale cost of natural gas (including cash payments for margin deposits associated with Spire Missouri’s use of natural gas derivative instruments), variations in the timing of collections of gas cost under the Utilities’ PGA clauses and GSA riders, the seasonality of accounts receivable balances, and the utilization of stored gas inventories cause short-term cash requirements to vary during the year and from year to year, and may cause significant variations in the Company’s cash provided by or used in operating activities.

Spire’s material cash requirements as of September 30, 2023, are related to capital expenditures, principal and interest payments on long-term debt, natural gas purchase obligations, and common and preferred stock dividends.

Total Company capital expenditures are planned to be $765 for fiscal 2024, though Spire had purchase commitments for less than a quarter of these as of September 30, 2023.

As detailed in Note 6, Long-Term Debt, of the Notes to Financial Statements in Item 8, $156.6 of the total $3,732.7 principal amount is due in fiscal 2024. Using each long-term debt instrument’s stated maturity and fixed rates or variable rates as of September 30, 2023, interest payments are projected to total $1,817.3, of which $150.7 is due in fiscal 2024.

Spire’s natural gas purchase obligations totaled $1,613.2, including $650.1 for fiscal 2024, representing the minimum payments required under existing natural gas transportation and storage contracts and natural gas supply agreements. The amounts reflect fixed obligations as well as obligations to purchase natural gas at future market prices, calculated using forward market prices as of September 30, 2023. Each of the Utilities generally recovers costs related to its purchases, transportation and storage of natural gas through the operation of its PGA clause or GSA rider, subject to prudence review by the appropriate regional public service commission. Additional contractual commitments are generally entered into prior to or during the heating season.

Spire dividends declared and payable as of September 30, 2023, totaled $43.1, while annualized dividends based on the regular quarterly amounts declared on November 10, 2023, are estimated at $175.3.

Spire will pay $175 cash, subject to customary working capital and other closing adjustments, to acquire MoGas Pipeline, an interstate natural gas pipeline, and Omega Pipeline, a connected gas distribution system, from CorEnergy Infrastructure Trust, Inc. if the transaction closes (currently anticipated in the second quarter of fiscal 2024). For further discussion of this pending acquisition, see Note 16, Commitments and Contingencies, of the Notes to Financial Statements in Item 8.

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Source of Funds

It is management's view that the Company, Spire Missouri and Spire Alabama have adequate access to capital markets and will have sufficient capital resources, both internal and external, to meet anticipated requirements.

The Company's, Spire Missouri's and Spire Alabama's access to capital markets, including the commercial paper market, and their respective financing costs, may depend on the credit rating of the entity that is accessing the capital markets. Their debt is rated by two rating agencies: Standard & Poor's Corporation ("S&P") and Moody's Investors Service ("Moody's"). As of September 30, 2023, the debt ratings of the Company, Spire Missouri and Spire Alabama (shown in the following table) remain at investment grade with a stable outlook (other than Moody's negative outlook for Spire Alabama debt).

	S&P	Moody's
Spire Inc. senior unsecured long-term debt	BBB+	Baa2
Spire Inc. preferred stock	BBB	Ba1
Spire Inc. short-term debt	A-2	P-2
Spire Missouri senior secured long-term debt	A	A1
Spire Alabama senior unsecured long-term debt	A-	A2

Cash and Cash Equivalents

Bank deposits were used to support working capital needs of the business. Spire had no temporary cash investments as of September 30, 2023 or 2022.

Short-term Debt

The Company's short-term cash requirements can be met through the sale of commercial paper or the use of a revolving credit facility. For information about these resources, see Note 7, Notes Payable and Credit Agreements, of the Notes to Financial Statements in Item 8 and "Interest Rate Risk" under "Market Risk" below.

Long-term Debt and Equity

At September 30, 2023, Spire had outstanding principal of long-term debt totaling $3,732.7, of which $1,798.0 was issued by Spire Missouri, $750.0 was issued by Spire Alabama, and $229.7 was issued by other subsidiaries. For more information about long-term debt, see Note 6 of the Notes to Financial Statements in Item 8 and "Interest Rate Risk" under "Market Risk" below.

Effective March 5, 2022, Spire Missouri was authorized by the MoPSC to issue conventional term loans, first mortgage bonds, unsecured debt, preferred stock and common stock in an aggregate amount of up to $800.0 for financings placed any time before December 31, 2024. Under this authorization through September 30, 2023, Spire Missouri has issued $79.1 of common stock and $400.0 of first mortgage bonds. Spire Alabama has no standing authority to issue long-term debt and must petition the APSC for each planned issuance.

On October 13, 2022, Spire Alabama issued $90.0 of notes due October 15, 2029, bearing interest at 5.32% and $85.0 of notes due October 15, 2032, bearing interest at 5.41%. Interest is payable semi-annually. The notes are senior unsecured obligations and rank equal in right to payment with all other senior unsecured indebtedness of Spire Alabama. Also on October 13, 2022, Spire Gulf issued $30.0 of first mortgage bonds due October 15, 2037, bearing interest at 5.61% payable semi-annually. The bonds rank equal in right to payment with the other first mortgage bonds issued by Spire Gulf. The bonds were issued under a supplemental indenture with collateral fall away provisions whereby, under certain conditions, Spire Gulf may elect to exchange the bonds, which are secured, for unsecured notes.

On February 13, 2023, Spire Missouri issued $400.0 aggregate principal amount of its 4.80% Series First Mortgage Bonds due 2033. Interest is payable semi-annually. The notes are senior secured indebtedness of Spire Missouri and rank equally with all other existing and future senior secured indebtedness issued by Spire Missouri under its mortgage and deed of trust. The bonds are secured by a first mortgage lien on substantially all of the real properties of Spire Missouri, subject to limited exceptions.

On March 7, 2023, Spire issued $150.0 aggregate principal amount of its 5.80% Series 2023 Senior Notes due March 15, 2033. Interest is payable semi-annually. The notes are senior unsecured obligations of the Company.

Spire has a shelf registration statement on Form S-3 on file with the SEC for the issuance and sale of up to 250,000 shares of common stock under its Dividend Reinvestment and Direct Stock Purchase Plan. There were 244,182 and 237,891 shares at September 30, 2023 and November 10, 2023, respectively, remaining available for issuance under this Form S-3. Spire and Spire Missouri also have a universal shelf registration statement on Form S-3 on file with the SEC for the issuance of various equity and debt securities, which expires on May 9, 2025.

Spire has an "at-the-market" (ATM) equity distribution agreement, pursuant to which the Company may offer and sell, from time to time, shares of its common stock (including shares of common stock that may be sold pursuant to forward sale agreements entered into in connection with the ATM equity distribution agreement). In the second and third quarters of fiscal 2023, Spire executed forward sale agreements for a total of 2,315,921 shares, 1,744,549 of which must be settled on or before December 28, 2023 and 571,372 of which were settled on September 27, 2023, generating net proceeds of $38.5. Had the remaining shares under the forward agreements been settled as of September 30, 2023, it would have generated net proceeds of $111.2. As of September 30, 2023, Spire may sell additional shares with an aggregate offering price of up to $17.9 under the current Board of Directors authorization expiring May 2025. For additional information about the ATM program, see Note 5 of the Notes to Financial Statements in Item 8.

In February 2021, Spire issued 3.5 million equity units for an aggregate stated amount of $175.0, resulting in net proceeds of $169.3 after underwriting fees and other issuance costs. See Note 5, Shareholders' Equity, of the Notes to Financial Statements in Item 8 for additional discussion of these equity units.

Including the current portion of long-term debt, the Company's long-term consolidated capitalization consisted of 44% equity at September 30, 2023 and 46% equity at September 30, 2022. For more information about equity, see Note 5 of the Notes to Financial Statements in Item 8.

ENVIRONMENTAL MATTERS

The Utilities and other Spire subsidiaries own and operate natural gas distribution, transmission and storage facilities, the operations of which are subject to various environmental laws, regulations and interpretations. While environmental issues resulting from such operations arise in the ordinary course of business, such issues have not materially affected the Company's, Spire Missouri's or Spire Alabama's financial position and results of operations. As environmental laws, regulations and their interpretations change, however, the Company and the Utilities may be required to incur additional costs. For information relative to environmental matters, see Contingencies in Note 16 of the Notes to Financial Statements in Item 8.

REGULATORY MATTERS

For discussions of regulatory matters for Spire, Spire Missouri, and Spire Alabama, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

ACCOUNTING PRONOUNCEMENTS

The Company, Spire Missouri and Spire Alabama have evaluated recently issued accounting standards and concluded that none will have a material impact on their financial position or results of operations upon adoption.

CRITICAL ACCOUNTING ESTIMATES

Our discussion and analysis of our financial condition, results of operations, liquidity and capital resources are based upon our financial statements, which have been prepared in accordance with GAAP, which requires that we make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. We believe the following represent the more significant items requiring the use of judgment and estimates in preparing our financial statements:

Regulatory Accounting – The Utilities account for their regulated operations in accordance with FASB Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also, regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities). Management believes that the current regulatory environment supports the continued use of these regulatory accounting principles and that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process. For Spire Missouri and Spire Alabama, management believes the following represent the more significant items recorded through the application of this accounting guidance:

PGA Clause – Spire Missouri's PGA clauses allows it to flow through to customers, subject to a prudence review by the MoPSC, the cost of purchased gas supplies, including the costs, cost reductions and related carrying costs associated with the use of natural gas derivative instruments to hedge the purchase price of natural gas. The difference between actual costs incurred and costs recovered through the application of the PGA clauses are recorded as regulatory assets and regulatory liabilities that are recovered or refunded in a subsequent period. The PGA clauses also permit the application of carrying costs to all over- or under-recoveries of gas costs, including costs and cost reductions associated with the use of derivative instruments, and also provide for a portion of income from off-system sales and capacity release revenues to be flowed through to customers.

GSA Rider – Spire Alabama's rate schedules for natural gas distribution charges contain a GSA rider, established in 1993, which permits the pass-through to customers of changes in the cost of gas supply. Spire Alabama's tariff provides a temperature adjustment mechanism, also included in the GSA, that is designed to moderate the impact of departures from normal temperatures on Spire Alabama's earnings. The temperature adjustment applies primarily to residential, small commercial and small industrial customers. Other non-temperature weather related conditions that may affect customer usage are not included in the temperature adjustment. In prior years, Spire Alabama entered into cash flow derivative commodity instruments to hedge its exposure to price fluctuations on its gas supply. Spire Alabama recognizes all derivatives at fair value as either assets or liabilities on the balance sheet. Any realized gains or losses are passed through to customers using the mechanisms of the GSA rider in accordance with Spire Alabama's APSC approved tariff and are recognized as a regulatory asset or regulatory liability. All derivative commodity instruments in a gain position are valued on a discounted basis incorporating an estimate of performance risk specific to each related counterparty. Derivative commodity instruments in a loss position are valued on a discounted basis incorporating an estimate of performance risk specific to Spire Alabama. Spire Alabama currently has no active gas supply derivative positions.

ISRS – The ISRS allows Spire Missouri expedited recovery for its investment to upgrade its infrastructure and enhance its safety and reliability without the necessity of a formal rate case. Spire Missouri records ISRS revenues as authorized by the MoPSC and estimates the probability and amount of any refunds based on commission precedent, current legal rulings, the opinion of legal counsel, and other considerations.

For more information, see Note 15, Regulatory Matters, of the Notes to Financial Statements in Item 8.

Employee Benefits and Postretirement Obligations – Pension and postretirement obligations are calculated by actuarial consultants that utilize several statistical factors and other assumptions provided by management related to future events, such as discount rates, returns on plan assets, compensation increases, and mortality rates. For the Utilities, the amount of expense recognized and the amounts reflected in other comprehensive income are dependent upon the regulatory treatment provided for such costs, as discussed further below. Certain liabilities related to group medical benefits and workers' compensation claims, portions of which are self-insured and/or contain "stop-loss" coverage with third-party insurers to limit exposure, are established based on historical trends.

The amount of net periodic pension and other postretirement benefit costs recognized in the financial statements related to the Utilities' qualified pension plans and other postretirement benefit plans is based upon allowances, as approved by the MoPSC (for Spire Missouri) and as approved by the APSC (for Spire Alabama). The allowances have been established in the rate-making process for the recovery of these costs from customers. The differences between these amounts and actual pension and other postretirement benefit costs incurred for financial reporting purposes are deferred as regulatory assets or regulatory liabilities. GAAP also requires that changes that affect the funded status of pension and other postretirement benefit plans, but that are not yet required to be recognized as components of pension and other postretirement benefit costs, be reflected in other comprehensive income. For the Utilities' qualified pension plans and other postretirement benefit plans, amounts that would otherwise be reflected in other comprehensive income are deferred with entries to regulatory assets or regulatory liabilities.

For more information, see Note 13, Pension Plans and Other Postretirement Benefits, of the Notes to Financial Statements in Item 8.

The tables below reflect the sensitivity of Spire's plans to potential changes in key assumptions:

Pension Plan Benefits:			
Actuarial Assumptions	**Increase/ (Decrease)**	**Estimated Increase/ (Decrease) to Projected Benefit Obligation**	**Estimated Increase/ (Decrease) to Annual Net Pension Cost***
Discount Rate	0.25%	$ (9.3)	$ 0.1
	(0.25)%	9.7	(0.1)
Expected Return on Plan Assets	0.25%	—	(1.0)
	(0.25)%	—	1.0
Rate of Future Compensation Increase	0.25%	0.6	0.1
	(0.25)%	(0.6)	(0.1)

Postretirement Benefits:			
Actuarial Assumptions	**Increase/ (Decrease)**	**Estimated Increase/ (Decrease) to Projected Postretirement Benefit Obligation**	**Estimated Increase/ (Decrease) to Annual Net Postretirement Benefit Cost***
Discount Rate	0.25%	$ (2.5)	$ —
	(0.25)%	2.6	—
Expected Return on Plan Assets	0.25%	—	(0.7)
	(0.25)%	—	0.7

* Excludes the impact of regulatory deferral mechanism. See Note 13, Pension Plans and Other Postretirement Benefits, of the Notes to Financial Statements in Item 8 for information regarding the regulatory treatment of these costs.

Income Taxes – Income tax calculations require estimates due to book-tax differences, estimates with respect to regulatory treatment of certain items, and uncertainty in the interpretation of tax laws and regulations. Critical assumptions and judgments also include projections of future taxable income to determine the ability to utilize net operating losses and credit carryforwards prior to their expiration. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Management regularly assesses financial statement tax provisions to identify any change in regulatory treatment or tax related estimates and assumptions that could have a material impact on cash flows, financial position and/or results of operations. For more information, see Note 12, Income Taxes, of the Notes to Financial Statements in Item 8.

For further discussion of significant accounting policies, see Note 1, Summary of Significant Accounting Policies, of the Notes to Financial Statements in Item 8.

MARKET RISK

Commodity Price Risk

Gas Utility

The Utilities' commodity price risk, which arises from market fluctuations in the price of natural gas, is primarily managed through the operation of Spire Missouri's PGA clauses and Spire Alabama's GSA rider. The PGA clauses and GSA rider allows the Utilities to flow through to customers, subject to prudence review by the MoPSC and APSC, the cost of purchased gas supplies. Spire Missouri is allowed the flexibility to make up to three discretionary PGA changes during each year, in addition to its mandatory November PGA change, so long as such changes are separated by at least two months. Spire Missouri is able to mitigate, to some extent, changes in commodity prices through the use of physical storage supplies and regional supply diversity. Spire Alabama is allowed to make monthly changes to the GSA rate, but increases cannot exceed a 5% increase over the prior effective residential billing rate. The Utilities also have risk management policies that allow for the purchase of natural gas derivative instruments with the goal of managing its price risk associated with purchasing natural gas on behalf of its customers. These policies prohibit speculation. As of September 30, 2023, Spire Missouri had active natural gas derivative positions, but Spire Alabama did not. Costs and cost reduction, including carrying costs, associated with the use of natural gas derivative instruments are allowed to be passed on to customers through the operation of the PGA clauses or GSA rider. Accordingly, the Utilities do not expect any adverse earnings impact as a result of the use of these derivative instruments. However, the timing of recovery for cash payments related to margin requirements may cause short-term cash requirements to vary. For more information about the Utilities' natural gas derivative instruments, see Note 10, Derivative Instruments and Hedging Activities, of the Notes to Financial Statements in Item 8.

Gas Marketing

In the course of its business, Spire's non-regulated gas marketing subsidiary, Spire Marketing, enters into contracts to purchase and sell natural gas at fixed prices and natural gas index-based prices. Commodity price risk associated with these contracts has the potential to impact earnings and cash flows. To minimize this risk, Spire Marketing has a risk management policy that provides for daily monitoring of a number of business measures, including fixed price commitments. In accordance with the risk management policy, Spire Marketing manages the price risk associated with its fixed price commitments. This risk is currently managed either by closely matching the offsetting physical purchase or sale of natural gas at fixed-prices or through the use of natural gas futures, options and swap contracts traded on or cleared through the New York Mercantile Exchange (NYMEX) and Intercontinental Exchange (ICE) to lock in margins. At September 30, 2023 and 2022, Spire Marketing's unmatched fixed-price positions were not material to Spire's financial position or results of operations.

As mentioned above, Spire Marketing uses natural gas futures, options and swap contracts traded on or cleared through the NYMEX and ICE to manage the commodity price risk associated with its fixed-price natural gas purchase and sale commitments. These derivative instruments may be designated as cash flow hedges of forecasted purchases or sales. Such accounting treatment, if elected, generally permits a substantial portion of the gain or loss to be deferred from recognition in earnings until the period that the associated forecasted purchase or sale is recognized in earnings. To the extent a hedge is effective, gains or losses on the derivatives will be offset by changes in the value of the hedged forecasted transactions. At September 30, 2022 and 2021, Spire Marketing had no designated cash flow hedges. Information about the fair values of Spire Marketing's exchange-traded/cleared natural gas derivative instruments is presented below:

	Derivative Fair Values	Cash Margin	Derivatives and Cash Margin
Net balance of derivative assets at September 30, 2022	$ 10.6	$ 15.2	$ 25.8
Changes in fair value	(35.0)	—	(35.0)
Settlements/purchases - net	12.2	—	12.2
Changes in cash margin	—	3.1	3.1
Net balance of derivative assets at September 30, 2023	$ (12.2)	$ 18.3	$ 6.1

	As of September 30, 2023					
Maturity by Fiscal Year	**Total**	**2024**	**2025**	**2026**	**2027**	**2028**
Fair values of exchange-traded/cleared natural gas derivatives - net	$ (12.1)	$ (8.6)	$ (3.3)	$ (0.2)	$ —	$ —
Fair values of basis swaps - net	0.5	0.7	—	(0.1)	(0.1)	—
Fair values of puts and calls - net	(0.1)	(0.1)	—	—	—	—
Position volumes [millions of MMBtu, long or (short)]:						
Net futures/swap/option positions	21.4	7.9	9.9	2.3	1.2	0.1
Net basis swap positions	14.1	6.2	3.7	2.2	1.8	0.2
Net puts and calls positions	(0.8)	(0.8)	—	—	—	—

Certain of Spire Marketing's physical natural gas derivative contracts are designated as normal purchases or normal sales, as permitted by GAAP. This election permits the Company to account for the contract in the period the natural gas is delivered. Contracts not designated as normal purchases or normal sales, including those designated as trading activities, are accounted for as derivatives with changes in fair value recognized in earnings in the periods prior to settlement.

Below is a reconciliation of the beginning and ending balances for physical natural gas contracts accounted for as derivatives, none of which will settle beyond fiscal 2024:

Net balance of derivative liabilities at September 30, 2022	$ (8.9)
Changes in fair value	19.6
Settlements	(1.7)
Net balance of derivative liabilities at September 30, 2023	$ 9.0

For further details related to Spire Marketing's derivatives and hedging activities, see Note 10, Derivative Instruments and Hedging Activities, of the Notes to Financial Statements in Item 8.

Counterparty Credit Risk

Spire Marketing has concentrations of counterparty credit risk in that a significant portion of its transactions are with energy producers, utility companies and pipelines. These concentrations of counterparties have the potential to affect the Company's overall exposure to credit risk, either positively or negatively, in that each of these three groups may be affected similarly by changes in economic, industry or other conditions. Spire Marketing also has concentrations of credit risk with certain individually significant counterparties. To the extent possible, Spire Marketing enters into netting arrangements with its counterparties to mitigate exposure to credit risk. It is also exposed to credit risk associated with its derivative contracts designated as normal purchases and normal sales. Spire Marketing closely monitors its credit exposure and, although uncollectible amounts have not been significant, increased counterparty defaults are possible and may result in financial losses and/or capital limitations. For more information on these and other concentrations of credit risk, including how Spire Marketing manages these risks, see Note 11, Concentrations of Credit Risk, of the Notes to Financial Statements in Item 8.

Interest Rate Risk

The Company is subject to interest rate risk associated with its short-term debt issuances. Based on average short-term borrowings during fiscal 2023, an increase of 100 basis points in the underlying average interest rate for short-term debt would have caused an increase in interest expense (and a decrease in pre-tax earnings and cash flows) of approximately $8.4 on an annual basis. Portions of such an increase may be offset through the Utilities' application of PGA and GSA carrying costs. At September 30, 2023, Spire had fixed-rate long-term debt totaling $3,432.7, of which $1,498.0 was issued by Spire Missouri, $750.0 was issued by Spire Alabama, and $1,184.7 was issued by Spire and other subsidiaries. While the long-term debt issues are fixed-rate, they are subject to changes in fair value as market interest rates change. However, increases or decreases in fair value would impact earnings and cash flows only if the Company were to reacquire any of these issues in the open market prior to maturity. Under GAAP applicable to the Utilities' regulated operations, losses or gains on early redemptions of long-term debt would typically be deferred as regulatory assets or regulatory liabilities and amortized over a future period.

Refer to Note 10, Derivative Instruments and Hedging Activities, of the Notes to Financial Statements in Item 8 for details on the Company's interest rate swap transactions.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

For this discussion, see "Market Risk" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Spire Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Spire Inc. and subsidiaries (the "Company") as of September 30, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended September 30, 2023, of the Company and our report dated November 16, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for their assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Reports on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Spire Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Spire Inc. and subsidiaries (the "Company") as of September 30, 2023 and 2022, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows, for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of September 30, 2023, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated November 16, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Matters – Impact of Rate Regulation on the Financial Statements – Refer to Note 15 to the financial statements

Critical Audit Matter Description

The Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also,

regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities).

The Company is subject to rate regulation by the Missouri and Alabama Public Service Commissions (the "Commissions"), which have jurisdiction with respect to the rates of natural gas companies within their respective geographies. The Company has stated that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process.

Accounting for the economics of rate regulation affects multiple financial statement line items, including property, plant, and equipment; regulatory assets and liabilities; operating revenues; and depreciation expense, and affects multiple disclosures in the Company's financial statements. There is a risk that the Commissions will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. As a result, we identified the impact of rate regulation as a critical audit matter due to the high degree of subjectivity involved in assessing the impact of current and future regulatory orders on events that have occurred as of September 30, 2023, and the judgments made by management to support its assertions about impacted account balances and disclosures. Management judgments included assessing the likelihood of (1) recovery in future rates of incurred costs or (2) refunds to customers or future reduction in rates. Given that management's accounting judgments are based on assumptions about the outcome of future decisions by the Commissions, auditing these rate-impacted account balances and disclosures, and the related judgments, requires specialized knowledge of accounting for rate regulation due to the inherent complexities associated with the specialized rules related to accounting for the effects of cost-based regulation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the Commissions included the following, among others:

- We tested the effectiveness of management's controls over evaluating the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We tested the effectiveness of management's controls over the initial recognition of amounts as property, plant, and equipment; regulatory assets or liabilities; and the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates.
- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments, in the financial statements.
- We read relevant regulatory orders issued by the Commissions for the Company in Missouri, Alabama, and Mississippi; regulatory statutes, interpretations, procedural memorandums, and filings made by interveners; and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedents of the Commissions' treatment of similar costs under similar circumstances.
- We obtained from management the regulatory orders that support the probability of recovery, refund, and/or future reduction in rates for regulatory assets and liabilities and assessed management's assertion that amounts are probable of recovery, refund, or a future reduction in rates.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

We have served as the Company's auditor since 1953.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholder and the Board of Directors of Spire Missouri Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Spire Missouri Inc. (a wholly owned subsidiary of Spire Inc.) (the "Company") as of September 30, 2023 and 2022, the related statements of comprehensive income, shareholder's equity, and cash flows, for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of their internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Matters – Impact of Rate Regulation on the Financial Statements – Refer to Note 15 to the financial statements

Critical Audit Matter Description

The Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also,

regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities).

The Company is subject to rate regulation by the Missouri Public Service Commission (the "Commission"), which has jurisdiction with respect to the rates of natural gas companies within Missouri's geography. The Company has stated that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process.

Accounting for the economics of rate regulation affects multiple financial statement line items, including property, plant, and equipment; regulatory assets and liabilities; operating revenues; and depreciation expense, and affects multiple disclosures in the Company's financial statements. There is a risk that the Commission will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. As a result, we identified the impact of rate regulation as a critical audit matter due to the high degree of subjectivity involved in assessing the impact of current and future regulatory orders on events that have occurred as of September 30, 2023, and the judgments made by management to support their assertions about impacted account balances and disclosures. Management judgments included assessing the likelihood of (1) recovery in future rates of incurred costs or (2) refunds to customers or future reduction in rates. Given that management's accounting judgments are based on assumptions about the outcome of future decisions by the Commission, auditing these rate-impacted account balances and disclosures, and the related judgments, requires specialized knowledge of accounting for rate regulation due to the inherent complexities associated with the specialized rules related to accounting for the effects of cost-based regulation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the Commission included the following, among others:

- We tested the effectiveness of management's controls over evaluating the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We tested the effectiveness of management's controls over the initial recognition of amounts as property, plant, and equipment; regulatory assets or liabilities; and the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates.
- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments, in the financial statements.
- We read relevant regulatory orders issued by the Commission for the Company in Missouri; regulatory statutes, interpretations, procedural memorandums, and filings made by interveners; and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedents of the Commission's treatment of similar costs under similar circumstances.
- We obtained from management the regulatory orders that support the probability of recovery, refund, and/or future reduction in rates for regulatory assets and liabilities and assessed management's assertion that amounts are probable of recovery, refund, or a future reduction in rates.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

We have served as the Company's auditor since 1953.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholder and the Board of Directors of Spire Alabama Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Spire Alabama Inc. (a wholly owned subsidiary of Spire Inc.) (the "Company") as of September 30, 2023 and 2022, the related statements of income, shareholder's equity, and cash flows, for each of the three years in the period ended September 30, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2023 and 2022, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of their internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Regulatory Matters – Impact of Rate Regulation on the Financial Statements – Refer to Note 15 to the financial statements

Critical Audit Matter Description

The Company accounts for their regulated operations in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 980, *Regulated Operations*. The provisions of this accounting guidance require, among other things, that financial statements of a rate-regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-rate-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. Also,

regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities).

The Company is subject to rate regulation by the Alabama Public Service Commission (the "Commission"), which has jurisdiction with respect to the rates of natural gas companies within Alabama's geography. The Company has stated that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process.

Accounting for the economics of rate regulation affects multiple financial statement line items, including property, plant, and equipment; regulatory assets and liabilities; operating revenues; and depreciation expense, and affects multiple disclosures in the Company's financial statements. There is a risk that the Commission will not approve full recovery of the costs of providing utility service or recovery of all amounts invested in the utility business and a reasonable return on that investment. As a result, we identified the impact of rate regulation as a critical audit matter due to the high degree of subjectivity involved in assessing the impact of current and future regulatory orders on events that have occurred as of September 30, 2023, and the judgments made by management to support their assertions about impacted account balances and disclosures. Management judgments included assessing the likelihood of (1) recovery in future rates of incurred costs or (2) refunds to customers or future reduction in rates. Given that management's accounting judgments are based on assumptions about the outcome of future decisions by the Commission, auditing these rate-impacted account balances and disclosures, and the related judgments, requires specialized knowledge of accounting for rate regulation due to the inherent complexities associated with the specialized rules related to accounting for the effects of cost-based regulation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty of future decisions by the Commission included the following, among others:

- We tested the effectiveness of management's controls over evaluating the likelihood of (1) the recovery in future rates of costs incurred as property, plant, and equipment and deferred as regulatory assets, and (2) a refund or a future reduction in rates that should be reported as regulatory liabilities. We tested the effectiveness of management's controls over the initial recognition of amounts as property, plant, and equipment; regulatory assets or liabilities; and the monitoring and evaluation of regulatory developments that may affect the likelihood of recovering costs in future rates or of a future reduction in rates.
- We evaluated the Company's disclosures related to the impacts of rate regulation, including the balances recorded and regulatory developments, in the financial statements.
- We read relevant regulatory orders issued by the Commission for the Company in Alabama; regulatory statutes, interpretations, procedural memorandums, and filings made by interveners; and other publicly available information to assess the likelihood of recovery in future rates or of a future reduction in rates based on precedents of the Commission's treatment of similar costs under similar circumstances.
- We obtained from management the regulatory orders that support the probability of recovery, refund, and/or future reduction in rates for regulatory assets and liabilities and assessed management's assertion that amounts are probable of recovery, refund, or a future reduction in rates.

/s/ Deloitte & Touche LLP

St. Louis, Missouri
November 16, 2023

We have served as the Company's auditor since 2014.

SPIRE INC.
CONSOLIDATED STATEMENTS OF INCOME

(In millions, except per share amounts)	Years Ended September 30 2023	2022	2021
Operating Revenues	$ 2,666.3	$ 2,198.5	$ 2,235.5
Operating Expenses:			
Natural gas	1,260.8	923.9	946.3
Operation and maintenance	517.6	449.6	465.8
Depreciation and amortization	254.8	237.3	213.1
Taxes, other than income taxes	214.5	179.5	160.1
Total Operating Expenses	2,247.7	1,790.3	1,785.3
Operating Income	418.6	408.2	450.2
Interest Expense	185.7	119.8	106.6
Other Income (Expense), Net	23.4	(8.7)	(3.4)
Income Before Income Taxes	256.3	279.7	340.2
Income Tax Expense	38.8	58.9	68.5
Net Income	217.5	220.8	271.7
Provision for preferred dividends	14.8	14.8	14.8
Income allocated to participating securities	0.3	0.3	0.4
Net Income Available to Common Shareholders	$ 202.4	$ 205.7	$ 256.5
Weighted Average Number of Common Shares Outstanding:			
Basic	52.5	52.0	51.6
Diluted	52.6	52.1	51.7
Basic Earnings Per Share of Common Stock	$ 3.86	$ 3.96	$ 4.97
Diluted Earnings Per Share of Common Stock	$ 3.85	$ 3.95	$ 4.96

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In millions)	Years Ended September 30 2023	2022	2021
Net Income	$ 217.5	$ 220.8	$ 271.7
Other Comprehensive Income, Before Tax:			
Cash flow hedging derivative instruments:			
Net hedging gain arising during the period	20.1	56.7	61.2
Amounts reclassified into regulatory liabilities	(17.5)	—	—
Amounts reclassified into net income	(2.4)	(1.2)	(1.3)
Net gain on cash flow hedging derivative instruments	0.2	55.5	59.9
Net gain (loss) on defined benefit pension and other postretirement plans	0.2	1.5	(1.3)
Net unrealized gain (loss) on available-for-sale debt securities	0.1	(0.4)	(0.2)
Other Comprehensive Income, Before Tax	0.5	56.6	58.4
Income Tax Expense Related to Items of Other Comprehensive Income	0.1	13.0	13.6
Other Comprehensive Income, Net of Tax	0.4	43.6	44.8
Comprehensive Income	$ 217.9	$ 264.4	$ 316.5

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED BALANCE SHEETS

(Dollars in millions, except per share amounts)	September 30 2023	2022
ASSETS		
Utility Plant	$ 8,210.1	$ 7,664.9
Less: Accumulated depreciation and amortization	2,431.2	2,294.5
Net Utility Plant	5,778.9	5,370.4
Non-utility Property (net of accumulated depreciation and amortization of $71.1 and $50.7 at September 30, 2023 and 2022, respectively)	628.5	491.4
Other Investments	102.6	87.8
Total Other Property and Investments	731.1	579.2
Current Assets:		
Cash and cash equivalents	5.6	6.5
Accounts receivable:		
Utility	192.4	210.8
Other	128.6	443.8
Allowance for credit losses	(32.5)	(31.9)
Delayed customer billings	22.0	21.3
Inventories:		
Natural gas	223.7	371.8
Propane gas	8.6	8.6
Materials and supplies	47.2	41.9
Regulatory assets	348.3	355.4
Prepayments	48.2	41.1
Other	84.8	122.7
Total Current Assets	1,076.9	1,592.0
Deferred Charges and Other Assets:		
Goodwill	1,171.6	1,171.6
Regulatory assets	1,249.2	1,112.4
Other	305.9	258.1
Total Deferred Charges and Other Assets	2,726.7	2,542.1
Total Assets	$ 10,313.6	$ 10,083.7

SPIRE INC.
CONSOLIDATED BALANCE SHEETS (Continued)

	September 30	
	2023	2022
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Preferred stock ($25.00 par value per share; 10.0 million depositary shares authorized, issued and outstanding at September 30, 2023 and 2022)	$ 242.0	$ 242.0
Common stock (par value $1.00 per share; 70.0 million shares authorized; 53.2 million shares and 52.5 million shares issued and outstanding at September 30, 2023, and 2022, respectively)	53.2	52.5
Paid-in capital	1,616.5	1,571.3
Retained earnings	958.0	905.5
Accumulated other comprehensive income	47.6	47.2
Total Shareholders' Equity	2,917.3	2,818.5
Temporary equity	16.5	13.1
Long-term debt (less current portion)	3,554.0	2,958.5
Total Capitalization	6,487.8	5,790.1
Current Liabilities:		
Current portion of long-term debt	156.6	281.2
Notes payable	955.5	1,037.5
Accounts payable	253.1	617.4
Advance customer billings	20.9	18.7
Wages and compensation accrued	47.0	50.2
Customer deposits	27.7	28.2
Taxes accrued	104.1	90.1
Regulatory liabilities	7.3	3.7
Other	183.2	226.6
Total Current Liabilities	1,755.4	2,353.6
Deferred Credits and Other Liabilities:		
Deferred income taxes	743.7	675.1
Pension and postretirement benefit costs	137.3	163.0
Asset retirement obligations	577.4	520.9
Regulatory liabilities	472.4	418.2
Other	139.6	162.8
Total Deferred Credits and Other Liabilities	2,070.4	1,940.0
Commitments and Contingencies (Note 16)		
Total Capitalization and Liabilities	$ 10,313.6	$ 10,083.7

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(Dollars in millions, except per share amounts)	Common Stock Shares	Common Stock Par	Preferred Stock	Paid-in Capital	Retained Earnings	AOCI*	Total
Balance at September 30, 2020	51,611,789	$ 51.6	$ 242.0	$1,549.2	$ 720.7	$(41.2)	$2,522.3
Net income	—	—	—	—	271.7	—	271.7
Dividend reinvestment plan	24,565	—	—	1.6	—	—	1.6
Stock-based compensation costs	—	—	—	9.1	—	—	9.1
Stock issued under stock-based compensation plans	65,316	0.1	—	(0.1)	—	—	—
Employees' tax withholding for stock-based compensation	(16,787)	—	—	(1.1)	—	—	(1.1)
Equity units issued	—	—	—	(40.8)	—	—	(40.8)
Temporary equity adjustment to redemption value	—	—	—	—	1.3	—	1.3
Dividends declared:							
Common stock ($2.60 per share)	—	—	—	—	(135.9)	—	(135.9)
Preferred stock ($1.475 per depositary share)	—	—	—	—	(14.8)	—	(14.8)
Other comprehensive income, net of tax	—	—	—	—	—	44.8	44.8
Balance at September 30, 2021	51,684,883	$ 51.7	$ 242.0	$1,517.9	$ 843.0	$ 3.6	$2,658.2
Net income	—	—	—	—	220.8	—	220.8
Common stock issued	719,625	0.7	—	49.6	—	—	50.3
Dividend reinvestment plan	24,154	—	—	1.6	—	—	1.6
Stock-based compensation costs	—	—	—	4.1	—	—	4.1
Stock issued under stock-based compensation plans	93,936	0.1	—	(0.1)	—	—	—
Employees' tax withholding for stock-based compensation	(28,055)	—	—	(1.8)	—	—	(1.8)
Dividends declared:							
Common stock ($2.74 per share)	—	—	—	—	(143.5)	—	(143.5)
Preferred stock ($1.475 per depositary share)	—	—	—	—	(14.8)	—	(14.8)
Other comprehensive income, net of tax	—	—	—	—	—	43.6	43.6
Balance at September 30, 2022	52,494,543	$ 52.5	$ 242.0	$1,571.3	$ 905.5	$ 47.2	$2,818.5
Net income	—	—	—	—	217.5	—	217.5
Common stock issued	611,872	0.6	—	39.9	—	—	40.5
Dividend reinvestment plan	22,230	—	—	1.5	—	—	1.5
Stock-based compensation costs	—	—	—	5.3	—	—	5.3
Stock issued under stock-based compensation plans	60,007	0.1	—	(0.1)	—	—	—
Employees' tax withholding for stock-based compensation	(18,428)	—	—	(1.4)	—	—	(1.4)
Temporary equity adjustment to redemption value	—	—	—	—	2.3	—	2.3
Dividends declared:							
Common stock ($2.88 per share)	—	—	—	—	(152.5)	—	(152.5)
Preferred stock ($1.475 per depositary share)	—	—	—	—	(14.8)	—	(14.8)
Other comprehensive income, net of tax	—	—	—	—	—	0.4	0.4
Balance at September 30, 2023	53,170,224	$ 53.2	$ 242.0	$1,616.5	$ 958.0	$ 47.6	$2,917.3

* Accumulated other comprehensive income (loss)

See the accompanying Notes to Financial Statements.

SPIRE INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)	Years Ended September 30 2023	2022	2021
Operating Activities:			
Net Income	$ 217.5	$ 220.8	$ 271.7
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	254.8	237.3	213.1
Deferred income taxes and investment tax credits	36.9	57.9	67.0
Changes in assets and liabilities:			
Accounts receivable	334.2	(26.5)	(343.0)
Inventories	142.8	(117.2)	(111.0)
Regulatory assets and liabilities	(68.7)	(409.0)	76.6
Accounts payable	(389.2)	190.7	177.7
Delayed/advance customer billings, net	1.5	(25.5)	(12.4)
Taxes accrued	15.0	11.2	8.9
Other assets and liabilities	(117.6)	(93.5)	(116.1)
Other	13.0	8.8	17.3
Net cash provided by operating activities	440.2	55.0	249.8
Investing Activities:			
Capital expenditures	(662.5)	(552.2)	(624.8)
Business acquisition	(37.0)	—	—
Other	4.0	5.5	2.8
Net cash used in investing activities	(695.5)	(546.7)	(622.0)
Financing Activities:			
Issuance of long-term debt	755.0	300.0	629.1
Repayment of long-term debt	(281.2)	(55.8)	(115.4)
(Repayment) Issuance of short-term debt, net	(82.0)	365.5	24.0
Issuance of common stock	41.9	51.9	1.0
Dividends paid on common stock	(150.7)	(141.9)	(133.2)
Dividends paid on preferred stock	(14.8)	(14.8)	(14.8)
Other	(7.6)	(4.0)	(11.3)
Net cash provided by financing activities	260.6	500.9	379.4
Net Increase in Cash, Cash Equivalents, and Restricted Cash	5.3	9.2	7.2
Cash, Cash Equivalents, and Restricted Cash at Beginning of Year	20.5	11.3	4.1
Cash, Cash Equivalents, and Restricted Cash at End of Year	$ 25.8	$ 20.5	$ 11.3
Supplemental disclosure of cash paid for:			
Interest, net of amounts capitalized	$ (177.5)	$ (119.9)	$ (98.7)
Income taxes	(2.0)	(1.8)	(1.5)

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
STATEMENTS OF COMPREHENSIVE INCOME

(In millions)	Years Ended September 30 2023	2022	2021
Operating Revenues	$ 1,762.9	$ 1,321.0	$ 1,516.6
Operating Expenses:			
Natural gas	943.4	587.0	786.8
Operation and maintenance	296.2	255.7	261.1
Depreciation and amortization	158.7	145.3	129.2
Taxes, other than income taxes	157.5	129.0	110.9
Total Operating Expenses	1,555.8	1,117.0	1,288.0
Operating Income	207.1	204.0	228.6
Interest Expense	97.4	60.9	50.3
Other Income (Expense), Net	19.4	(6.9)	(8.9)
Income Before Income Taxes	129.1	136.2	169.4
Income Tax Expense	11.6	21.3	25.3
Net Income	117.5	114.9	144.1
Other Comprehensive Income (Loss), Net of Tax	0.2	1.5	(1.3)
Comprehensive Income	$ 117.7	$ 116.4	$ 142.8

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
BALANCE SHEETS

(Dollars in millions, except per share amounts)	September 30 2023	2022
ASSETS		
Utility Plant	$ 4,964.9	$ 4,550.4
Less: Accumulated depreciation and amortization	1,043.2	982.1
Net Utility Plant	3,921.7	3,568.3
Other Property and Investments	65.7	58.9
Current Assets:		
Cash and cash equivalents	0.8	—
Accounts receivable:		
Utility	142.6	131.5
Associated companies	1.3	3.7
Other	21.1	44.5
Allowance for credit losses	(26.2)	(24.9)
Delayed customer billings	17.9	16.1
Inventories:		
Natural gas	132.8	215.3
Propane gas	8.6	8.6
Materials and supplies	24.2	22.0
Regulatory assets	293.1	288.1
Prepayments	26.7	23.3
Total Current Assets	642.9	728.2
Deferred Charges and Other Assets:		
Goodwill	210.2	210.2
Regulatory assets	617.6	547.6
Other	147.4	105.0
Total Deferred Charges and Other Assets	975.2	862.8
Total Assets	$ 5,605.5	$ 5,218.2

SPIRE MISSOURI INC.
BALANCE SHEETS (continued)

	September 30	
	2023	2022
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock (par value $1.00 per share; 50.0 million shares authorized; 25,855 and 25,325 issued and outstanding at September 30, 2023 and 2022, respectively)	$ 0.1	$ 0.1
Paid-in capital	854.8	816.1
Retained earnings	992.4	931.9
Accumulated other comprehensive loss	(2.5)	(2.7)
Total Shareholder's Equity	1,844.8	1,745.4
Long-term debt (less current portion)	1,785.4	1,387.7
Total Capitalization	3,630.2	3,133.1
Current Liabilities:		
Current portion of long-term debt	—	250.0
Notes payable – associated companies	540.6	445.3
Accounts payable	85.8	119.0
Accounts payable – associated companies	10.5	13.3
Advance customer billings	11.0	7.0
Wages and compensation accrued	23.6	33.8
Customer deposits	5.8	6.5
Taxes accrued	60.3	50.4
Other	48.7	45.6
Total Current Liabilities	786.3	970.9
Deferred Credits and Other Liabilities:		
Deferred income taxes	531.8	500.1
Pension and postretirement benefit costs	103.3	115.5
Asset retirement obligations	111.1	110.6
Regulatory liabilities	389.4	331.8
Other	53.4	56.2
Total Deferred Credits and Other Liabilities	1,189.0	1,114.2
Commitments and Contingencies (Note 16)		
Total Capitalization and Liabilities	$ 5,605.5	$ 5,218.2

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
STATEMENTS OF SHAREHOLDER'S EQUITY

(Dollars in millions)	Common Stock Shares	Common Stock Par	Paid-in Capital	Retained Earnings	AOCI*	Total
Balance at September 30, 2020	24,577	$ 0.1	$ 765.0	$ 672.9	$ (2.9)	$ 1,435.1
Net income	—	—	—	144.1	—	144.1
Other comprehensive loss, net of tax	—	—	—	—	(1.3)	(1.3)
Balance at September 30, 2021	24,577	0.1	765.0	817.0	(4.2)	1,577.9
Net income	—	—	—	114.9	—	114.9
Common stock issued to Spire Inc.	748	—	51.1	—	—	51.1
Other comprehensive income, net of tax	—	—	—	—	1.5	1.5
Balance at September 30, 2022	25,325	0.1	816.1	931.9	(2.7)	1,745.4
Net income	—	—	—	117.5	—	117.5
Common stock issued to Spire Inc.	530	—	38.7	—	—	38.7
Dividends declared	—	—	—	(57.0)	—	(57.0)
Other comprehensive income, net of tax	—	—	—	—	0.2	0.2
Balance at September 30, 2023	25,855	$ 0.1	$ 854.8	$ 992.4	$ (2.5)	$ 1,844.8

* Accumulated other comprehensive income (loss)

See the accompanying Notes to Financial Statements.

SPIRE MISSOURI INC.
STATEMENTS OF CASH FLOWS

(In millions)	Years Ended September 30 2023	2022	2021
Operating Activities:			
Net Income	$ 117.5	$ 114.9	$ 144.1
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	158.7	145.3	129.2
Deferred income taxes and investment tax credits	11.6	21.3	25.3
Changes in assets and liabilities:			
Accounts receivable	16.0	163.8	(207.4)
Inventories	80.2	(45.4)	(79.0)
Regulatory assets and liabilities	(22.4)	(314.3)	35.9
Accounts payable	(45.7)	25.3	23.1
Delayed/advance customer billings, net	2.2	(26.4)	(13.0)
Taxes accrued	9.7	9.3	2.1
Other assets and liabilities	(108.4)	(48.0)	(115.0)
Other	1.7	1.4	0.7
Net cash provided by (used in) operating activities	221.1	47.2	(54.0)
Investing Activities:			
Capital expenditures	(447.5)	(354.1)	(382.6)
Other	4.1	3.6	1.3
Net cash used in investing activities	(443.4)	(350.5)	(381.3)
Financing Activities:			
Issuance of long-term debt	400.0	300.0	304.1
Repayment of long-term debt	(250.0)	—	(55.0)
(Repayment) issuance of short-term debt, net	—	(250.0)	250.0
Borrowings from (repayments to) Spire, net	95.3	204.4	(60.3)
Issuance of common stock	38.7	51.1	—
Dividends paid	(57.0)	—	—
Other	(3.9)	(2.2)	(3.5)
Net cash provided by financing activities	223.1	303.3	435.3
Net Increase in Cash and Cash Equivalents	0.8	—	—
Cash and Cash Equivalents at Beginning of Year	—	—	—
Cash and Cash Equivalents at End of Year	$ 0.8	$ —	$ —
Supplemental disclosure of cash paid for:			
Interest, net of amounts capitalized	$ (93.8)	$ (58.9)	$ (45.9)
Income taxes	(0.2)	—	—

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
STATEMENTS OF INCOME

(In millions)	Years Ended September 30 2023	2022	2021
Operating Revenues	$ 571.1	$ 509.1	$ 494.0
Operating Expenses:			
Natural gas	202.7	161.5	145.3
Operation and maintenance	136.4	130.1	132.5
Depreciation and amortization	69.3	66.8	62.1
Taxes, other than income taxes	43.0	38.1	37.1
Total Operating Expenses	451.4	396.5	377.0
Operating Income	119.7	112.6	117.0
Interest Expense	34.9	21.3	20.2
Other Income, Net	1.5	0.4	2.0
Income Before Income Taxes	86.3	91.7	98.8
Income Tax Expense	20.3	23.2	25.0
Net Income	$ 66.0	$ 68.5	$ 73.8

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
BALANCE SHEETS

(Dollars in millions, except per share amounts)	September 30 2023	2022
ASSETS		
Utility Plant	$ 2,862.6	$ 2,732.6
Less: Accumulated depreciation and amortization	1,273.0	1,184.1
Net Utility Plant	1,589.6	1,548.5
Current Assets:		
Cash and cash equivalents	1.2	2.4
Accounts receivable:		
Utility	42.2	69.9
Associated companies	1.2	1.3
Other	6.6	6.5
Allowance for credit losses	(5.7)	(6.3)
Delayed customer billings	3.6	4.8
Inventories:		
Natural gas	52.4	72.5
Materials and supplies	19.1	16.3
Regulatory assets	41.6	56.9
Prepayments	6.4	5.8
Total Current Assets	168.6	230.1
Deferred Charges and Other Assets:		
Regulatory assets	606.9	538.2
Deferred income tax	—	11.0
Other	84.2	81.3
Total Deferred Charges and Other Assets	691.1	630.5
Total Assets	$ 2,449.3	$ 2,409.1

SPIRE ALABAMA INC.
BALANCE SHEETS (continued)

	September 30	
	2023	2022
CAPITALIZATION AND LIABILITIES		
Capitalization:		
Common stock and paid-in capital (par value $0.01 per share; 3,000,000 shares authorized; 1,972,052 issued and outstanding at September 30, 2023 and 2022)	$ 285.9	$ 316.9
Retained earnings	642.1	589.1
Total Shareholder's Equity	928.0	906.0
Long-term debt	745.9	571.5
Total Capitalization	1,673.9	1,477.5
Current Liabilities:		
Notes payable – associated companies	124.1	260.9
Accounts payable	28.4	85.6
Accounts payable – associated companies	4.6	4.4
Advance customer billings	8.1	9.9
Wages and compensation accrued	6.6	7.6
Customer deposits	19.3	19.0
Taxes accrued	34.5	31.3
Other	14.7	22.4
Total Current Liabilities	240.3	441.1
Deferred Credits and Other Liabilities:		
Deferred income taxes	9.1	—
Pension and postretirement benefit costs	27.2	40.5
Asset retirement obligations	451.0	398.7
Regulatory liabilities	21.2	23.0
Other	26.6	28.3
Total Deferred Credits and Other Liabilities	535.1	490.5
Commitments and Contingencies (Note 16)		
Total Capitalization and Liabilities	$ 2,449.3	$ 2,409.1

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
STATEMENTS OF SHAREHOLDER'S EQUITY

(Dollars in millions)	Common Stock Shares	Common Stock Par	Paid-in Capital	Retained Earnings	Total
Balance at September 30, 2020	1,972,052	$ —	$ 350.9	$ 500.8	$ 851.7
Net income	—	—	—	73.8	73.8
Dividends declared	—	—	—	(22.0)	(22.0)
Return of capital to Spire	—	—	(22.0)	—	(22.0)
Balance at September 30, 2021	1,972,052	—	328.9	552.6	881.5
Net income	—	—	—	68.5	68.5
Dividends declared	—	—	—	(32.0)	(32.0)
Return of capital to Spire	—	—	(12.0)	—	(12.0)
Balance at September 30, 2022	1,972,052	—	316.9	589.1	906.0
Net income	—	—	—	66.0	66.0
Dividends declared	—	—	—	(13.0)	(13.0)
Return of capital to Spire	—	—	(31.0)	—	(31.0)
Balance at September 30, 2023	1,972,052	$ —	$ 285.9	$ 642.1	$ 928.0

See the accompanying Notes to Financial Statements.

SPIRE ALABAMA INC.
STATEMENTS OF CASH FLOWS

(In millions)	Years Ended September 30 2023	2022	2021
Operating Activities:			
Net Income	$ 66.0	$ 68.5	$ 73.8
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	69.3	66.8	62.1
Deferred income taxes	20.3	23.2	25.0
Changes in assets and liabilities:			
Accounts receivable	27.1	(21.2)	(17.8)
Inventories	17.2	(42.5)	(15.4)
Regulatory assets and liabilities	(49.5)	(101.7)	29.2
Accounts payable	(42.3)	26.3	14.0
Delayed/advance customer billings	(0.6)	0.5	0.5
Taxes accrued	3.3	0.8	2.5
Other assets and liabilities	18.7	(3.7)	(37.8)
Other	0.4	0.2	0.3
Net cash provided by operating activities	129.9	17.2	136.4
Investing Activities:			
Capital expenditures	(117.6)	(141.5)	(169.8)
Other	1.3	0.8	0.7
Net cash used in investing activities	(116.3)	(140.7)	(169.1)
Financing Activities:			
Issuance of long-term debt	175.0	—	150.0
Repayment of long-term debt	—	(50.0)	—
(Repayments to) borrowings from Spire, net	(136.8)	211.9	(72.4)
Return of capital to Spire	(31.0)	(12.0)	(22.0)
Dividends paid	(21.0)	(24.0)	(22.0)
Other	(1.0)	—	(0.9)
Net cash (used in) provided by financing activities	(14.8)	125.9	32.7
Net (Decrease) Increase in Cash and Cash Equivalents	(1.2)	2.4	—
Cash and Cash Equivalents at Beginning of Year	2.4	—	—
Cash and Cash Equivalents at End of Year	$ 1.2	$ 2.4	$ —
Supplemental disclosure of cash paid for:			
Interest, net of amounts capitalized	$ (30.1)	$ (21.0)	$ (17.9)
Income taxes	—	—	—

See the accompanying Notes to Financial Statements.

SPIRE INC., SPIRE MISSOURI INC., AND SPIRE ALABAMA INC.
NOTES TO FINANCIAL STATEMENTS
(Dollars in millions, except per share, per unit and per gallon amounts)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION – These notes are an integral part of the accompanying audited financial statements of Spire Inc. ("Spire" or the "Company") presented on a consolidated basis, Spire Missouri Inc. ("Spire Missouri") and Spire Alabama Inc. ("Spire Alabama"). Spire Missouri, Spire Alabama and Spire EnergySouth Inc. ("Spire EnergySouth") are wholly owned subsidiaries of Spire. Spire Missouri, Spire Alabama and the subsidiaries of Spire EnergySouth (Spire Gulf Inc. and Spire Mississippi Inc.) are collectively referred to as the "Utilities." Unless otherwise indicated, references to years herein are references to the fiscal years ending September 30 for the Company and its subsidiaries.

The accompanying audited financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The consolidated financial position, results of operations and cash flows of Spire include the accounts of the Company and all its subsidiaries. Transactions and balances between consolidated entities have been eliminated from the consolidated financial statements of Spire. In compliance with GAAP, transactions between Spire Missouri and Spire Alabama and their affiliates, as well as intercompany balances on their balance sheets, have not been eliminated from their separate financial statements.

NATURE OF OPERATIONS – Spire has three reportable segments: Gas Utility, Gas Marketing, and Midstream. The Gas Utility segment consists of the regulated natural gas distribution operations of the Company and is the core business segment of Spire in terms of revenue and earnings. The Gas Utility segment is comprised of the operations of: Spire Missouri, serving St. Louis, Kansas City, and other areas in Missouri; Spire Alabama, serving central and northern Alabama; and the subsidiaries of Spire EnergySouth, serving the Mobile, Alabama area and south-central Mississippi. The Gas Marketing segment includes Spire's primary gas-related business, Spire Marketing Inc. ("Spire Marketing"), which provides non-regulated natural gas services throughout the United States (U.S.). The Midstream segment includes Spire STL Pipeline and Spire Storage, which are subsidiaries engaged in the transportation and storage of natural gas. The activities of the Company's other subsidiaries are reported as Other and are described in Note 14, Information by Operating Segment. Spire Missouri and Spire Alabama each have a single reportable segment.

USE OF ESTIMATES – The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

SYSTEM OF ACCOUNTS – The accounts of the Utilities are maintained in accordance with the Uniform System of Accounts prescribed by the applicable state public service commissions, which systems substantially conform to that prescribed by the Federal Energy Regulatory Commission (FERC).

REGULATED OPERATIONS – The Utilities account for their regulated operations in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 980, *Regulated Operations*. This topic sets forth the application of GAAP for those companies whose rates are established by or are subject to approval by an independent third-party regulator. The provisions of this accounting guidance require, among other things, that financial statements of a regulated enterprise reflect the actions of regulators, where appropriate. These actions may result in the recognition of revenues and expenses in time periods that are different than non-regulated enterprises. When this occurs, costs are deferred as assets in the balance sheet (regulatory assets) and recorded as expenses when those amounts are reflected in rates. In addition, regulators can impose liabilities upon a regulated company for amounts previously collected from customers and for recovery of costs that are expected to be incurred in the future (regulatory liabilities). Management believes that the current regulatory environment supports the continued use of these regulatory accounting principles and that all regulatory assets and regulatory liabilities are recoverable or refundable through the regulatory process. See additional discussion on regulated operations in Note 15, Regulatory Matters.

PROPERTY, PLANT, AND EQUIPMENT –

Utility Plant – Utility plant is stated at original cost. The cost of additions to utility plant includes contracted work, direct labor and materials, allocable overheads and an allowance for funds used during construction. The costs of units of property retired, replaced or renewed are removed from utility plant and are charged to accumulated depreciation. Maintenance and repairs of property and replacement and renewal of items determined to be less than units of property are charged to maintenance expenses.

Utility plant is depreciated using the composite method on a straight-line basis over the estimated service lives of the various classes of property at rates approved by the applicable regulatory commission. For Spire Missouri and for Spire Alabama, the annual depreciation and amortization expense in fiscal years 2023, 2022 and 2021 averaged approximately 3% of the original cost of depreciable and amortizable property.

Non-utility Property – Non-utility property is recorded at the original cost of acquisition or construction, which includes material, labor, contractor services and, for FERC-regulated projects, an allowance for funds used during construction. Repairs, replacements and renewals of items of property determined to be less than a unit of property or that do not increase the property's life or functionality are charged to maintenance expense. Upon retirement or sale of non-utility property, the original cost and related accumulated depreciation are removed from the accounts and any gain or loss is included in the income statements. Costs related to software developed or obtained for internal use are capitalized and amortized on a straight-line basis over the estimated useful life of the related software. If software is retired prior to being fully amortized, the difference is recorded as a loss in the income statements.

Accrued Capital Expenditures – Accrued capital expenditures, shown in the following table, are excluded from capital expenditures in the statements of cash flows until paid.

September 30	2023	2022	2021
Spire	$ 104.3	$ 77.8	$ 59.5
Spire Missouri	56.5	45.6	37.1
Spire Alabama	4.6	19.2	13.6

ASSET RETIREMENT OBLIGATIONS – Spire, Spire Missouri and Spire Alabama record legal obligations associated with the retirement of long-lived assets in the period in which the obligations are incurred, if sufficient information exists to reasonably estimate the fair value of the obligations. Obligations are recorded as both a cost of the related long-lived asset and as a corresponding liability. Subsequently, the asset retirement costs are depreciated over the life of the asset and the asset retirement obligations are accreted to the expected settlement amounts. Spire, Spire Missouri and Spire Alabama record asset retirement obligations associated with certain safety requirements to purge and seal gas distribution mains upon retirement, the plugging and abandonment of storage wells and other storage facilities, specific service line obligations, and certain removal and disposal obligations related to components of Spire Missouri's, Spire Alabama's and Spire Gulf's distribution systems and general plant. Asset retirement obligations recorded by Spire's other subsidiaries are not material. As authorized by the Missouri Public Service Commission (MoPSC) and the Alabama Public Service Commission (APSC), Spire Missouri, Spire Alabama and Spire Gulf accrue future asset removal costs associated with their property, plant and equipment even if a legal obligation does not exist. Such accruals are provided for through depreciation expense and are recorded with corresponding credits to regulatory liabilities or regulatory assets. When those utilities retire depreciable utility plant and equipment, they charge the associated original costs to accumulated depreciation and amortization, and any related removal costs incurred are charged to regulatory liabilities or regulatory assets. The difference between removal costs recognized in depreciation rates and the accretion expense and depreciation expense recognized for financial reporting purposes is a timing difference between recovery of these costs in rates and their recognition for financial reporting purposes. Accordingly, these differences are deferred as regulatory liabilities or regulatory assets. In the rate setting process, the regulatory liabilities or regulatory assets are excluded from the rate base upon which those utilities have the opportunity to earn their allowed rates of return.

The following table presents a reconciliation of the beginning and ending balances of asset retirement obligations at September 30, as reported in the balance sheets.

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Asset retirement obligations, beginning of year	$ 520.9	$ 519.6	$ 110.6	$ 143.4	$ 398.7	$ 362.8
Liabilities incurred during the period	7.9	3.2	0.9	1.2	2.0	0.5
Liabilities settled during the period	(6.8)	(9.2)	(2.5)	(4.1)	(2.5)	(2.0)
Accretion	21.5	21.1	4.5	5.9	16.5	14.7
Revisions in estimated cash flows	33.9	(13.8)	(2.4)	(35.8)	36.3	22.7
Asset retirement obligations, end of year	$ 577.4	$ 520.9	$ 111.1	$ 110.6	$ 451.0	$ 398.7

NATURAL GAS AND PROPANE GAS – For Spire Missouri's eastern region, inventory of natural gas in storage is priced on a last in, first out (LIFO) basis and inventory of propane gas in storage is priced on a first in, first out (FIFO) basis. For the rest of the Gas Utility segment, inventory of natural gas in storage is priced on the weighted average cost basis. The replacement cost of Spire Missouri's natural gas for current use in eastern Missouri at September 30, 2023 was less than the LIFO cost by $21.1. The replacement cost of Spire Missouri's natural gas for current use in eastern Missouri at September 30, 2022 was more than the LIFO cost by $37.3. The carrying value of the Utilities' inventory is never adjusted to a lower net realizable value or market value because, pursuant to Purchased Gas Adjustment (PGA) clauses or a Gas Supply Adjustment (GSA) rider, actual gas costs are recovered in customer rates. Natural gas and propane gas storage inventory in Spire's other operating segments is recorded at the lower of average cost or net realizable value.

BUSINESS COMBINATIONS AND GOODWILL – Spire's acquisitions were accounted for using business combination accounting. Under this method, the purchase price paid by the acquirer is allocated to the assets acquired and liabilities assumed as of the acquisition date based on their fair value. Goodwill is measured as the excess of the acquisition-date fair value of the consideration transferred over the amount of acquisition-date identifiable assets acquired net of assumed liabilities. At September 30, 2023, goodwill included in Spire's Gas Utility, Gas Marketing, and Midstream segments was $210.2, zero, and zero, respectively, with the remainder held at the corporate level. Goodwill amounts have not changed since fiscal 2017, and there are no accumulated impairment losses. Spire and Spire Missouri evaluate goodwill for impairment as of July 1 of each year, or more frequently if events and circumstances indicate that goodwill might be impaired. At each test date, the assessments concluded that goodwill was not impaired. The Company updated the assessments as of September 30, 2023, determining that it remained more likely than not that the fair value of each reporting unit exceeded its carrying value.

A subsidiary of Spire in the Midstream segment acquired a natural gas storage facility in northern Oklahoma, now named Spire Storage Salt Plains LLC, on April 1, 2023. The $37 purchase price was fully allocated to the assets acquired and liabilities assumed based on their fair value at the acquisition date, consisting almost entirely of base gas and other property, plant and equipment, resulting in no goodwill.

IMPAIRMENT OF LONG-LIVED ASSETS – Long-lived assets classified as held and used are evaluated for impairment when events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. Whether impairment has occurred is determined by comparing the estimated undiscounted cash flows attributable to the assets with the carrying value of the assets. If the carrying value exceeds the undiscounted cash flows, the Company recognizes an impairment charge equal to the amount of the carrying value that exceeds the estimated fair value of the assets. In the period in which the Company determines an asset meets held-for-sale criteria, an impairment charge is recorded to the extent the book value exceeds its fair value less cost to sell.

DERIVATIVES – In the course of their business, certain subsidiaries of Spire enter into commitments associated with the purchase or sale of natural gas. Certain of their derivative natural gas contracts are designated as normal purchases or normal sales and, as such, are excluded from the scope of FASB ASC Topic 815, *Derivatives and Hedging*. Those contracts are accounted for as executory contracts and recorded on an accrual basis. Revenues and expenses from such contracts are recorded gross. Contracts not designated as normal purchases or normal sales are recorded as derivatives with changes in fair value recognized in earnings in the periods prior to physical delivery. Certain of Spire Marketing's wholesale purchase and sale transactions are classified as trading activities for financial reporting purposes, with income and expenses presented on a net basis in natural gas expenses in the Consolidated Statements of Income. Spire also enters into cash flow hedges through execution of interest rate swap contracts to protect itself against adverse movements in interest rates. Refer to Note 10, Derivative Instruments and Hedging Activities, for more information about derivatives.

INCOME TAXES – Spire and its subsidiaries account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amount of existing assets and liabilities and the respective tax basis and for tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be realized or settled. The effects on deferred tax assets and liabilities of a change in enacted tax rates is recognized in income or loss for non-regulated operations, and in a regulatory asset or regulatory liability for regulated operations. A valuation allowance is established when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions in accordance with authoritative guidance. The authoritative guidance addresses the determination of whether tax benefits claimed, or expected to be claimed, on a tax return should be recorded in the financial statements. Spire may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the position will be sustained upon examination by the taxing authority, based on the technical merits of the position. Tax-related interest and penalties, if any, are classified as a liability on the balance sheets. For additional information on the accounting for income taxes, refer to Note 12, Income Taxes.

CASH, CASH EQUIVALENTS, AND RESTRICTED CASH – All highly liquid debt instruments purchased with original maturities of three months or less are considered to be cash equivalents. Such instruments are carried at cost, which approximates market value. Outstanding checks on the Company's and Utilities' bank accounts in excess of funds on deposit create book overdrafts (which are funded at the time checks are presented for payment) and are classified as Other in the Current Liabilities section of the balance sheets. Changes in book overdrafts are reflected as Operating Activities in the statements of cash flows. In Spire's statements of cash flows, total Cash, Cash Equivalents, and Restricted Cash included $20.2 and $14.0 of restricted cash reported in "Other Investments" on the Company's balance sheet as of September 30, 2023 and 2022, respectively (in addition to amounts shown as "Cash and cash equivalents"). This restricted cash has been segregated and invested in debt securities in a trust account based on collateral requirements for reinsurance at Spire's risk management company.

NATURAL GAS RECEIVABLE – Spire Marketing enters into natural gas transactions with natural gas pipeline and storage companies known as park and loan arrangements. Under the terms of the arrangements, Spire Marketing purchases natural gas from a third party and delivers that natural gas to the pipeline or storage company for the right to receive the same quantity of natural gas from that company at the same location in a future period. These arrangements are accounted for as non-monetary transactions under GAAP and are recorded at the carrying amount. As such, natural gas receivables are reflected in "Other" current assets on the Consolidated Balance Sheets at cost, which includes related fees associated with the transactions. In the period that the natural gas is returned to Spire Marketing, concurrent with the sale of the natural gas to a third party, the related natural gas receivable is expensed in the Consolidated Statements of Income. In conjunction with these transactions, Spire Marketing usually enters into New York Mercantile Exchange (NYMEX) and Intercontinental Exchange (ICE) natural gas futures, options, and swap contracts or fixed price sales agreements to protect against market changes in future sales prices.

EARNINGS PER COMMON SHARE – GAAP requires dual presentation of basic and diluted earnings per share (EPS). EPS is computed using the two-class method, which is an earnings allocation method for computing EPS that treats a participating security as having rights to earnings that would otherwise have been available to common shareholders. Certain of the Company's stock-based compensation awards pay non-forfeitable dividends to the participants during the vesting period and, as such, are deemed participating securities. Basic EPS is computed by dividing net income available to common shareholders by the weighted average number of common shares outstanding during the period. Diluted EPS is computed by dividing net income available to common shareholders by the weighted average number of common shares outstanding that are increased for additional shares that would be outstanding if potentially dilutive securities were converted to common shares, pursuant to the treasury stock method. Shares attributable to equity units, non-participating performance-contingent restricted stock awards, and time-vested restricted stock/units are excluded from the calculation of diluted earnings per share if the effect would be antidilutive. Shares attributable to non-participating performance-contingent restricted stock awards are only included in the calculation of diluted earnings per share to the extent the underlying performance and/or market conditions are satisfied (a) prior to the end of the reporting period or (b) would be satisfied if the end of the reporting period were the end of the related contingency period and the result would be dilutive. The Company's EPS computations are presented in Note 4, Earnings Per Common Share.

TRANSACTIONS WITH AFFILIATES – Transactions between affiliates of the Company have been eliminated from the consolidated financial statements of Spire. Spire Missouri and Spire Alabama borrowed funds from the Company and incurred related interest, as reflected in their separate financial statements, and they participated in normal intercompany shared services transactions. In addition, Spire Missouri's and Spire Alabama's other transactions with affiliates included:

	Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021
Natural gas purchases from Spire Marketing	$ 57.4	$ 86.3	$ 92.5	$ 4.7	$ 3.2	$ 10.4
Natural gas sales to Spire Marketing	0.4	—	1.1	—	0.5	0.1
Transportation services from Spire STL Pipeline LLC	32.0	32.0	32.0	—	—	—
Natural gas storage services from Spire Storage Salt Plains LLC	0.7	—	—	—	—	—
Transportation services from Spire NGL Inc.	—	—	0.5	—	—	—

ACCOUNTS RECEIVABLE AND ALLOWANCE FOR CREDIT LOSSES – Trade accounts receivable are recorded at the amounts due from customers, including unbilled amounts. Accounts receivable are written off when they are deemed to be uncollectible. An allowance for expected credit losses is estimated and updated based on relevant data and trends such as accounts receivable aging, historical write-off experience, current write-off trends, economic conditions, and the impact of weather and availability of customer payment assistance on collection trends. For the Utilities, net write-offs as a percentage of revenue has historically been the best predictor of base net write-off experience over time. Management judgment is applied in the development of the allowance due to the complexity of variables and subjective nature of certain relevant factors. The accounts receivable of Spire's non-utility businesses are evaluated separately from those of the Utilities. The allowance for credit losses for those other businesses is based on a continuous evaluation of the individual counterparty risk and is not significant for the periods presented. Activity in the allowance for credit losses is shown in the following table.

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Allowance at beginning of year	$ 31.9	$ 30.3	$ 24.9	$ 24.9	$ 22.6	$ 18.1	$ 6.3	$ 6.6	$ 5.5
Provision for expected credit losses	16.6	11.6	14.7	13.3	11.2	11.1	2.6	0.3	3.1
Write-offs, net of recoveries	(16.0)	(10.0)	(9.3)	(12.0)	(8.9)	(6.6)	(3.2)	(0.6)	(2.0)
Allowance at end of year	$ 32.5	$ 31.9	$ 30.3	$ 26.2	$ 24.9	$ 22.6	$ 5.7	$ 6.3	$ 6.6

FINANCE RECEIVABLES – Spire Alabama finances third party contractor sales of merchandise including gas furnaces and appliances. At September 30, 2023 and 2022, Spire Alabama's finance receivable totaled approximately $6.7 and $7.1, respectively. Financing is available only to qualified customers who meet creditworthiness thresholds for customer payment history and external agency credit reports. Spire Alabama relies upon ongoing payments as the primary indicator of credit quality during the term of each contract. The allowance for credit losses is recognized using an estimate of write-off percentages based on historical experience. Delinquent accounts are evaluated on a case-by-case basis and, absent evidence of debt repayment, after 90 days are due in full and assigned to a third-party collection agency. The remaining finance receivable is written off approximately 12 months after being assigned to the third-party collection agency. Spire Alabama had finance receivables past due 90 days or more of $0.3 at September 30, 2023 and 2022.

GROUP MEDICAL AND WORKERS' COMPENSATION RESERVES – The Company self-insures its group medical and workers' compensation costs and carries stop-loss coverage in relation to medical claims and workers' compensation claims. Reserves for amounts incurred but not reported are established based on historical cost levels and lags between occurrences and reporting.

FAIR VALUE MEASUREMENTS – Certain assets and liabilities are recognized or disclosed at fair value, which is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). GAAP establishes a fair value hierarchy that prioritizes the inputs used to measure fair value.

The levels of the hierarchy are described below:

- Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 – Pricing inputs other than quoted prices included within Level 1, which are either directly or indirectly observable for the asset or liability as of the reporting date. These inputs are derived principally from, or corroborated by, observable market data.
- Level 3 – Pricing that is based upon inputs that are generally unobservable that are based on the best information available and reflect management's assumptions about how market participants would price the asset or liability.

Assessment of the significance of a particular input to the fair value measurements may require judgment and may affect the valuation of the asset or liability and its placement within the fair value hierarchy. Additional information about fair value measurements is provided in Note 8, Fair Value of Financial Instruments, Note 9, Fair Value Measurements, and Note 13, Pension Plans and Other Postretirement Benefits.

STOCK-BASED COMPENSATION – The Company accounts for share-based compensation arrangements in accordance with ASC Topic 718, *Compensation - Stock Compensation*. The Company measures stock-based compensation awards at fair value at the date of grant and recognizes the compensation cost of the awards over the requisite service period. Forfeitures are recognized in the period they occur. Refer to Note 3, Stock-Based Compensation, for further discussion of the accounting for the Company's stock-based compensation plans.

2. REVENUE

The following tables show revenue disaggregated by source and customer type.

	2023	2022	2021
Spire			
Gas Utility:			
Residential	$ 1,648.5	$ 1,416.6	$ 1,234.0
Commercial & industrial	606.0	338.9	586.0
Transportation	121.6	118.0	122.9
Off-system & other incentive	30.0	42.0	152.7
Other customer revenue	16.1	19.9	22.2
Total revenue from contracts with customers	2,422.2	1,935.4	2,117.8
Changes in accrued revenue under alternative revenue programs	34.7	10.7	1.5
Total Gas Utility operating revenues	2,456.9	1,946.1	2,119.3
Gas Marketing	179.1	234.9	96.5
Midstream	66.1	53.1	52.6
Other	16.7	16.1	15.1
Total before eliminations	2,718.8	2,250.2	2,283.5
Intersegment eliminations (see Note 14, Information by Operating Segment)	(52.5)	(51.7)	(48.0)
Total Operating Revenues	$ 2,666.3	$ 2,198.5	$ 2,235.5
Spire Missouri			
Residential	$ 1,261.3	$ 1,061.4	$ 882.1
Commercial & industrial	411.9	177.2	436.1
Transportation	33.2	33.3	33.5
Off-system & other incentive	20.1	25.2	145.6
Other customer revenue	12.5	11.1	16.3
Total revenue from contracts with customers	1,739.0	1,308.2	1,513.6
Changes in accrued revenue under alternative revenue programs	23.9	12.8	3.0
Total Operating Revenues	$ 1,762.9	$ 1,321.0	$ 1,516.6
Spire Alabama			
Residential	$ 322.9	$ 291.6	$ 288.0
Commercial & industrial	150.4	119.1	114.9
Transportation	77.6	74.4	78.7
Off-system & other incentive	9.9	16.8	7.1
Other customer revenue	3.6	5.5	1.9
Total revenue from contracts with customers	564.4	507.4	490.6
Changes in accrued revenue under alternative revenue programs	6.7	1.7	3.4
Total Operating Revenues	$ 571.1	$ 509.1	$ 494.0

The Utilities sell natural gas to residential and other customers. The sale of natural gas is governed by the various state utility commissions, which set rates, charges, and terms and conditions of service, collectively included in a "tariff." The performance obligation, which relates to the promise to provide natural gas, is satisfied over time as the customer simultaneously receives and consumes the natural gas, and revenue is recognized accordingly.

The Utilities' transportation revenue relates to the promise to transport the specified quantities of natural gas at tariff rates. This performance obligation is satisfied over time as the gas is transported, and revenue is recognized as invoiced monthly.

The Utilities have alternative revenue programs (ARPs), which represent an agreement between the utility and its regulator, currently consisting of decoupling mechanisms (also known as weather normalization adjustments) and incentive programs (primarily Alabama's Cost Control Measure). When the criteria to recognize additional (or reduced) revenue from ARPs have been met, the Utilities establish a regulatory asset (or liability). When amounts previously recognized for ARPs are billed, the Utilities reduce the regulatory asset (or liability) and increase (or decrease) accounts receivable. Billed amounts, which are part of the overall tariff paid by customers, are included in revenue from contracts with customers, while the change in the related regulatory asset or liability is presented as revenue from ARPs. Depending on whether the beginning accrued ARP balance was a regulatory asset or liability and depending on the size and direction of the current period accrual, the amount presented as revenue from ARPs could be negative.

The Utilities read meters and bill customers on monthly cycles. Spire Missouri, Spire Gulf and Spire Mississippi record their gas utility revenues from gas sales and transportation services on an accrual basis that includes estimated amounts for gas delivered but not yet billed. The accruals for unbilled revenues are reversed in the subsequent accounting period when meters are actually read and customers are billed. Spire Alabama records natural gas distribution revenues in accordance with the tariff established by the APSC. Unbilled revenue is accrued in an amount equal to the related gas cost, as profit margin is not considered earned until billed. Spire's other subsidiaries, including Spire Marketing, record revenues when earned, as the product is delivered or as services are performed.

Gas Marketing's contracts are derivatives. Wholesale contracts (with producers, municipalities, and utility companies) are subject to derivative accounting. Retail contracts (with large commercial and industrial customers) are designated as "normal purchase, normal sale" arrangements and are therefore accounted for as revenue from contracts with customers. The performance obligation is satisfied over time by the transfer of control of natural gas to the customer, and revenue is recognized as invoiced monthly.

Payments are generally required within 30 days of billing, and contracts generally do not have a significant financing component. Spire's revenues are not subject to significant returns, refunds, or warranty obligations.

Spire, Spire Missouri, and Spire Alabama have elected to apply a "right to invoice" practical expedient, recognizing revenue for volumes delivered for which they have a right to invoice, as long as that amount corresponds with the value to the customer. Disclosures about remaining performance obligations are not required because either contracts have an original expected duration of one year or less, or revenue is recognized under the right to invoice practical expedient, or both.

Sales taxes imposed on applicable Spire Alabama and Spire Missouri sales are billed to customers. These amounts are not recorded in the statements of income but are recorded as tax collections payable and included in the "Other" line of the Current Liabilities section of the balance sheets.

Gross receipts taxes associated with the Company's natural gas utility services are imposed on the Company, Spire Missouri, and Spire Alabama and billed to its customers. The expense amounts (shown in the table below) are reported gross in the "Taxes, other than income taxes" line in the statements of income, and corresponding revenues are reported in "Operating Revenues."

	2023	2022	2021
Spire	$ 131.8	$ 109.8	$ 94.0
Spire Missouri	96.7	79.6	64.3
Spire Alabama	29.9	25.5	25.1

3. STOCK-BASED COMPENSATION

The Spire 2015 Equity Incentive Plan (EIP) was approved by shareholders of Spire on January 29, 2015 and amended on November 9, 2018. The purpose of the EIP is to encourage directors, officers, and key employees of the Company and its subsidiaries to contribute to the Company's success and align their interests with that of shareholders. To accomplish this purpose, the Compensation and Human Resources Committee ("Committee") of Spire's Board of Directors (the "Board") may grant awards under the EIP that may be earned by achieving performance objectives and/or other criteria as determined by the Committee. Under the terms of the EIP, officers and employees of the Company and its subsidiaries, as determined by the Committee, are eligible to be selected for awards. The EIP provides for restricted stock, restricted stock units, qualified and non-qualified stock options, stock appreciation rights, and performance shares payable in stock, cash, or a combination of both. The EIP generally provides a minimum vesting period of at least three years for each type of award, with pro rata vesting permitted during the minimum three-year vesting period. The maximum number of shares reserved for issuance under the EIP is 1,000,000.

The Company allows participants in the EIP the ability to defer a portion or all of their award. As of September 30, 2023, a total of 244,618 share equivalents (at target payout) have been deferred by participants. Such units are included in the data presented below. After the required holding period, deferred awards are ultimately paid in cash rather than in shares of stock. Upon vesting, the Company issues new shares to satisfy awards that are not deferred.

Restricted Stock Awards

During fiscal 2023, the Company granted116,390 performance-contingent restricted share units to executive officers and key employees at a weighted average grant date fair value of $79.88 per share. This number represents the target shares that can be earned pursuant to the terms of the awards. The share units have a performance period ending September 30, 2026. While the participants have no interim voting rights on these share units, dividends accrue during the performance period and are paid to the participants upon vesting but are subject to forfeiture if the underlying share units do not vest.

The number of share units that will ultimately vest is dependent upon the attainment of certain levels of earnings, as well as the Company's level of total shareholder return (TSR) during the performance period relative to a comparator group of peer companies. This TSR provision is considered a market condition under GAAP and is discussed further below. The maximum amount of shares or share equivalents that can be earned pursuant to the terms of the awards is 200% of the target units granted.

The weighted average grant date fair value of performance-contingent restricted share units granted during fiscal years 2022 and 2021 was $67.43 and $68.69 per share, respectively.

Fiscal 2023 activity of restricted stock units subject to performance and/or market conditions is presented below:

	Units	Weighted Average Grant Date Fair Value Per Unit
Non-vested at September 30, 2022	343,524	$ 70.14
Granted	116,390	$ 79.88
Adjusted for performance	(13,459)	$ 76.91
Vested	(74,556)	$ 76.91
Forfeited	(23,546)	$ 71.73
Non-vested at September 30, 2023	348,353	$ 71.76

For the year ended September 30, 2023, the total number of shares or share equivalents that could be issued if all outstanding award grants attain maximum performance payout is 696,706.

During fiscal 2023, the Company granted 55,524 shares of time-vested restricted stock to executive officers and key employees at a weighted average grant date fair value of $71.91 per share. Unless forfeited based on terms of the agreements, these shares will vest in fiscal 2025. In the interim, participants receive full voting rights and dividends, which are not subject to forfeiture. The weighted average grant date fair value of time-vested restricted stock and restricted stock units awarded to employees during fiscal years 2022 and 2021 was $63.57 and $64.29 per share, respectively.

During fiscal 2023, the Company granted 12,720 shares of time-vested restricted stock to non-employee directors at a weighted average grant date fair value of $75.59 per share. These shares vested in fiscal 2023, six months after the grant date. The weighted average grant date fair value of restricted stock awarded to non-employee directors during fiscal years 2022 and 2021 was $66.31 and $62.35 per share, respectively.

Time-vested restricted stock and stock unit activity for fiscal 2023 is presented below:

	Shares/ Units	Weighted Average Grant Date Fair Value Per Share
Non-vested at September 30, 2022	122,245	$ 66.60
Granted	68,244	$ 72.60
Vested	(59,040)	$ 75.27
Forfeited	(8,460)	$ 65.36
Non-vested at September 30, 2023	122,989	$ 65.85

For restricted stock and stock units (performance-contingent and time-vested) that vested during fiscal years 2023, 2022, and 2021, the Company withheld 18,428 shares, 28,055 shares, and 16,787 shares, respectively, at weighted average prices of $72.03, $63.97 and $65.99 per share, respectively, pursuant to elections by employees to satisfy tax withholding obligations. The total fair value of restricted stock (performance-contingent and time-vested) that vested during fiscal years 2023, 2022, and 2021 was $8.6, $10.1, and $6.5, respectively, and the related tax benefit was $3.2, $3.8, and $2.5, respectively. None of the tax benefits have been realized.

Equity Compensation Costs

Compensation cost for performance-contingent restricted stock and stock unit awards is based upon the probable outcome of the performance conditions. For shares or units that do not vest or that are not expected to vest due to the outcome of the performance conditions (excluding market conditions), no compensation cost is recognized and any previously recognized compensation cost is reversed.

The fair value of awards of performance-contingent and time-vested restricted stock and restricted stock units, not subject to the TSR provision, are estimated using the closing price of the Company's stock on the grant date. For those awards that do not pay dividends during the vesting period, the estimate of fair value is reduced by the present value of the dividends expected to be paid on the Company's common stock during the performance period, discounted using an appropriate U.S. Treasury yield. For shares subject to the TSR provision, the estimated impact of this market condition is reflected in the grant date fair value per share of the awards. Accordingly, compensation cost is not reversed to reflect any actual reductions in the awards that may result from the TSR provision. However, if the Company's TSR during the performance period ranks below the level specified in the award agreements, relative to a comparator group of companies, and the Committee elects not to reduce the award (or reduce by a lesser amount), this election would be accounted for as a modification of the original award and additional compensation cost would be recognized at that time. The grant date fair value of the awards subject to the TSR provision awarded during fiscal years 2023, 2022 and 2021 was valued by a Monte Carlo simulation model that assessed the probabilities of various TSR outcomes. The significant assumptions used in the Monte Carlo simulations are as follows:

	2023	2022	2021
Risk-free interest rate	4.26%	0.79%	0.22%
Expected dividend yield of stock	—	—	—
Expected volatility of stock	33.8%	32.2%	31.4%
Performance period (in years)	3.0	3.0	3.0

The risk-free interest rate was based on the yield on U.S. Treasury securities matching the vesting period. A zero-percent dividend yield was used, which is mathematically equivalent to the assumption that dividends are reinvested as they are paid. The expected volatility is based on the historical volatility of the Company's stock. Volatility assumptions were also made for each of the companies included in the comparator group. The vesting period is equal to the performance period set forth in the terms of the award.

The amounts of compensation cost recognized for share-based compensation arrangements are presented below:

	2023	2022	2021
Total compensation cost	$ 11.2	$ 7.5	$ 16.6
Compensation cost capitalized	(1.4)	(1.1)	(2.7)
Compensation cost recognized in net income	9.8	6.4	13.9
Income tax benefit recognized in net income	(2.2)	(1.5)	(3.2)
Compensation cost recognized in net income, net of income tax	$ 7.6	$ 4.9	$ 10.7

As of September 30, 2023, there was $12.1 of total unrecognized compensation cost related to non-vested share-based compensation arrangements, which is expected to be recognized over a weighted average period of 1.7 years.

4. EARNINGS PER COMMON SHARE

	2023	2022	2021
Basic Earnings Per Common Share:			
Net Income	$ 217.5	$ 220.8	$ 271.7
Less: Provision for preferred dividends	14.8	14.8	14.8
Income allocated to participating securities	0.3	0.3	0.4
Net Income Available to Common Shareholders	$ 202.4	$ 205.7	$ 256.5
Weighted Average Common Shares Outstanding (in millions)	52.5	52.0	51.6
Basic Earnings Per Share of Common Stock	$ 3.86	$ 3.96	$ 4.97
Diluted Earnings per Common Share:			
Net Income	$ 217.5	$ 220.8	$ 271.7
Less: Provision for preferred dividends	14.8	14.8	14.8
Income allocated to participating securities	0.3	0.3	0.4
Net Income Available to Common Shareholders	$ 202.4	$ 205.7	$ 256.5
Weighted Average Common Shares Outstanding (in millions)	52.5	52.0	51.6
Dilutive Effect of Restricted Stock and Restricted Stock Units (in millions)*	0.1	0.1	0.1
Weighted Average Diluted Common Shares (in millions)	52.6	52.1	51.7
Diluted Earnings Per Share of Common Stock	$ 3.85	$ 3.95	$ 4.96
* Calculation excludes certain outstanding common shares (shown in millions by period at the right) attributable to common stock forward contracts, stock units subject to performance or market conditions, and restricted stock, which could have a dilutive effect in the future	1.9	0.1	0.1

5. SHAREHOLDERS' EQUITY

Spire

Preferred Stock

At September 30, 2023 and 2022, Spire had authorized 5,000,000 shares of preferred stock.

On May 21, 2019, Spire completed the public offering of 10,000,000 depositary shares (the "Depositary Shares"), each representing a 1/1,000th interest in a share of the Company's 5.90% Series A Cumulative Redeemable Perpetual Preferred Stock, par value $25.00 per share, with a liquidation preference of $25,000 per share (the "Preferred Stock"). The transaction resulted in $242.0 of net proceeds, after deducting commissions and sale expenses, which proceeds were used to (i) refinance long-term and short-term Spire debt and (ii) fund capital expenditures at both the Utilities and Spire's gas-related businesses.

Dividends on the Preferred Stock, when declared by the Board, are payable on the liquidation preference amount, on a cumulative basis, quarterly in arrears on the 15th day of February, May, August and November of each year, beginning on August 15, 2019. Dividends are payable out of amounts legally available for the payment of dividends at an annual rate equal to 5.90% of the liquidation preference per share of Preferred Stock (equivalent to $25.00 per Depositary Share). Dividends accumulate daily and are cumulative from May 21, 2019.

Under the terms of the Preferred Stock, the Company's ability to declare or pay dividends on, or purchase or redeem, shares of its common stock or any class or series of capital stock of the Company that rank junior to the Preferred Stock are subject to certain restrictions in the event that the Company does not declare and pay the full cumulative dividends on the Preferred Stock through the most recently completed quarterly dividend period.

Spire may, at its option, redeem the Preferred Stock (i) in whole, but not in part, at any time prior to August 15, 2024, within 120 days after a ratings event where a rating agency amends, clarifies or changes the criteria it uses to assign equity credit for securities such as the Preferred Stock, at a redemption price in cash equal to $25,500 per share, or (ii) in whole or in part, from time to time, on or after August 15, 2024, at a redemption price in cash equal to $25,000 per share, plus, in each case, all accumulated and unpaid dividends (whether declared or not) up to such redemption date.

Shareholders of the Preferred Stock generally have no voting rights with respect to matters that generally require the approval of voting stockholders. The limited voting rights of holders of the Preferred Stock include the right to vote on certain matters that may affect the preference or special rights of the Preferred Stock. In addition, if and whenever dividends on any shares of Preferred Stock have not been declared and paid for at least six dividend periods, whether or not consecutive, the number of directors then constituting the Board shall automatically be increased by two (to be elected by the holders of the Preferred Stock) until all accumulated and unpaid dividends on the Preferred Stock have been paid in full.

Equity Units

In February 2021, Spire issued 3.5 million equity units, initially in the form of Corporate Units, for an aggregate stated amount of $175.0, resulting in net proceeds (after underwriting fees and other issuance costs) of $169.3. Each "Corporate Unit" has a stated amount of fifty dollars and consists of (i) a stock purchase contract and (ii) a 1/20, or 5%, undivided beneficial ownership interest in one thousand dollars principal amount of Spire's 2021 Series A 0.75% Remarketable Senior Notes due March 1, 2026 (RSNs). The RSNs are pledged as collateral to secure the holder's obligation under the related stock purchase contracts. Each stock purchase contract obligates the holder to purchase, and Spire to issue and deliver, on March 1, 2024, for a price of fifty dollars in cash, a variable number of shares of its common stock as follows (subject to anti-dilution adjustments).

If the applicable market value* per share of Spire common stock is:	Number of shares to be purchased per stock purchase contract is:
Equal to or greater than $78.6906 ("threshold appreciation price")	0.6354 ("minimum settlement rate")
Less than $78.6906, but greater than $64.24	$50.00 ÷ applicable market value*
Less than or equal to $64.24 ("reference price")	0.7783 ("maximum settlement rate")

*Based on the volume-weighted average price of Spire common stock during the 20 trading days before settlement.

If a holder elects to settle purchase contracts early, the holder would pay fifty dollars per unit and receive 0.6354 shares per unit.

The Company makes quarterly interest payments on the RSNs at the rate of 0.75% per year and quarterly contract adjustment payments on the stock purchase contracts at the rate of 6.75%. The RSNs and the contract adjustment payments are structurally subordinated to all liabilities of Spire's subsidiaries.

At issuance, the Company recorded the $35.0 present value of the stock purchase contract payments as a liability (reflected in "Other" current and noncurrent liabilities on the balance sheet) offset by a charge to additional paid-in capital in equity. This noncash financing activity has been excluded from the statement of cash flows. Interest payments on the RSNs are recorded as interest expense and stock purchase contract payments are charged against the liability. Accretion of the stock purchase contract liability is recorded as imputed interest expense. In calculating diluted EPS, the Company applies the treasury stock method to the Corporate Units. These securities have not had an effect on diluted EPS.

In order to secure funds necessary for the holders to pay the purchase price of the common stock on the purchase contract settlement date, the remarketing agent will remarket the RSNs on behalf of the current holders to new third-party investors. Following any successful remarketing of the RSNs, the interest rate on the RSNs will be reset, interest will be payable on a semi-annual basis, and Spire will cease to have the option to redeem the RSNs, other than in connection with the occurrence or continuance of certain special events.

ATM Program

On February 6, 2019, Spire entered into an "at-the-market" (ATM) equity distribution agreement, supplemented as of May 14, 2019, pursuant to which the Company may offer and sell, from time to time, shares of its common stock (including shares of common stock that may be sold pursuant to forward sale agreements entered into in connection with the ATM equity distribution agreement). On April 28, 2022, Spire's board approved a new authorization for the sale of additional shares with an aggregate offering price of up to $200.0 through May 2025.

Settled sales under this ATM program are included in "Common stock issued" in the Condensed Consolidated Statements of Shareholders' Equity. Also, in the second and third quarters of fiscal 2023, Spire executed forward sale agreements for 228,690 shares and 2,087,231 shares, respectively, of its common stock. On September 27, 2023, 571,372 of these shares were settled, generating $38.5 of net proceeds. The third quarter forward sales included a block sale of 1,744,549 shares which must be settled on or before December 28, 2023. Had all shares under this forward agreement been settled as of September 30, 2023, it would have generated net proceeds of $111.2.

As of September 30, 2023, under the ATM program, Spire may sell additional shares with an aggregate offering price of up to $17.9.

Other Equity Information

Spire has a shelf registration statement on Form S-3 on file with the U.S. Securities and Exchange Commission (SEC) for the issuance and sale of up to 250,000 shares of common stock under its Dividend Reinvestment and Direct Stock Purchase Plan. There were 244,182 and 237,891 shares at September 30, 2023 and November 10, 2023, respectively, remaining available for issuance under this Form S-3. Spire also has a universal shelf registration statement on Form S-3 on file with the SEC for the issuance of various equity and debt securities, which expires on May 9, 2025.

Spire Missouri

Substantially all of Spire Missouri's plant is subject to the liens of its first mortgage bonds. The mortgage contains several restrictions on Spire Missouri's ability to pay cash dividends on its common stock or to make loans to its parent company. These mortgage restrictions are applicable regardless of whether the stock is publicly held or held solely by Spire Missouri's parent company. Under the most restrictive of these provisions, no cash dividend may be declared or paid if, after the dividend, the aggregate net amount spent for all dividends after September 30, 1953 would exceed a maximum amount determined by a formula set out in the mortgage. Under that formula, the maximum amount is the sum of $8.0 plus earnings applicable to common stock (adjusted for stock repurchases and issuances) for the period from September 30, 1953 to the last day of the quarter before the declaration or payment date for the dividends. As of September 30, 2023 and 2022, the amount under the mortgage's formula that was available to pay dividends was $1,678.5 and $1,579.4, respectively. Thus, all of Spire Missouri's retained earnings were free from such dividend restrictions as of those dates.

Spire Missouri has a universal shelf registration statement on Form S-3 on file with the SEC for the issuance of various equity and debt securities, which expires on May 9, 2025. Effective March 5, 2022, Spire Missouri was authorized by the MoPSC to issue conventional term loans, first mortgage bonds, unsecured debt, preferred stock and common stock in an aggregate amount of up to $800.0 for financings placed any time before December 31, 2024. Under this authorization through September 30, 2023, Spire Missouri has issued $79.1 of common stock and $400.0 of first mortgage bonds.

At September 30, 2023 and 2022, Spire Missouri had authorized 1,480,000 shares of preferred stock, but none were issued and outstanding.

Spire Alabama

At September 30, 2023 and 2022, Spire Alabama had authorized 120,000 shares of preferred stock, but none were issued and outstanding.

Accumulated Other Comprehensive Income

The components of accumulated other comprehensive income (AOCI), net of income taxes, recognized in the balance sheets at September 30 were as follows:

	Net Unrealized Gain (Loss) on Cash Flow Hedges	Defined Benefit Pension and Other Postretirement Benefit Plans	Net Unrealized Gain (Loss) on Available-for-Sale Debt Securities	Total
Spire				
Balance at September 30, 2021	$ 7.9	$ (4.2)	$ (0.1)	$ 3.6
Other comprehensive income (loss)	42.5	1.5	(0.4)	43.6
Balance at September 30, 2022	50.4	(2.7)	(0.5)	47.2
Other comprehensive income	0.1	0.2	0.1	0.4
Balance at September 30, 2023	$ 50.5	$ (2.5)	$ (0.4)	$ 47.6
Spire Missouri				
Balance at September 30, 2021	$ —	$ (4.2)	$ —	$ (4.2)
Other comprehensive income	—	1.5	—	1.5
Balance at September 30, 2022	—	(2.7)	—	(2.7)
Other comprehensive income	—	0.2	—	0.2
Balance at September 30, 2023	$ —	$ (2.5)	$ —	$ (2.5)

Income tax expense (benefit) recorded for items of other comprehensive income (loss) reported in the statements of comprehensive income is calculated by applying statutory federal, state, and local income tax rates applicable to ordinary income. The tax rates applied to individual items of other comprehensive income (loss) are similar within each reporting period. For the periods presented, Spire Alabama had no AOCI balances.

6. LONG-TERM DEBT

The composition of long-term debt as of September 30 is shown in the following tables.

	2023	2022
Spire		
3.31% Notes Payable, due December 15, 2022	$ —	$ 25.0
3.54% Senior Notes, due February 27, 2024	150.0	150.0
0.75% Remarketable Senior Notes, due March 1, 2026	175.0	175.0
3.13% Senior Notes, due September 1, 2026	130.0	130.0
3.93% Senior Notes, due March 15, 2027	100.0	100.0
5.80% Senior Notes, due March 15, 2033	150.0	—
4.70% Senior Notes, due August 15, 2044	250.0	250.0
Total principal of Spire Missouri long-term debt (see below)	1,798.0	1,648.0
Total principal of Spire Alabama long-term debt (see below)	750.0	575.0
Other subsidiaries' long-term debt:		
5.00% First Mortgage Bonds, due September 30, 2031	42.0	42.0
2.95% Notes, with annual principal payments through December 2034	117.7	123.9
5.61% First Mortgage Bonds, due October 15, 2037	30.0	—
3.52% First Mortgage Bonds, due September 30, 2049	40.0	40.0
Total principal of long-term debt	3,732.7	3,258.9
Less: Unamortized discounts and debt issuance costs	(22.1)	(19.2)
Less: Current portion	(156.6)	(281.2)
Long-term debt, excluding current portion	$ 3,554.0	$ 2,958.5
Spire Missouri		
First Mortgage Bonds:		
3.40% Series, due August 15, 2023	$ —	$ 250.0
Floating Rate Series, due December 2, 2024	300.0	300.0
3.40% Series, due March 15, 2028	45.0	45.0
7.00% Series, due June 1, 2029	19.3	19.3
2.84% Series, due November 15, 2029	275.0	275.0
7.90% Series, due September 15, 2030	30.0	30.0
3.68% Series, due September 15, 2032	50.0	50.0
4.80% Series, due February 15, 2033	400.0	—
6.00% Series, due May 1, 2034	99.3	99.3
6.15% Series, due June 1, 2036	54.5	54.5
4.63% Series, due August 15, 2043	99.9	99.9
4.23% Series, due September 15, 2047	70.0	70.0
3.30% Series, due June 1, 2051	305.0	305.0
4.38% Series, due September 15, 2057	50.0	50.0
Total principal of Spire Missouri long-term debt	1,798.0	1,648.0
Less: Unamortized discounts and debt issuance costs	(12.6)	(10.3)
Less: Current portion	—	(250.0)
Spire Missouri long-term debt, excluding current portion	$ 1,785.4	$ 1,387.7
Spire Alabama		
3.21% Notes, due September 15, 2025	$ 35.0	$ 35.0
5.32% Notes, due October 15, 2029	90.0	—
2.88% Notes, due December 1, 2029	100.0	100.0
2.04% Notes, due December 15, 2030	150.0	150.0
5.41% Notes, due October 15, 2032	85.0	—
5.90% Notes, due January 15, 2037	45.0	45.0
4.31% Notes, due December 1, 2045	80.0	80.0
3.92% Notes, due January 15, 2048	45.0	45.0
4.64% Notes, due January 15, 2049	90.0	90.0
4.02% Notes, due January 15, 2058	30.0	30.0
Total principal of Spire Alabama long-term debt	750.0	575.0
Less: Unamortized discounts and debt issuance costs	(4.1)	(3.5)
Spire Alabama long-term debt, excluding current portion	$ 745.9	$ 571.5

Spire Missouri's $300.0 of first mortgage bonds due December 2, 2024 are secured equally with all its other first mortgage bonds. Interest is payable quarterly in arrears at a floating rate based on the compounded secured overnight financing rate plus 50 basis points, with a maximum rate of the lesser of 8% or the maximum rate then permitted by applicable law.

Maturities of long-term debt for Spire on a consolidated basis, Spire Missouri and Spire Alabama for the five fiscal years after September 30, 2023 are as follows:

	2024	2025	2026	2027	2028
Spire	$ 156.6	$ 342.0	$ 312.5	$ 108.1	$ 53.6
Spire Missouri	—	300.0	—	—	45.0
Spire Alabama	—	35.0	—	—	—

The long-term debt agreements of Spire, Spire Missouri and Spire Alabama contain customary financial covenants and default provisions. As of September 30, 2023, there were no events of default under these financial covenants.

Spire

At September 30, 2023, Spire had outstanding principal of long-term debt totaling $3,732.7, of which $1,798.0 was issued by Spire Missouri, $750.0 was issued by Spire Alabama and $229.7 was issued by other subsidiaries. Except for $300.0 of Spire Missouri floating-rate bonds, all long-term debt bears fixed rates and is subject to changes in fair value as market interest rates change. However, increases and decreases in fair value would impact earnings and cash flows only if the Company were to reacquire any of these issues in the open market prior to maturity. Under GAAP applicable to the Utilities' regulated operations, losses or gains on early redemption of long-term debt would typically be deferred as regulatory assets or regulatory liabilities and amortized over a future period. Interest expense shown on Spire's consolidated statement of income is net of capitalized interest totaling $8.6, $4.5 and $4.4 for the years ended September 30, 2023, 2022 and 2021, respectively.

As indicated in Note 5, Shareholders' Equity, Spire has a shelf registration statement on Form S-3 on file with the SEC for the issuance of equity and debt securities.

Spire Missouri

At September 30, 2023, Spire Missouri had outstanding principal of long-term debt totaling $1,798.0. Except for $300.0 of floating-rate bonds, all long-term debt bears fixed rates and is subject to changes in fair value as market interest rates change. Interest expense shown on Spire Missouri's statement of comprehensive income is net of capitalized interest totaling $3.1, $0.6 and $0.2 for the years ended September 30, 2023, 2022 and 2021, respectively.

As indicated in Note 5, Shareholders' Equity, Spire Missouri has a shelf registration on Form S-3 on file with the SEC for issuance of equity and debt securities, which expires on May 9, 2025. Effective March 5, 2022, Spire Missouri was authorized by the MoPSC to issue conventional term loans, first mortgage bonds, unsecured debt, preferred stock and common stock in an aggregate amount of up to $800.0 for financings placed any time before December 31, 2024. Under this authorization through September 30, 2023, Spire Missouri has issued $79.1 of common stock and $400.0 of first mortgage bonds.

Substantially all of Spire Missouri's plant is subject to the liens of its first mortgage bonds. The mortgage contains several restrictions on Spire Missouri's ability to pay cash dividends on its common stock, which are described in Note 5, Shareholders' Equity.

Spire Alabama

At September 30, 2023, Spire Alabama had outstanding principal of fixed-rate long-term debt totaling $750.0. While these long-term debt issues are fixed-rate, they are subject to changes in fair value as market interest rates change. Interest expense shown on Spire Alabama's statement of income is net of capitalized interest totaling $2.3, $3.2 and $3.2 for the years ended September 30, 2023, 2022 and 2021, respectively.

Spire Alabama has no standing authority to issue long-term debt and must petition the APSC for each planned issuance.

7. NOTES PAYABLE AND CREDIT AGREEMENTS

Spire, Spire Missouri and Spire Alabama have a syndicated revolving credit facility pursuant to a loan agreement with 12 banks through July 22, 2027. The loan agreement has an aggregate credit commitment of $1,300.0, including sublimits of $450.0 for the Spire holding company, $575.0 for Spire Missouri and $275.0 for Spire Alabama. These sublimits may be reallocated from time to time among the three borrowers within the $1,300.0 aggregate commitment, with commitment fees and interest margins applied for each borrower relative to its credit rating, as well as sustainability rate adjustments based on Spire's DART ("Days Away Restricted or Transferred") rate and methane emissions reductions. The Spire holding company may use its line to provide for the funding needs of various subsidiaries. The agreement also contains financial covenants limiting each borrower's consolidated total debt, including short-term debt, to no more than 70% of its total capitalization. As defined in the line of credit, on September 30, 2023, total debt was less than 65% of total capitalization for each borrower. There were no borrowings against this credit facility as of September 30, 2023 and 2022.

Spire has a commercial paper program ("CP Program") pursuant to which it may issue short-term, unsecured commercial paper notes. Amounts available under the CP Program may be borrowed, repaid and re-borrowed from time to time, with the aggregate face or principal amount of the notes outstanding under the CP Program at any time not to exceed $1,300.0. The notes may have maturities of up to 365 days from date of issue.

On January 5, 2023, Spire Missouri entered into a loan agreement with several banks for a $250.0 unsecured term loan due October 5, 2023. Interest was based on the secured overnight financing rate ("SOFR") plus an adjustment of 0.10% per annum plus a margin of 0.80% per annum. The loan was repaid on May 8, 2023.

Information about short-term borrowings, including Spire Missouri's and Spire Alabama's borrowings from Spire, is presented in the following table. As of September 30, 2023, $706.9 of Spire's short-term borrowings were used to support lending to the Utilities.

	Spire (Parent Only)	Spire Missouri		Spire Alabama	Spire
	CP Program	Term Loan	Spire Note	Spire Note	Consol-idated
Year Ended September 30, 2023					
Highest borrowings outstanding	$ 1,282.0	$ 250.0	$ 656.9	$ 274.0	$ 1,482.0
Lowest borrowings outstanding	354.4	—	3.8	76.7	489.0
Weighted average borrowings	776.3	66.8	327.9	119.1	843.1
Weighted average interest rate	5.0%	5.5%	4.9%	4.9%	5.0%
As of September 30, 2023					
Borrowings outstanding	$ 955.5	$ —	$ 540.6	$ 124.1	$ 955.5
Weighted average interest rate	5.6%	0.0%	5.6%	5.6%	5.6%
As of September 30, 2022					
Borrowings outstanding	$ 1,037.5	$ —	$ 445.3	$ 260.9	$ 1,037.5
Weighted average interest rate	3.3%	0.0%	3.3%	3.3%	3.3%

8. FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying amounts and estimated fair values of financial instruments not measured at fair value on a recurring basis were as follows:

	Carrying Amount	Fair Value	Classification of Estimated Fair Value: Quoted Prices in Active Markets (Level 1)	Classification of Estimated Fair Value: Significant Observable Inputs (Level 2)
Spire				
As of September 30, 2023				
Cash and cash equivalents	$ 5.6	$ 5.6	$ 5.6	$ —
Notes payable	955.5	955.5	—	955.5
Long-term debt, including current portion	3,710.6	3,270.2	—	3,270.2
As of September 30, 2022				
Cash and cash equivalents	$ 6.5	$ 6.5	$ 6.5	$ —
Notes payable	1,037.5	1,037.5	—	1,037.5
Long-term debt, including current portion	3,239.7	2,851.8	—	2,851.8
Spire Missouri				
As of September 30, 2023				
Cash and cash equivalents	$ 0.8	$ 0.8	$ 0.8	$ —
Notes payable - associated companies	540.6	540.6	—	540.6
Long-term debt	1,785.4	1,592.4	—	1,592.4
As of September 30, 2022				
Notes payable - associated companies	$ 445.3	$ 445.3	$ —	$ 445.3
Long-term debt, including current portion	1,637.7	1,473.9	—	1,473.9
Spire Alabama				
As of September 30, 2023				
Cash and cash equivalents	$ 1.2	$ 1.2	$ 1.2	$ —
Notes payable - associated companies	124.1	124.1	—	124.1
Long-term debt	745.9	648.0	—	648.0
As of September 30, 2022				
Cash and cash equivalents	$ 2.4	$ 2.4	$ 2.4	$ —
Notes payable - associated companies	260.9	260.9	—	260.9
Long-term debt	571.5	485.0	—	485.0

9. FAIR VALUE MEASUREMENTS

The information presented below categorizes the assets and liabilities in the balance sheets that are accounted for at fair value on a recurring basis in periods subsequent to initial recognition.

The mutual funds included in Level 1 are valued based on exchange-quoted market prices of individual securities. The mutual funds included in Level 2 are valued based on the closing net asset value per unit.

Derivative instruments included in Level 1 are valued using quoted market prices on the NYMEX or the Intercontinental Exchange (ICE). Derivative instruments classified in Level 2 include physical commodity derivatives and interest rate swaps that are valued using broker or dealer quotation services whose prices are derived principally from, or are corroborated by, observable market inputs. Also included in Level 2 are certain derivative instruments that have values that are similar to, and correlate with, quoted prices for exchange-traded instruments in active markets. Derivative instruments included in Level 3 are valued using generally unobservable inputs that are based upon the best information available and reflect management's assumptions about how market participants would price the asset or liability. There were no Level 3 balances as of September 30, 2023 or 2022. The Company's and the Utilities' policy is to recognize transfers between the levels of the fair value hierarchy, if any, as of the beginning of the interim reporting period in which circumstances change or events occur to cause the transfer.

The mutual funds are included in "Other investments" on the Company's balance sheets and in "Other Property and Investments" on Spire Missouri's balance sheets. Changes in their recurring valuations are recorded as unrealized investment gains or losses in the corresponding periodic income statement. Derivative assets and liabilities, including receivables and payables associated with cash margin requirements, are presented net on the balance sheets when a legally enforceable netting agreement exist between the Company, Spire Missouri or Spire Alabama and the counterparty to the derivative contract. For additional information on derivative instruments, see Note 10, Derivative Instruments and Hedging Activities.

Spire

	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Effects of Netting and Cash Margin Receivables /Payables	Total
As of September 30, 2023					
ASSETS					
Gas Utility:					
U.S. stock/bond mutual funds	$ 20.4	$ —	$ —	$ —	$ 20.4
Gasoline and heating oil contracts	—	0.1	—	(0.1)	—
NYMEX/ICE natural gas contracts	6.3	—	—	(6.3)	—
Gas Marketing:					
NYMEX/ICE natural gas contracts	10.1	—	—	(10.1)	—
Natural gas commodity contracts	—	36.7	—	(3.6)	33.1
Other:					
U.S. stock/bond mutual funds	37.6	—	—	—	37.6
Interest rate swaps	—	44.2	—	—	44.2
Total	$ 74.4	$ 81.0	$ —	$ (20.1)	$ 135.3
LIABILITIES					
Gas Utility:					
NYMEX/ICE natural gas contracts	$ 50.8	$ —	$ —	$ (44.0)	$ 6.8
Gas Marketing:					
NYMEX/ICE natural gas contracts	21.8	—	—	(21.8)	—
Natural gas commodity contracts	—	27.6	—	(3.6)	24.0
Total	$ 72.6	$ 27.6	$ —	$ (69.4)	$ 30.8
As of September 30, 2022					
ASSETS					
Gas Utility:					
U.S. stock/bond mutual funds	$ 19.1	$ —	$ —	$ —	$ 19.1
NYMEX/ICE natural gas contracts	57.8	—	—	(57.8)	—
Gas Marketing:					
NYMEX/ICE natural gas contracts	91.8	—	—	(91.8)	—
Natural gas commodity contracts *	—	56.6	—	(4.0)	52.6
Other:					
U.S. stock/bond mutual funds	29.3	—	—	—	29.3
Interest rate swaps *	—	63.6	—	—	63.6
Total	$ 198.0	$ 120.2	$ —	$ (153.6)	$ 164.6
LIABILITIES					
Gas Utility:					
NYMEX/ICE natural gas contracts	$ 30.7	$ —	$ —	$ (30.7)	$ —
Gas Marketing:					
NYMEX/ICE natural gas contracts	82.3	—	—	(82.3)	—
Natural gas commodity contracts *	—	65.5	—	(4.0)	61.5
Total	$ 113.0	$ 65.5	$ —	$ (117.0)	$ 61.5

* Subsequent to the issuance of its consolidated financial statements for the year ended September 30, 2022, during the fourth quarter of fiscal 2023, the Company identified an error in the fair value level presentation for certain line items in the Fair Value Measurements table. The presentation has been corrected to reflect the impacted line items in Level 2 rather than Level 1 as of September 30, 2022. This immaterial correction did not impact the reported fair values or the consolidated financial statements.

Spire Missouri

	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Effects of Netting and Cash Margin Receivables /Payables	Total
As of September 30, 2023					
ASSETS					
U.S. stock/bond mutual funds	$ 20.4	$ —	$ —	$ —	$ 20.4
Gasoline and heating oil contracts	—	0.1	—	(0.1)	—
NYMEX/ICE natural gas contracts	6.3	—	—	(6.3)	—
Total	$ 26.7	$ 0.1	$ —	$ (6.4)	$ 20.4
LIABILITIES					
NYMEX/ICE natural gas contracts	$ 50.8	$ —	$ —	$ (44.0)	$ 6.8
As of September 30, 2022					
ASSETS					
U.S. stock/bond mutual funds	$ 19.1	$ —	$ —	$ —	$ 19.1
NYMEX/ICE natural gas contracts	57.8	—	—	(57.8)	—
Total	$ 76.9	$ —	$ —	$ (57.8)	$ 19.1
LIABILITIES					
NYMEX/ICE natural gas contracts	$ 30.7	$ —	$ —	$ (30.7)	$ —

Spire Alabama

Spire Alabama occasionally utilizes a gasoline derivative program to stabilize the cost of fuel used in operations. As of September 30, 2023 and September 30, 2022, there were no gasoline derivatives outstanding.

10. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

Spire

Spire Missouri has a risk management policy to utilize various derivatives, including futures contracts, exchange-traded options and swaps for the explicit purpose of managing price risk associated with purchasing and delivering natural gas on a regular basis to customers in accordance with its tariffs. The objective of this policy is to limit Spire Missouri's exposure to natural gas price volatility and to manage, hedge and mitigate substantial price risk. Further discussion of this policy can be found in the Spire Missouri section.

From time to time Spire Missouri and Spire Alabama purchase NYMEX futures and options contracts to help stabilize operating costs associated with forecasted purchases of gasoline and diesel fuels used to power vehicles and equipment. Further information on these derivatives can be found in the Spire Missouri and Spire Alabama sections, respectively.

In the course of its business, Spire's gas marketing subsidiary, Spire Marketing enters into commitments associated with the purchase or sale of natural gas. Certain of Spire Marketing's derivative natural gas contracts are designated as normal purchases or normal sales and, as such, are excluded from the scope of ASC Topic 815 and are accounted for as executory contracts on an accrual basis. Any of Spire Marketing's derivative natural gas contracts that are not designated as normal purchases or normal sales are accounted for at fair value. At September 30, 2023, the fair values of 567.0 million MMBtu of non-exchange-traded natural gas commodity contracts were reflected in the Consolidated Balance Sheet. Of these contracts, 379.1 million MMBtu will settle during fiscal 2024, and 151.1 million MMBtu, 26.4 million MMBtu, and 3.8 million MMBtu, will settle during fiscal years 2025, 2026, and 2027, respectively. A total of 6.6 million MMBtu will settle in the years 2028-2030. These

contracts have not been designated as hedges; therefore, changes in the fair value of these contracts are reported in earnings each period.

Furthermore, Spire Marketing manages the price risk associated with its fixed-priced commitments by either closely matching the offsetting physical purchase or sale of natural gas at fixed prices or through the use of NYMEX or ICE futures, swap, and option contracts to lock in margins.

At September 30, 2023, Spire Marketing's unmatched fixed-price positions were not material to Spire's financial position or results of operations. Spire Marketing's NYMEX and ICE natural gas futures, swap and option contracts used to lock in margins may be designated as cash flow hedges of forecasted transactions for financial reporting purposes.

Spire enters into cash flow hedges through the execution of interest rate swap contracts to protect itself against adverse movements in interest rates. At September 30, 2023, the following swaps were outstanding:

Period Originated	Contract Hedge Term (Years)	Notional Amount	Fixed Interest Rate	Fiscal 2023 Mark-to-Market Gain
Quarter 1, fiscal 2022	10	$ 50.0	1.4918%	$ 2.7
Quarter 2, fiscal 2022	10	75.0	1.6475%	4.0
Quarter 2, fiscal 2022	10	25.0	1.7460%	1.5
Quarter 1, fiscal 2023	10	50.0	3.4480%	2.4
Quarter 2, fiscal 2023	10	50.0	3.6850%	0.9
Quarter 2, fiscal 2023	10	25.0	3.5350%	0.5
Quarter 2, fiscal 2023	10	25.0	3.3850%	0.6
Quarter 3, fiscal 2023	30	50.0	2.7470%	7.8
Quarter 3, fiscal 2023	10	25.0	2.9020%	2.2
Quarter 3, fiscal 2023	10	25.0	3.0180%	2.0
		$ 400.0		$ 24.6

As of September 30, 2023, the Company has recorded through other comprehensive income a cumulative mark-to-market net asset of $44.2 on open swaps.

The Company's and Spire Missouri's exchange-traded/cleared derivative instruments consist primarily of NYMEX and ICE positions. The NYMEX is the primary national commodities exchange on which natural gas derivatives are traded. Open NYMEX and ICE natural gas futures and swap positions at September 30, 2023 and 2022 were as follows:

	September 30, 2023		September 30, 2022	
Gas Marketing	Notional (MMBtu millions)	Maximum Term (Months)	Notional (MMBtu millions)	Maximum Term (Months)
Natural gas futures purchased	61.3	51	76.3	54
Natural gas options purchased, net	4.9	15	3.7	12
Natural gas basis swaps purchased	44.1	51	61.7	39
Gas Utility				
Natural gas futures purchased	66.5	24	13.0	12

At September 30, 2023, Spire Missouri also had 16.3 million MMBtu of other price mitigation in place through the use of NYMEX natural gas option-based strategies.

Derivative instruments designated as cash flow hedges of forecasted transactions are recognized on the balance sheets of the Company at fair value, and the change in fair value of the effective portion of these hedge instruments is recorded, net of income tax, in other comprehensive income or loss (OCI). Accumulated other comprehensive income or loss (AOCI) is a component of Total Common Stock Equity. Amounts are reclassified from AOCI into earnings when the hedged items affect net income, using the same revenue or expense category that the hedged item impacts. Based on market prices at September 30, 2023, it is expected that $2.8 of net gains will be reclassified into the Consolidated Statements of Income of the Company during the next twelve months. Cash flows from hedging transactions are classified in the same category as the cash flows from the items that are being hedged in the Consolidated Statements of Cash Flows.

Effect of Derivative Instruments on the Consolidated Statements of Income and Comprehensive Income

	Location of Gain (Loss) Recorded in Income	2023	2022	2021
Derivatives in Cash Flow Hedging Relationships				
Effective portion of gain recognized in OCI on derivatives:				
Interest rate swaps		$ 20.1	$ 56.7	$ 61.2
Effective portion of gain reclassified from AOCI to income:				
Interest rate swaps	Interest Expense	$ (2.4)	$ (1.2)	$ (1.3)
Derivatives Not Designated as Hedging Instruments*				
Gain (Loss) recognized in income on derivatives:				
Gas / diesel futures	Non-Operating Expense: Other Income	$ 0.3	$ —	$ —
Natural gas commodity contracts	Operating Expenses: Natural Gas	18.0	52.6	54.1
NYMEX / ICE natural gas contracts	Operating Expenses: Natural Gas	(35.0)	43.3	(77.5)
Total		$ (16.7)	$ 95.9	$ (23.4)

* Gains and losses on Spire Missouri's natural gas derivative instruments, which are not designated as hedging instruments for financial reporting purposes, are deferred pursuant to the Missouri Utilities' PGA clauses and initially recorded as regulatory assets or regulatory liabilities. These gains and losses are excluded from the table above because they have no direct impact on the statements of income. Such amounts are recognized in the statements of income as a component of natural gas operating expenses when they are recovered through the PGA clause and reflected in customer billings.

Fair Value of Derivative Instruments in the Consolidated Balance Sheets

	Derivative Assets*		Derivative Liabilities*	
September 30, 2023	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**
Derivatives designated as hedging instruments				
Other: Interest rate swaps	Current Assets: Other	$ 44.2	Current Liabilities: Other	$ —
Subtotal		44.2		—
Derivatives not designated as hedging instruments				
Gas Utility:				
Natural gas contracts	Current Assets: Other	6.3	Current Liabilities: Other	50.8
Gasoline and heating oil contracts	Current Assets: Other	0.1		—
Gas Marketing:				
NYMEX / ICE natural gas contracts	Current Assets: Other	8.0	Current Liabilities: Other	16.0
	Deferred Charges and Other Assets: Other	2.1	Deferred Credits and Other Liabilities: Other	5.7
Natural gas commodity	Current Assets: Other	31.2	Current Liabilities: Other	20.1
	Deferred Charges and Other Assets: Other	5.5	Deferred Credits and Other Liabilities: Other	7.6
Subtotal		53.2		100.2
Total derivatives		$ 97.4		$ 100.2
September 30, 2022				
Derivatives designated as hedging instruments				
Other: Interest rate swaps	Current Assets: Other	$ 63.6	Current Liabilities: Other	$ —
Subtotal		63.6		—
Derivatives not designated as hedging instruments				
Gas Utility:				
Natural gas contracts	Current Assets: Other	57.8	Current Liabilities: Other	30.7
Gas Marketing:				
NYMEX / ICE natural gas contracts	Current Assets: Other	79.2	Current Liabilities: Other	71.5
	Deferred Charges and Other Assets: Other	12.7	Deferred Credits and Other Liabilities: Other	10.8
Natural gas commodity	Current Assets: Other	53.4	Current Liabilities: Other	55.1
	Deferred Charges and Other Assets: Other	3.1	Deferred Credits and Other Liabilities: Other	10.4
Subtotal		206.2		178.5
Total derivatives		$ 269.8		$ 178.5

* The fair values of Derivative Assets and Derivative Liabilities exclude the fair value of cash margin receivables or payables with counterparties subject to netting arrangements. Fair value amounts of derivative contracts (including the fair value amounts of cash margin receivables and payables) for which there is a legal right to set off are presented net on the balance sheets. As such, the gross balances presented in the table above are not indicative of the Company's net economic exposure. Refer to Note 9, Fair Value Measurements, for information on the valuation of derivative instruments.

Following is a reconciliation of the amounts in the tables above to the amounts presented in the consolidated balance sheets:

	2023	2022
Fair value of derivative assets presented above	$ 97.4	$ 269.8
Fair value of cash margin receivable offset with derivatives	49.3	(36.6)
Netting of assets and liabilities with the same counterparty	(69.4)	(117.0)
Total	$ 77.3	$ 116.2
Derivative Instrument Assets, per Consolidated Balance Sheets:		
Current Assets: Other	$ 71.8	$ 113.1
Deferred Charges and Other Assets: Other	5.5	3.1
Total	$ 77.3	$ 116.2
Fair value of derivative liabilities presented above	$ 100.2	$ 178.5
Netting of assets and liabilities with the same counterparty	(69.4)	(117.0)
Total	$ 30.8	$ 61.5
Derivative Instrument Liabilities, per Consolidated Balance Sheets:		
Current Liabilities: Other	$ 23.2	$ 51.1
Deferred Credits and Other Liabilities: Other	7.6	10.4
Total	$ 30.8	$ 61.5

Additionally, at September 30, 2023 2022, the Company had zero and $49.8, respectively, in cash margin receivables not offset with derivatives, which are presented in Accounts Receivable – Other.

Spire Missouri

Spire Missouri has a risk management policy to utilize various derivatives, including futures contracts, exchange-traded options, swaps and over-the-counter instruments for the explicit purpose of managing price risk associated with purchasing and delivering natural gas on a regular basis to customers in accordance with its tariffs. The objective of this policy is to limit Spire Missouri's exposure to natural gas price volatility and to manage, hedge and mitigate substantial price risk. This policy strictly prohibits speculation and permits Spire Missouri to hedge current physical natural gas purchase commitments or forecasted or anticipated future peak (maximum) physical need for natural gas delivered. Costs and cost reductions, including carrying costs, associated with Spire Missouri's use of natural gas derivative instruments are allowed to be passed on to Spire Missouri customers through the operation of its PGA clause, through which the MoPSC allows Spire Missouri to recover gas supply costs, subject to prudence review by the MoPSC. Accordingly, Spire Missouri does not expect any adverse earnings impact as a result of the use of these derivative instruments.

Spire Missouri does not designate these instruments as hedging instruments for financial reporting purposes because gains or losses associated with the use of these derivative instruments are deferred and recorded as regulatory assets or regulatory liabilities pursuant to ASC Topic 980, *Regulated Operations*, and, as a result, have no direct impact on the statements of income.

The timing of the operation of the PGA clause may cause interim variations in short-term cash flows, because Spire Missouri is subject to cash margin requirements associated with changes in the values of these instruments. Nevertheless, carrying costs associated with such requirements are recovered through the PGA clause.

From time to time, Spire Missouri purchases NYMEX futures and options contracts to help stabilize operating costs associated with forecasted purchases of gasoline and diesel fuels used to power vehicles and equipment used in the course of its business. The gains and losses on these contracts are not subject to Spire Missouri's PGA clause. At September 30, 2023, Spire Missouri did not have a material amount of gasoline futures contracts outstanding.

Derivative instruments designated as cash flow hedges of forecasted transactions are recognized on the balance sheets at fair value and the change in the fair value of the effective portion of these hedge instruments is recorded, net of income tax, in OCI. AOCI is a component of Total Common Stock Equity. Amounts are reclassified from AOCI into earnings when the hedged items affect net income, using the same revenue or expense category that the hedged item impacts. As in both 2022 and 2021, there will be no reclassifications into the statements of income during fiscal 2024. Cash flows from hedging transactions are classified in the same category as the cash flows from the items that are being hedged in the statements of cash flows.

Spire Missouri's derivative instruments consist primarily of NYMEX positions. The NYMEX is the primary national commodities exchange on which natural gas derivatives are traded. Open NYMEX natural gas futures positions at September 30, 2023 and 2022 were as follows:

	September 30, 2023		September 30, 2022	
	Notional (MMBtu millions)	Maximum Term (Months)	Notional (MMBtu millions)	Maximum Term (Months)
Natural gas futures purchased	66.5	24	13.0	12

At September 30, 2023, Spire Missouri had also had 16.3 million MMBtu of other price mitigation in place through the use of NYMEX natural gas option-based strategies.

Gains and losses on Spire Missouri's natural gas derivative instruments, which are not designated as hedging instruments for financial reporting purposes, are deferred pursuant to the Spire Missouri's PGA clauses and initially recorded as regulatory assets or regulatory liabilities. Such amounts are recognized in the statements of income as a component of natural gas operating expenses when they are recovered through the PGA clause and reflected in customer billings.

Fair Value of Derivative Instruments in the Balance Sheets

	Derivative Assets*		Derivative Liabilities*	
September 30, 2023	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**
Derivatives not designated as hedging instruments				
Natural gas contracts	Current Assets: Other	$ 6.3	Current Liabilities: Other	$ 50.8
Gasoline and heating oil contracts	Current Assets: Other	0.1		
Total derivatives		$ 6.4		$ 50.8
September 30, 2022				
Derivatives not designated as hedging instruments				
Natural gas contracts	Current Assets: Other	$ 57.8	Current Liabilities: Other	$ 30.7

* The fair values of Derivative Assets and Derivative Liabilities exclude the fair value of cash margin receivables or payables with counterparties subject to netting arrangements. Fair value amounts of derivative contracts (including the fair value amounts of cash margin receivables and payables) for which there is a legal right to set off are presented net on the balance sheets. As such, the gross balances presented in the table above are not indicative of Spire Missouri's net economic exposure. Refer to Note 9, Fair Value Measurements, for information on the valuation of derivative instruments.

Following is a reconciliation of the amounts in the tables above to the amounts presented in Spire Missouri's balance sheets:

	2023	2022
Fair value of derivative assets presented above	$ 6.4	$ 57.8
Fair value of cash margin (payable) receivable offset with derivatives	37.6	(27.1)
Netting of assets and liabilities with the same counterparty	(44.0)	(30.7)
Total	$ —	$ —
Fair value of derivative liabilities presented above	$ 50.8	$ 30.7
Netting of assets and liabilities with the same counterparty	(44.0)	(30.7)
Total	$ 6.8	$ —
Derivative Instrument Liabilities, per Balance Sheets:		
Derivative instrument liabilities	$ 6.8	$ —
Total	$ 6.8	$ —

Additionally, at September 30, 2023 and 2022, Spire Missouri had zero and $24.0, respectively, in cash margin receivables not offset with derivatives, which are presented in Accounts Receivable – Other.

Spire Alabama

Spire Alabama periodically employs a gasoline derivative program to help stabilize operating costs associated with forecasted purchases of gasoline and diesel fuels used to power vehicles and equipment used in the course of its business. The gains or losses on these derivative instruments are not subject to Spire Alabama's GSA rider. There were no such contracts outstanding as of September 30, 2023 and 2022.

11. CONCENTRATIONS OF CREDIT RISK

Spire's Gas Utility segment serves 1.7 million customers in three states across multiple rate classes resulting in a significant amount of revenue diversity. Credit risk is mitigated by the high percentage of residential customers as well as the geographic diversity of the Utilities, though customers for each of the Utilities are concentrated in a single state.

Spire Marketing's accounts receivable attributable to utility companies and their marketing affiliates totaled $53.4 at September 30, 2023. The concentration of transactions with these counterparties has the potential to affect the Company's overall exposure to credit risk, either positively or negatively, in that customers in this group may be affected similarly by changes in economic, industry, or other conditions. Spire Marketing also has concentrations of credit risk with certain individually significant counterparties. At September 30, 2023, the amounts included in accounts receivable from its five largest counterparties (in terms of net accounts receivable exposure) totaled $26.7. Three of these five counterparties are investment-grade-rated integrated utilities, one is a liquefied natural gas project facility with a senior debt issue rating one notch below investment-grade with a positive outlook, and one is a utility marketing affiliate which is not rated but whose owners are all investment-grade public power companies.

To manage these risks, Spire Marketing has established procedures to determine the creditworthiness of its counterparties. These procedures include obtaining credit ratings and credit reports, analyzing counterparty financial statements to assess financial condition, and considering the industry environment in which the counterparty operates. This information is monitored on an ongoing basis. In some instances, Spire Marketing may require credit assurances such as prepayments, letters of credit, or parental guaranties. In addition, Spire Marketing may enter into netting arrangements to mitigate credit risk with counterparties in the energy industry with whom it conducts both sales and purchases of natural gas. Where there is no netting arrangement, Spire Marketing records accounts receivable, accounts payable, and prepayments for physical sales and purchases of natural gas on a gross basis. Sales are typically made on an unsecured credit basis with payment due the month following delivery. Accounts receivable amounts are closely monitored and provisions for uncollectible amounts are accrued when losses are probable.

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12. INCOME TAXES

The Company, Spire Missouri, and Spire Alabama are subject to federal income tax as well as income tax in various state and local jurisdictions. Spire files a consolidated federal income tax return and various state income tax returns and allocates income taxes to Spire Missouri, Spire Alabama and its other subsidiaries as if each entity were a separate taxpayer.

The provision for income taxes during the fiscal years ended September 30, 2023, 2022, and 2021 was as follows:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Federal:									
Current	$ 0.7	$ 0.5	$ 0.2	$ —	$ —	$ —	$ —	$ —	$ —
Deferred	30.4	47.0	49.5	10.1	18.2	22.0	15.8	18.1	19.8
Investment tax credits	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	—	—	—
State and local:									
Current	1.2	0.5	1.3	—	—	—	—	—	—
Deferred	6.7	11.1	17.7	1.7	3.3	3.5	4.5	5.1	5.2
Total income tax expense	$ 38.8	$ 58.9	$ 68.5	$ 11.6	$ 21.3	$ 25.3	$ 20.3	$ 23.2	$ 25.0

The effective income tax rate varied from the federal statutory income tax rate for each year due to the following:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Federal income tax statutory rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
State and local income taxes, net of federal income tax benefits	3.7	3.6	3.6	2.6	2.6	2.6	4.1	4.1	4.1
Certain expenses capitalized on books and deducted on tax return	(1.4)	(1.6)	(1.6)	(2.7)	(3.2)	(3.3)	—	—	—
Taxes related to prior years	—	(0.3)	(0.5)		(0.6)	(0.2)	—	—	—
Tax credits *	(3.3)	—	—	(4.2)	—	—	(1.9)	—	—
Amortization of excess deferred taxes	(5.1)	(3.5)	(2.5)	(7.7)	(7.3)	(5.0)	0.2	—	—
Other items – net **	0.2	1.9	0.1	—	3.1	(0.2)	0.1	0.2	0.2
Effective income tax rate	15.1%	21.1%	20.1%	9.0%	15.6%	14.9%	23.5%	25.3%	25.3%

* In 2023, the Company completed a research and development study which encompassed fiscal years 2014 to 2022.

** Other consists primarily of property adjustments.

The significant items comprising the net deferred tax liability or asset as of September 30 were as follows:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Deferred tax assets:						
Reserves not currently deductible	$ 27.7	$ 33.5	$ —	$ 4.0	$ 3.9	$ 7.4
Pension and other postretirement benefits	64.4	72.6	44.7	52.6	17.0	—
Goodwill	—	—	—	—	58.8	73.0
Operating losses	239.2	255.1	89.2	116.9	159.8	140.3
Regulatory amount due to customers, net	30.4	34.5	27.6	30.7	—	—
Other	35.8	24.9	10.5	—	3.0	—
Total deferred tax assets	397.5	420.6	172.0	204.2	242.5	220.7
Deferred tax liabilities:						
Relating to property	(788.0)	(740.0)	(507.7)	(489.3)	(218.7)	(201.6)
Regulatory pension and other postretirement benefits	(80.6)	(92.8)	(53.0)	(72.3)	(25.9)	(1.6)
Deferred gas costs	(67.0)	(75.8)	(64.1)	(74.0)	—	—
Other ***	(205.6)	(187.1)	(79.0)	(68.7)	(7.0)	(6.5)
Total deferred tax liabilities	(1,141.2)	(1,095.7)	(703.8)	(704.3)	(251.6)	(209.7)
Net deferred tax (liability) asset	$ (743.7)	$ (675.1)	$ (531.8)	$ (500.1)	$ (9.1)	$ 11.0

*** For Spire, Other consists primarily of goodwill-related liabilities.

As indicated in Note 1, Summary of Significant Accounting Policies, the Company's regulated operations accounting for income taxes is impacted by ASC Topic 980, *Regulated Operations*. The Tax Cuts and Jobs Act of 2017 (TCJA) reduced the corporate federal income tax rate, and the corresponding reductions in deferred income tax balances resulted in amounts previously collected from utility customers for these deferred taxes becoming refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes are to be passed back to customers for certain accelerated tax depreciation benefits. In fiscal 2018, the MoPSC Amended Report and Order took effect and the estimated excess accumulated deferred income tax began to be returned to Spire Missouri customers in rates. During the prior fiscal year, the amount of excess accumulated deferred income taxes was trued up as part of the rate proceeding. The amount being returned related to the TCJA has been updated and in addition the excess accumulated deferred income taxes related to the Missouri tax rate change began to be returned in fiscal 2022. For Spire Missouri, excess accumulated deferred taxes of $10.0, $9.9, and $8.4, respectively, were returned in fiscal year 2023, 2022, and 2021. The treatment for accumulated deferred income tax balances for Spire Alabama, Spire Gulf and Spire Mississippi started to be accounted for during fiscal 2023. For Spire Gulf, $3.1 was returned to ratepayers. Spire Mississippi returned less than $0.1. For Spire Alabama, the deferred tax position resulted in a collection from customers of $0.2 for fiscal 2023.

On April 14, 2023, the IRS issued Revenue Procedure 2023-15 that provides a safe harbor method of accounting that taxpayers may use to determine whether to deduct or capitalize expenditures to repair, maintain, replace, or improve natural gas transmission and distribution property. Under the revenue procedure, the method of accounting will depend on the property's classification as linear transmission property, linear distribution property, or non-linear property. The revenue procedure may be adopted in tax years ending after May 1, 2023. The Company is evaluating the revenue procedure and the impact adopting the safe harbor would have on its property that is subject to this guidance.

In assessing whether deferred tax assets are realizable, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. Management considers all significant available positive and negative evidence, including the existence of losses in recent years, the timing of deferred tax liability reversals, projected future taxable income, taxable income in carryback years, and tax planning strategies to assess the need for a valuation allowance. Based upon this evidence, management believes it is more likely than not the Company, Spire Missouri and Spire Alabama will realize the benefits of these deferred tax assets.

As of September 30, 2023, Spire, and on a separate company basis, Spire Missouri and Spire Alabama, had federal and state loss carryforwards, contribution carryforwards, and various tax credit carryforwards as shown below.

	Spire	Spire Missouri	Spire Alabama
Federal and state loss carryforwards	$ 1,000.3	$ 352.4	$ 624.1
Contribution carryforwards	6.1	5.6	-
Tax credit carryforwards	13.1	8.5	1.6

For federal tax purposes, Spire Missouri's and Spire Alabama's loss carryforwards may be utilized against income from another member of the consolidated group. The loss carryforwards begin to expire in fiscal 2030 for certain state purposes and fiscal 2035 for federal and other state purposes. Contribution carryforwards and tax credit carryforwards are expected to be utilized prior to their expiration.

The Company, Spire Missouri and Spire Alabama recognize the tax benefit from a tax position only if it is at least more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. Unrecognized tax benefits are reported as a reduction of a deferred tax asset for an operating loss carryforward to the extent the recognition of the benefit would impact the operating loss carryforward, pursuant to ASU 2013-11. The following table presents a reconciliation of the beginning and ending balances of unrecognized tax benefits:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Unrecognized tax benefits, beginning of year	$ 19.6	$ 16.4	$ 13.2	$ 19.3	$ 16.1	$ 13.0	$ —	$ —	$ —
Increases related to tax positions taken in current year	4.2	3.3	3.2	3.6	3.2	3.1	0.3	—	—
Reductions due to lapse of applicable statute of limitations	—	(0.1)	—	—	—	—	—	—	—
Unrecognized tax benefits, end of year	$ 23.8	$ 19.6	$ 16.4	$ 22.9	$ 19.3	$ 16.1	$ 0.3	$ —	$ —

As of September 30, 2023 and 2022, the amounts of unrecognized tax benefits which, if recognized, would affect the effective tax rate were $5.9 and $4.0, respectively, for the Company, $5.1 and $3.7, respectively, for Spire Missouri, and $0.3 and $0.0, respectively, for Spire Alabama. It is reasonably possible that events will occur in the next 12 months that could increase or decrease the amount of the unrecognized tax benefits. The Company, Spire Missouri, and Spire Alabama do not expect that any such change will be significant to the balance sheets. Spire Alabama reported no unrecognized tax benefits for fiscal years 2022 and 2021.

The Company, Spire Missouri, and Spire Alabama record potential interest and penalties related to uncertain tax positions as interest expense and other income deductions, respectively. As of September 30, 2023 and 2022, interest accrued associated with uncertain tax positions was de minimis, and no penalties were accrued.

The Company, Spire Missouri, and Spire Alabama are no longer subject to examination for fiscal years prior to 2020, except to the extent the net operating losses from prior years are reviewed.

13. PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS

Pension Plans

Spire and the Utilities maintain pension plans for their employees. Spire Missouri and Spire Alabama have non-contributory, defined benefit, trusteed forms of pension plans covering the majority of their employees. Qualified plan assets are comprised of mutual and commingled funds consisting of U.S. equities with varying strategies, global equities, alternative investments, and fixed income investments.

The net periodic pension cost includes components shown in the following table. The components other than the service costs and regulatory adjustment are presented in "Other Income, Net" in the income statement, except for Spire Alabama's losses on lump-sum settlements. Such losses are capitalized in regulatory balances and amortized over the remaining actuarial life of individuals in the plan, and that amortization is presented in "Other Income, Net."

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Service cost – benefits earned during the period	$ 16.3	$ 20.0	$ 21.7	$ 11.4	$ 14.4	$ 15.4	$ 4.2	$ 4.8	$ 5.5
Interest cost on projected benefit obligation	25.1	21.5	20.7	17.8	14.7	14.2	4.8	4.7	4.6
Expected return on plan assets	(24.5)	(31.3)	(31.6)	(18.0)	(22.7)	(22.5)	(3.5)	(5.2)	(5.8)
Amortization of prior service credit	(4.5)	(4.5)	(3.1)	(1.9)	(1.9)	(0.6)	(2.4)	(2.4)	(2.3)
Amortization of actuarial loss	6.6	11.9	14.9	6.1	9.6	11.0	0.9	2.4	3.9
Loss on lump-sum settlements and curtailments	9.7	33.6	18.2	0.6	27.3	11.6	9.1	6.3	6.6
Subtotal	28.7	51.2	40.8	16.0	41.4	29.1	13.1	10.6	12.5
Regulatory adjustment	26.3	12.5	20.6	27.1	9.9	19.0	(1.7)	1.7	0.7
Net pension cost	$ 55.0	$ 63.7	$ 61.4	$ 43.1	$ 51.3	$ 48.1	$ 11.4	$ 12.3	$ 13.2

Other changes in plan assets and pension benefit obligations recognized in other comprehensive income or loss include the following:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Current year actuarial loss (gain)	$ 14.5	$(16.9)	$ (8.1)	$ 5.7	$ 0.9	$ (0.9)	$ 9.0	$(16.0)	$ (1.5)
Amortization of actuarial loss	(6.6)	(11.9)	(14.9)	(6.1)	(9.6)	(11.0)	(0.9)	(2.4)	(3.9)
Acceleration of loss recognized due to settlement	(9.7)	(33.6)	(18.2)	(0.6)	(27.3)	(11.6)	(9.1)	(6.3)	(6.6)
Current year service credit	—	—	(17.9)	—	—	(17.9)	—	—	—
Amortization of prior service credit	4.5	4.5	3.1	1.9	1.9	0.6	2.4	2.4	2.3
Subtotal	2.7	(57.9)	(56.0)	0.9	(34.1)	(40.8)	1.4	(22.3)	(9.7)
Regulatory adjustment	(2.8)	56.3	57.3	(1.0)	32.5	42.1	(1.4)	22.3	9.7
Total recognized in OCI	$ (0.1)	$ (1.6)	$ 1.3	$ (0.1)	$ (1.6)	$ 1.3	$ —	$ —	$ —

Spire pension obligations are driven by separate plan and regulatory provisions governing Spire Missouri, Spire Alabama and Spire EnergySouth pension plans.

Pursuant to the provisions of Spire Missouri's and Spire Alabama's pension plans, pension obligations may be satisfied by monthly annuities, lump-sum cash payments, or special termination benefits. Lump-sum payments are recognized as settlements (which can result in gains or losses) only if the total of such payments exceeds the sum of service and interest costs in a specific year. Special termination benefits, when offered, are also recognized as settlements which can result in gains or losses.

In the fiscal year ended September 30, 2023, one Spire Missouri plan and two Spire Alabama plans met the criteria for settlement recognition, requiring re-measurement of the obligation under those plans using updated census data and assumptions for discount rate and mortality. For the remeasurements, the discount rate for the Missouri plan was updated to 6.3% at September 30, 2023 (from 5.8% at September 30, 2022), and the discount rate for the Alabama plans were updated to 6.2% and 6.25%, respectively, (from 5.7% and 5.65%, respectively). Lump-sum payments recognized as settlements during fiscal 2023 was $48.7 ($9.9 attributable to Spire Missouri and $38.8 to Spire Alabama). The Alabama regulatory tariff requires that settlement losses be amortized over the remaining actuarial life of the individuals in the plan, and in fiscal 2023 the amortization periods range from 11.8 years to 13.4 years. Therefore, no lump sum settlement expenses were recorded in the fiscal year ended September 30, 2023.

In the fiscal year ended September 30, 2022, two Spire Missouri plans and two Spire Alabama plans met the criteria for settlement recognition, requiring re-measurement of the obligation under those plans using updated census data and assumptions for discount rate and mortality. For the remeasurements, the discount rates for the Missouri plans were updated to 5.7% and 5.8%, respectively, for each plan at September 30, 2022 (from 3.0%, at September 30, 2021), and the discount rate for the Alabama plans were updated to 5.7% and 5.65%, respectively, (from 3.1% and 3.0%, respectively). Lump-sum payments recognized as settlements during fiscal 2022 was $109.3 ($87.0 attributable to Spire Missouri and $22.3 to Spire Alabama). The Alabama regulatory tariff requires that settlement losses be amortized over the remaining actuarial life of the individuals in the plan, and in fiscal 2022 the amortization periods range from 11.4 years to 12.3 years. Therefore, no lump sum settlement expenses were recorded in the fiscal year ended September 30, 2022.

Effective December 23, 2021, the pension cost for Spire Missouri's western territory (Missouri West) included in customer rates was reduced from $5.5 to $4.4 per year, the pension cost included in Spire Missouri's eastern territory (Missouri East) customer rates was increased from $29.0 to $32.4 per year. Subsequently, on December 26, 2022, the amount in Missouri East was lowered to $29.9. The difference between these amounts and pension expense as calculated pursuant to the above and that otherwise would be included in the statements of income and statements of comprehensive income is deferred as a regulatory asset or regulatory liability.

Also effective December 23, 2021, Missouri East prepaid pension assets and other postretirement benefits that were previously being included in rates at $21.6 per year for eight years were reduced to $11.0 per year, with the amortization period being reset for another eight years. Missouri West net liability for pension and other postretirement benefits that were previously reducing rates by $3.3 per year for eight years were reduced to a $1.1 reduction in rates per year, with the amortization period being reset for another eight years. Subsequently, on December 26, 2022, Missouri East amortization was lowered to $6.9 and Missouri West to a reduction of $0.8.

The following table shows the reconciliation of the beginning and ending balances of the pension benefit obligation at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Benefit obligation, beginning of year	$ 464.4	$ 689.6	$ 320.6	$ 479.0	$ 97.8	$ 149.4
Service cost	16.3	20.0	11.4	14.4	4.2	4.8
Interest cost	25.1	21.5	17.8	14.7	4.8	4.7
Actuarial (gain) loss	(1.1)	(173.9)	(4.9)	(116.2)	5.4	(42.4)
Settlement loss	9.7	33.4	0.6	27.9	9.1	5.6
Settlement benefits paid	(48.8)	(109.3)	(9.9)	(87.0)	(38.8)	(22.3)
Regular benefits paid	(26.9)	(16.9)	(22.4)	(12.2)	(1.9)	(2.0)
Benefit obligation, end of year	$ 438.7	$ 464.4	$ 313.2	$ 320.6	$ 80.6	$ 97.8
Accumulated benefit obligation, end of year	$ 433.1	$ 457.1	$ 309.5	$ 315.0	$ 78.8	$ 96.2

In 2023, qualified plans except Spire Alabama's experienced actuarial gains. These gains were driven by the discount rates increasing by between 50 and 55 basis points, and were only partly offset by actuarial asset losses, as the trusts experienced actual returns below the actuarial expected returns. However, Spire Alabama had actuarial losses relating to larger than projected settlements, which, when combined with the actuarial asset losses, more than offset the gains relating to the increase in the discount rate.

The following table sets forth the reconciliation of the beginning and ending balances of the fair value of plan assets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Fair value of plan assets, beginning of year	$ 332.7	$ 498.9	$ 235.9	$ 364.0	$ 57.3	$ 82.8
Actual return on plan assets	9.1	(92.5)	7.5	(66.7)	—	(15.6)
Employer contributions	58.9	52.4	30.3	37.8	27.9	14.4
Settlement benefits paid	(39.1)	(109.3)	(9.3)	(87.0)	(29.7)	(22.3)
Regular benefits paid	(26.9)	(16.8)	(22.4)	(12.2)	(1.9)	(2.0)
Fair value of plan assets, end of year	$ 334.7	$ 332.7	$ 242.0	$ 235.9	$ 53.6	$ 57.3
Funded status of plans, end of year	$ (104.0)	$ (131.7)	$ (71.2)	$ (84.7)	$ (27.0)	$ (40.5)

The following table sets forth the amounts recognized in the balance sheets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Current liabilities	$ (1.6)	$ (1.1)	$ (1.6)	$ (1.1)	$ —	$ —
Noncurrent liabilities	(102.4)	(130.6)	(69.6)	(83.6)	(27.0)	(40.5)
Total	$ (104.0)	$ (131.7)	$ (71.2)	$ (84.7)	$ (27.0)	$ (40.5)

Pre-tax amounts recognized in accumulated other comprehensive loss not yet recognized as components of net periodic pension cost consist of:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Net actuarial loss	$ 130.1	$ 132.0	$ 92.5	$ 93.6	$ 40.2	$ 41.2
Prior service credit	(31.2)	(35.7)	(16.2)	(18.1)	(13.9)	(16.3)
Subtotal	98.9	96.3	76.3	75.5	26.3	24.9
Adjustments for amounts included in regulatory assets	(95.9)	(93.1)	(73.3)	(72.3)	(26.3)	(24.9)
Total	$ 3.0	$ 3.2	$ 3.0	$ 3.2	$ —	$ —

The assumptions used to calculate net periodic pension costs for Spire Missouri are as follows:

	2023	2022	2021
Weighted average discount rate - Spire Missouri East plan	5.70%	3.00%	2.85%
Weighted average discount rate - Spire Missouri West plan	5.80%	3.00%	2.75%
Weighted average rate of future compensation increase	3.00%	3.00%	3.00%
Expected long-term rate of return on plan assets	6.50%	6.75%	6.75%

The assumptions used to calculate net periodic pension costs for Spire Alabama are as follows:

	2023	2022	2021
Weighted average discount rate	5.65%/5.7%	3.10%/3.0%	2.95%/2.80%
Weighted average rate of future compensation increase	3.00%	3.00%	3.00%
Expected long-term rate of return on plan assets	6.50%	6.75%	6.75%

The discount rate is based on long-term, high quality bond indices at the measurement date. The expected long-term rate of return on plan assets is based on historical and projected rates of return for current and planned asset classes in the investment portfolio. Assumed projected rates of return for each asset class were selected after analyzing historical experience and future expectations of the returns. The overall expected rate of return for the portfolio was developed based on the target allocation for each class.

The assumptions used to calculate the benefit obligations are as follows:

	2023	2022
Weighted average discount rate - Spire Missouri East plan	6.25%	5.70%
Weighted average discount rate - Spire Missouri West plan	6.30%	5.80%
Weighted average discount rate - Spire Alabama plans	6.2%/6.25%	5.70%/5.65%
Weighted average rate of future compensation increase	3.00%	3.00%
Cash balance interest crediting rate - Spire Alabama / Spire Missouri	4.25%	4.25%

The following table sets forth the year-end projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for plans that have a projected benefit obligation and an accumulated benefit obligation in excess of plan assets:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Projected benefit obligation	$ 438.7	$ 464.4	$ 313.2	$ 320.6	$ 80.6	$ 97.8
Accumulated benefit obligation	433.1	457.1	309.5	315.0	78.8	96.2
Fair value of plan assets	334.7	332.7	242.0	235.9	53.6	57.3

The following tables set forth the targeted and actual plan assets by category as of September 30 of each year for Spire Missouri and Spire Alabama:

Spire Missouri	2023 Target	2023 Actual	2022 Target	2022 Actual
Return seeking assets	70.0%	77.0%	70.0%	74.3%
Liability hedging assets	30.0%	20.0%	30.0%	22.8%
Cash and cash equivalents	—%	3.0%	—%	2.9%
Total	100.0%	100.0%	100.0%	100.0%

Spire Alabama	2023 Target	2023 Actual	2022 Target	2022 Actual
Return seeking assets	75.0%	76.0%	70.0%	68.7%
Liability hedging assets	25.0%	15.0%	30.0%	25.3%
Cash and cash equivalents	—%	9.0%	—%	6.0%
Total	100.0%	100.0%	100.0%	100.0%

The Spire Inc. Retirement Plans Committee is responsible for the administration of the various plans, and all payments under the plans require direction of that committee. The Spire Inc. Defined Benefit Plan Investment Review Committee utilizes an Outsourced Chief Investment Officer (OCIO) model where investment decisions are outsourced to investment consultants (Willis Towers Watson), who in turn become co-fiduciaries with the committee.

For all plans, the Company employs a total return investment approach whereby a mix of equities and fixed income investments are used to maximize the long-term return of plan assets with a prudent level of risk. Risk tolerance is established through consideration of plan liabilities, plan funded status, corporate financial condition and market conditions. The Company has developed an investment strategy that focuses on asset allocation, diversification and quality guidelines. The investment goals are to obtain an adequate level of return to meet future obligations of the plan by providing above average risk-adjusted returns with a risk exposure in the mid-range of comparable funds. Comparative market and peer group benchmarks are utilized to ensure that investment managers are performing satisfactorily. The Company seeks to maintain an appropriate level of diversification to minimize the risk of large losses in a single asset class. Accordingly, plan assets for the pension plans do not have a concentration of assets in a single entity, industry, country, commodity or class of investment fund.

The following table sets forth expected pension benefit payments for the succeeding five fiscal years, and in aggregate for the five fiscal years thereafter, for Spire, Spire Missouri, and Spire Alabama:

	2024	2025	2026	2027	2028	2029 – 2032
Spire	$ 52.4	$ 45.3	$ 41.8	$ 41.8	$ 43.3	$ 202.8
Spire Missouri	41.0	34.1	30.4	29.4	30.5	139.1
Spire Alabama	8.0	7.7	7.8	8.7	8.9	44.1

The funding policy of Spire Missouri and Spire Alabama is to contribute an amount not less than the minimum required by government funding standards nor more than the maximum deductible amount for federal income tax purposes. Spire Missouri's contributions to the pension plans in fiscal 2024 are anticipated to be $21.6 into the qualified trusts, and $0 into the non-qualified plans. Spire Alabama's contributions to the pension plans in fiscal 2024 are anticipated to be $16.4 into the qualified trusts.

Other Postretirement Benefits

Spire and the Utilities provide certain life insurance benefits at retirement. Spire Missouri plans provide for medical insurance after early retirement until age 65. For retirements prior to January 1, 2015, the Missouri West plans provided medical insurance after retirement until death. The Spire Alabama plans provide medical insurance upon retirement until death for certain retirees depending on the type of employee and the date the employee was originally hired.

Net periodic postretirement benefit costs consist of the following components:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Service cost – benefits earned during the period	$ 4.8	$ 7.5	$ 7.3	$ 4.0	$ 6.3	$ 6.2	$ 0.7	$ 1.1	$ 0.9
Interest cost on accumulated postretirement benefit obligation	8.5	6.0	6.0	6.5	4.5	4.5	1.8	1.4	1.3
Expected return on plan assets	(15.8)	(16.8)	(16.1)	(10.5)	(11.3)	(10.9)	(5.0)	(5.2)	(4.9)
Amortization of prior service cost (credit)	0.3	1.0	1.0	0.6	0.7	0.7	(0.3)	0.3	0.3
Amortization of actuarial gain	(4.0)	(2.2)	(1.6)	(3.2)	(1.9)	(1.5)	(0.5)	—	—
Subtotal	(6.2)	(4.5)	(3.4)	(2.6)	(1.7)	(1.0)	(3.3)	(2.4)	(2.4)
Regulatory adjustment	0.6	3.3	13.2	1.8	5.0	15.0	(1.3)	(1.8)	(1.8)
Net postretirement benefit (income) cost	$ (5.6)	$ (1.2)	$ 9.8	$ (0.8)	$ 3.3	$ 14.0	$ (4.6)	$ (4.2)	$ (4.2)

Other changes in plan assets and postretirement benefit obligations recognized in OCI include the following:

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Current year actuarial (gain) loss	$(24.4)	$ 15.8	$(41.0)	$(21.5)	$ 9.8	$(29.0)	$ (1.1)	$ 5.9	$ (9.9)
Amortization of actuarial gain	4.0	2.2	1.6	3.2	1.9	1.5	0.5	—	—
Current year prior service cost	—	(6.3)	—		(1.1)	—	—	(5.2)	—
Amortization of prior service (cost) credit	(0.3)	(1.0)	(1.0)	(0.6)	(0.7)	(0.7)	0.3	(0.3)	(0.3)
Subtotal	(20.7)	10.7	(40.4)	(18.9)	9.9	(28.2)	(0.3)	0.4	(10.2)
Regulatory adjustment	20.7	(10.7)	40.4	18.9	(9.9)	28.2	0.3	(0.4)	10.2
Total recognized in OCI	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

Pursuant to a MoPSC Order, the return on plan assets is based on the market-related value of plan assets implemented prospectively over a four-year period. Gains and losses not yet includible in postretirement benefit cost are amortized only to the extent that such gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market-related value of plan assets. Such excess is amortized over the average remaining service life of active participants. Effective December 23, 2021, the $8.6 allowance for recovery in rates for Spire Missouri's postretirement benefit plans was discontinued. The difference between no recovery in rates and postretirement expense as calculated pursuant to the above and that otherwise would be included in the statements of income and statements of comprehensive income is deferred as a regulatory asset or regulatory liability. Effective with the resolution of the 2022 Missouri rate case in December 2022, net liabilities

for postretirement benefits reduced rates $0.9 and $0.1 per year for Missouri East and Missouri West, respectively.

The following table sets forth the reconciliation of the beginning and ending balances of the postretirement benefit obligation at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Benefit obligation, beginning of year	$ 148.1	$ 204.2	$ 114.8	$ 151.7	$ 29.9	$ 48.0
Service cost	4.8	7.5	4.0	6.3	0.7	1.1
Interest cost	8.5	6.0	6.5	4.5	1.8	1.4
Actuarial (gain) loss	(10.6)	(52.6)	(13.4)	(37.7)	4.2	(13.6)
Plan amendments	—	(6.2)	—	(1.0)	—	(5.2)
Retiree drug subsidy program	0.2	0.2	0.2	0.2	—	—
Benefits paid	(8.4)	(11.0)	(6.8)	(9.2)	(1.5)	(1.8)
Benefit obligation, end of year	$ 142.6	$ 148.1	$ 105.3	$ 114.8	$ 35.1	$ 29.9

In fiscal 2023, the actuarial gains for all qualified Spire plans were driven by the increase in the discount rate used to calculate the benefit obligation, combined with actuarial asset gains resulting from actual trust returns exceeding the expected returns. For Spire Alabama, these gains were more than offset by the loss associated with the difference between actual and assumed enrollment in Health Retirement Accounts.

The following table sets forth the reconciliation of the beginning and ending balances of the fair value of plan assets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Fair value of plan assets at beginning of year	$ 264.7	$ 326.9	$ 176.7	$ 221.7	$ 83.3	$ 99.4
Actual return on plan assets	29.9	(51.6)	18.8	(36.2)	10.2	(14.3)
Employer contributions	0.1	0.4	0.1	0.4	—	—
Benefits paid	(8.4)	(11.0)	(6.8)	(9.2)	(1.5)	(1.8)
Fair value of plan assets, end of year	$ 286.3	$ 264.7	$ 188.8	$ 176.7	$ 92.0	$ 83.3
Funded status of plans, end of year	$ 143.7	$ 116.6	$ 83.5	$ 61.9	$ 56.9	$ 53.4

The following table sets forth the amounts recognized in the balance sheets at September 30:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Noncurrent assets	$ 180.7	$ 151.6	$ 120.5	$ 96.9	$ 56.9	$ 53.4
Current liabilities	(0.4)	(0.3)	(0.4)	(0.3)	—	—
Noncurrent liabilities	(36.6)	(34.7)	(36.6)	(34.7)	—	—
Total	$ 143.7	$ 116.6	$ 83.5	$ 61.9	$ 56.9	$ 53.4

Pre-tax amounts recognized in accumulated other comprehensive loss not yet recognized as components of net periodic postretirement benefit cost consist of:

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Net actuarial gain	$ (103.3)	$ (83.3)	$ (92.3)	$ (74.2)	$ (6.1)	$ (5.6)
Prior service cost (credit)	7.0	7.1	7.4	7.9	(0.4)	(0.8)
Subtotal	(96.3)	(76.2)	(84.9)	(66.3)	(6.5)	(6.4)
Adjustments for amounts included in regulatory assets	96.3	76.2	84.9	66.3	6.5	6.4
Total	$ —	$ —	$ —	$ —	$ —	$ —

The assumptions used to calculate net periodic postretirement benefit costs for Spire Missouri are as follows:

	2023	2022	2021
Weighted average discount rate - Spire Missouri plans	5.80%	2.95%	2.75%
Weighted average rate of future compensation increase	3.00%	3.00%	3.00%
Expected long-term rate of return on plan assets - Spire Missouri plans	5.50%	5.75%	5.75%

The assumptions used to calculate net periodic postretirement benefit costs for Spire Alabama are as follows:

	2023	2022	2021
Weighted average discount rate	5.80%	2.95%	2.75%
Expected long-term rate of return on plan assets	4.75%/6.0%	5.00%/6.25%	5.00%/6.25%

The discount rate is based on long-term, high quality bond indices at the measurement date. The expected long-term rate of return on plan assets is based on historical and projected rates of return for current and planned asset classes in the investment portfolio. Assumed projected rates of return for each asset class were selected after analyzing historical experience and future expectations of the returns. The overall expected rate of return for the portfolio was developed based on the target allocation for each class.

The assumptions used to calculate the accumulated postretirement benefit obligations are as follows:

	2023	2022
Weighted average discount rate - Spire Alabama plans and Spire Missouri Plans	6.30%	5.80%
Weighted average rate of future compensation increase - Spire Missouri East plans	3.00%	3.00%

The assumed medical cost trend rates at September 30 are as follows:

	2023	2022
Medical cost trend assumed for next year - Spire Alabama and Spire Missouri	6.50%	6.75%
Rate to which the medical cost trend rate is assumed to decline (the ultimate medical cost trend rate)	5.00%	5.00%
Year the rate reaches the ultimate trend	2030	2028

The following tables set forth the targeted and actual plan assets by category as of September 30 of each year for Spire Missouri and Spire Alabama:

Spire Missouri	Target	2023 Actual	2022 Actual
Equity securities	60.0%	58.9%	58.7%
Debt securities	40.0%	38.1%	40.5%
Cash and cash equivalents	—%	3.0%	0.8%
Total	100.0%	100.0%	100.0%

Spire Alabama	Target	2023 Actual	2022 Actual
Equity securities	60.5%	59.9%	57.7%
Debt securities	39.5%	40.1%	42.3%
Total	100.0%	100.0%	100.0%

Missouri and Alabama state laws provide for the recovery in rates of costs accrued pursuant to GAAP provided that such costs are funded through an independent, external funding mechanism. The Utilities have established Voluntary Employees' Beneficiary Association and Rabbi Trusts as external funding mechanisms. Their investment policies seek to maximize investment returns consistent with their tolerance for risk. Outside investment management specialists are utilized in each asset class. Such specialists are provided with guidelines, where appropriate, designed to ensure that the investment portfolio is managed in accordance with policy. Performance and compliance with the guidelines is regularly monitored. Spire Missouri and Spire Alabama currently invest in mutual funds which are rebalanced periodically to the target allocation. The mutual funds are diversified across U.S. stock and bond markets, and for Spire Alabama, international stock markets.

The following table sets forth expected postretirement benefit payments for the succeeding five fiscal years, and in aggregate for the five fiscal years thereafter for Spire, Spire Missouri, and Spire Alabama:

	2024	2025	2026	2027	2028	2029 – 2032
Spire	$ 14.6	$ 14.8	$ 14.9	$ 14.8	$ 14.5	$ 68.6
Spire Missouri	11.6	11.8	11.8	11.7	11.4	52.2
Spire Alabama	2.9	2.9	2.9	2.9	2.9	15.0

The Utilities' funding policy is to contribute amounts to the trusts equal to the periodic benefit cost calculated pursuant to GAAP as recovered in rates. For both Spire Missouri and Spire Alabama there are no anticipated contributions to the postretirement plans in fiscal 2024.

Other Plans

Spire Services Inc. sponsors a 401(k) plan that cover substantially all employees of Spire Inc. and its subsidiaries. The plan allows employees to contribute a portion of their base pay in accordance with specific guidelines. The cost of the defined contribution plan for Spire Inc. totaled $15.5, for fiscal years 2023, 2022, and 2021, respectively. Spire Missouri provides a match of such contributions within specific limits. The cost of the defined contribution plan for Spire Missouri amounted to $9.1, $10.9, and $10.9 for fiscal years 2023, 2022, and 2021, respectively. Spire Alabama also provides a match of employee contributions within specific limits. The cost of the defined contribution plan for Spire Alabama amounted to $3.1, $3.6, and $2.9 for fiscal years 2023, 2022, and 2021, respectively.

Fair Value Measurements of Pension and Other Postretirement Plan Assets

Spire

The table below categorizes the fair value measurements of the Spire pension plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 14.8	$ —	$ 14.8	$ 11.5	$ —	$ 11.5
Equity funds - global (including U.S.)	—	139.0	139.0	—	122.2	122.2
Real asset funds	—	55.2	55.2	—	61.0	61.0
Debt securities:						
U.S. bond funds	27.8	—	27.8	42.3	—	42.3
U.S. government index funds	36.2	—	36.2	36.1	—	36.1
Global funds (including U.S.)	—	61.7	61.7	—	59.6	59.6
Total	$ 78.8	$ 255.9	$ 334.7	$ 89.9	$ 242.8	$ 332.7

The table below categorizes the fair value measurements of Spire's postretirement plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 5.1	$ —	$ 5.1	$ 3.5	$ —	$ 3.5
U.S. stock/bond mutual funds	188.2	76.5	264.7	177.1	69.4	246.5
International fund	—	16.5	16.5	0.8	13.9	14.7
Total	$ 193.3	$ 93.0	$ 286.3	$ 181.4	$ 83.3	$ 264.7

Cash and cash equivalents include money market mutual funds valued based on quoted market prices. Debt securities are valued based on broker/dealer quotations or by using observable market inputs. The stock and bond mutual funds are valued at the quoted market price of the identical securities.

Spire Missouri

The table below categorizes the fair value measurements of Spire Missouri's pension plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 6.8	$ —	$ 6.8	$ 5.7	$ —	$ 5.7
Equity funds - global (including U.S.)	—	99.4	99.4	—	85.7	85.7
Real asset funds	—	40.2	40.2	—	47.2	47.2
Debt securities:						
U.S. bond funds	20.9	—	20.9	29.4	—	29.4
U.S. government index funds	28.7	—	28.7	24.6	—	24.6
Global funds (including U.S.)	—	46.0	46.0	—	43.3	43.3
Total	$ 56.4	$ 185.6	$ 242.0	$ 59.7	$ 176.2	$ 235.9

The table below categorizes the fair value measurements of Spire Missouri's postretirement plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 4.3	$ —	$ 4.3	$ 2.7	$ —	$ 2.7
U.S. stock/bond mutual funds	184.5	—	184.5	174.0	—	174.0
Total	$ 188.8	$ —	$ 188.8	$ 176.7	$ —	$ 176.7

Cash and cash equivalents include money market mutual funds valued based on quoted market prices. Debt securities are valued based on broker/dealer quotations or by using observable market inputs. The stock and bond mutual funds are valued at the quoted market price of the identical securities.

Spire Alabama

The table below categorizes the fair value measurements of Spire Alabama's pension plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
Cash and cash equivalents	$ 4.6	$ —	$ 4.6	$ 3.5	$ —	$ 3.5
Equity funds - global (including U.S.)	—	22.9	22.9	—	21.6	21.6
Real asset funds	—	8.7	8.7	—	8.1	8.1
Debt securities:						
U.S. bond funds	4.0	—	4.0	7.7	—	7.7
U.S. government index funds	4.3	—	4.3	6.8	—	6.8
Global funds (including U.S.)	—	9.1	9.1	—	9.6	9.6
Total	$ 12.9	$ 40.7	$ 53.6	$ 18.0	$ 39.3	$ 57.3

The table below categorizes the fair value measurements of Spire Alabama's postretirement plan assets:

	As of September 30, 2023			As of September 30, 2022		
	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Total
U.S. stock/bond mutual funds	$ —	$ 76.5	$ 76.5	$ —	$ 69.4	$ 69.4
International fund	—	15.5	15.5	—	13.9	13.9
Total	$ —	$ 92.0	$ 92.0	$ —	$ 83.3	$ 83.3

Cash and cash equivalents include money market mutual funds valued based on quoted market prices. Debt securities are valued based on broker/dealer quotations or by using observable market inputs. The stock and bond mutual funds are valued at the quoted market price of the identical securities.

14. INFORMATION BY OPERATING SEGMENT

The Company has three reportable segments: Gas Utility, Gas Marketing, and Midstream. The Gas Utility segment is the aggregation of the operations of the Utilities. The Gas Marketing segment includes the results of Spire Marketing, a subsidiary engaged in the non-regulated marketing of natural gas and related activities, including utilizing natural gas storage contracts for providing natural gas sales. The Midstream segment includes Spire STL Pipeline, a subsidiary of Spire providing interstate natural gas pipeline transportation services, and Spire Storage, a subsidiary of Spire providing interstate natural gas storage services. Other components of the Company's consolidated information include Spire's subsidiaries engaged in the operation of a propane pipeline and risk management, among other activities, and unallocated corporate items, including certain debt and associated interest costs.

Accounting policies are described in Note 1, Summary of Significant Accounting Policies. Intersegment transactions include sales of natural gas from Spire Marketing to Spire Missouri and Spire Alabama, sales of natural gas from Spire Missouri to Spire Marketing, sales of natural gas from Spire Alabama to Spire Marketing, propane transportation services provided by Spire NGL Inc. to Spire Missouri, and propane storage services provided by Spire Missouri to Spire NGL Inc.

Management evaluates the performance of the operating segments based on the computation of net economic earnings. Net economic earnings exclude from reported net income, as applicable, the after-tax impacts of fair value accounting and timing adjustments associated with energy-related transactions, the impacts of acquisition, divestiture and restructuring activities, and the largely non-cash impacts of other non-recurring or unusual items such as certain regulatory, legislative or GAAP standard-setting actions.

2023	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Revenues from external customers	$ 2,456.6	$ 179.1	$ 29.9	$ 0.7	$ —	$ 2,666.3
Intersegment revenues	0.3	—	36.2	16.0	(52.5)	—
Total Operating Revenues	2,456.9	179.1	66.1	16.7	(52.5)	2,666.3
Depreciation and amortization expense	244.4	1.5	8.4	0.5	—	254.8
Interest expense	139.9	—	8.6	72.1	(34.9)	185.7
Income tax expense (benefit)	32.7	12.8	3.8	(10.5)	—	38.8
Net economic earnings (loss)	200.5	47.6	14.1	(34.1)	—	228.1
Capital expenditures	588.6	0.4	73.6	(0.1)	—	662.5

2022	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Revenues from external customers	$ 1,945.6	$ 234.9	$ 17.4	$ 0.6	$ —	$ 2,198.5
Intersegment revenues	0.5	—	35.7	15.5	(51.7)	—
Total Operating Revenues	1,946.1	234.9	53.1	16.1	(51.7)	2,198.5
Depreciation and amortization expense	227.9	1.4	7.5	0.5	—	237.3
Interest expense	86.4	—	4.9	37.3	(8.8)	119.8
Income tax expense (benefit)	49.6	11.9	4.5	(7.1)	—	58.9
Net economic earnings (loss)	202.7	27.0	11.1	(24.5)	—	216.3
Capital expenditures	528.6	0.9	22.6	0.1	—	552.2

2021	Gas Utility	Gas Marketing	Midstream	Other	Eliminations	Consolidated
Revenues from external customers	$ 2,118.2	$ 96.5	$ 19.9	$ 0.9	$ —	$ 2,235.5
Intersegment revenues	1.1	—	32.7	14.2	(48.0)	—
Total Operating Revenues	2,119.3	96.5	52.6	15.1	(48.0)	2,235.5
Depreciation and amortization expense	204.4	1.2	6.9	0.6	—	213.1
Interest expense	74.7	—	4.0	29.3	(1.4)	106.6
Income tax expense (benefit)	56.9	13.4	4.4	(6.2)	—	68.5
Net economic earnings (loss)	230.6	47.0	11.1	(22.4)	—	266.3
Capital expenditures	590.4	0.7	33.0	0.7	—	624.8

Total Assets at End of Year	2023	2022	2021
Gas Utility	$ 8,486.7	$ 8,042.8	$ 7,615.4
Gas Marketing	332.0	638.7	466.1
Midstream	574.3	446.0	413.8
Other	2,533.3	2,705.5	2,193.3
Eliminations	(1,612.7)	(1,749.3)	(1,332.2)
Total Assets	$ 10,313.6	$ 10,083.7	$ 9,356.4

Reconciliation of Consolidated Net Income to Consolidated Net Economic Earnings	2023	2022	2021
Net Income	$ 217.5	$ 220.8	$ 271.7
Adjustments, pre-tax:			
Missouri regulatory adjustments	—	—	(9.0)
Fair value and timing adjustments	11.4	(11.4)	3.3
Acquisition and divestiture activities	2.5	—	(1.3)
Income tax adjustments	(3.3)	6.9	1.6
Net Economic Earnings	$ 228.1	$ 216.3	$ 266.3

15. REGULATORY MATTERS

As discussed below for Spire Missouri and Spire Alabama, the Purchased Gas Adjustment (PGA) clauses and Gas Supply Adjustment (GSA) riders allow the Utilities to pass through to customers the cost of purchased gas supplies. Regulatory assets and regulatory liabilities related to the PGA clauses and the GSA rider are both labeled Unamortized Purchased Gas Adjustments herein.

The following regulatory assets and regulatory liabilities were reflected in the balance sheets of the Company, Spire Missouri and Spire Alabama as of September 30, 2023 and 2022.

	Spire		Spire Missouri		Spire Alabama	
September 30	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Regulatory Assets:						
Current:						
Unamortized purchased gas adjustments	$ 293.2	$ 322.2	$ 269.4	$ 275.1	$ 21.7	$ 43.8
Other	55.1	33.2	23.7	13.0	19.9	13.1
Total Current Regulatory Assets	348.3	355.4	293.1	288.1	41.6	56.9
Noncurrent:						
Future income taxes due from customers	144.5	137.8	136.2	129.2	2.0	2.2
Pension and postretirement benefit costs	261.0	294.5	189.1	222.9	67.8	66.5
Cost of removal	633.2	493.7	97.0	25.2	536.2	468.5
Unamortized purchased gas adjustments	23.0	—	23.0	—	—	—
Energy efficiency	56.3	57.2	56.3	57.2	—	—
Other	131.2	129.2	116.0	113.1	0.9	1.0
Total Noncurrent Regulatory Assets	1,249.2	1,112.4	617.6	547.6	606.9	538.2
Total Regulatory Assets	$ 1,597.5	$ 1,467.8	$ 910.7	$ 835.7	$ 648.5	$ 595.1
Regulatory Liabilities:						
Current:						
Other	$ 7.3	$ 3.7	$ —	$ —	$ —	$ —
Total Current Regulatory Liabilities	7.3	3.7	—	—	—	—
Noncurrent:						
Deferred taxes due to customers	128.0	145.3	114.8	127.9	—	—
Pension and postretirement benefit costs	185.2	172.6	156.5	143.6	17.9	19.4
Accrued cost of removal	126.6	32.9	90.4	—	—	—
Unamortized purchased gas adjustments	11.2	53.0	11.2	53.0	—	—
Other	21.4	14.4	16.5	7.3	3.3	3.6
Total Noncurrent Regulatory Liabilities	472.4	418.2	389.4	331.8	21.2	23.0
Total Regulatory Liabilities	$ 479.7	$ 421.9	$ 389.4	$ 331.8	$ 21.2	$ 23.0

A portion of the Company's and Spire Missouri's regulatory assets are not earning a return, as shown in the table below:

	Spire		Spire Missouri	
September 30	**2023**	**2022**	**2023**	**2022**
Pension and postretirement benefit costs	$ 133.4	$ 152.9	$ 133.4	$ 152.9
Future income taxes due from customers	142.5	135.6	136.2	129.2
Unamortized purchase gas adjustments	292.4	275.1	292.4	275.1
Other	104.2	122.7	104.2	122.7
Total Regulatory Assets Not Earning a Return	$ 672.5	$ 686.3	$ 666.2	$ 679.9

Like all the Company's regulatory assets, these regulatory assets as of September 30, 2023 are expected to be recovered from customers in future rates. The recovery period for the future income taxes due from customers and pension and other postretirement benefit costs could be 20 years or longer, based on current Internal Revenue Service guidelines and average remaining service life of active participants, respectively. The recovery period for the PGA assets is less than two years. The other items not earning a return are expected to be recovered over a period not to exceed 15 years, consistent with precedent set by the MoPSC, except for certain debt costs expected to be recovered over the related debt term, up to 35 years. Spire Alabama does not have any regulatory assets that are not earning a return.

Spire Missouri

As authorized by the MoPSC, the PGA clause allows Spire Missouri to flow through to customers, subject to prudence review by the MoPSC, the cost of purchased gas supplies. To better match customer billings with market natural gas prices, Spire Missouri is allowed to file to modify, on a periodic basis, the level of gas costs in its PGA. Certain provisions of the PGA clause are included below:

- Spire Missouri has a risk management policy that allows for the purchase of natural gas derivative instruments with the goal of managing price risk associated with purchasing natural gas on behalf of its customers. The MoPSC clarified that costs, cost reductions, and carrying costs associated with the Utility's use of natural gas derivative instruments are gas costs recoverable through the PGA mechanism.
- The tariffs allow Spire Missouri flexibility to make up to three discretionary PGA changes during each year, in addition to its mandatory November PGA change, so long as such changes are separated by at least two months.
- Spire Missouri is authorized to apply carrying costs to all over- or under-recoveries of gas costs, including cost increases and cost reductions associated with the use of derivative instruments, including cash payments for margin deposits.
- Pre-tax income from off-system sales and capacity release revenues is shared with customers (such that customers receive 75% and Spire Missouri receives 25%).

Pursuant to the provisions of the PGA clause, the difference between actual costs incurred and costs recovered through the application of the PGA clause, as well as the actual amount of off-system sales and capacity release revenues allocated to customers, are reflected as a regulatory asset or liability at the end of the fiscal year. At that time, the balance is classified as a current asset or current liability and recovered from, or credited to, customers over an annual period commencing in the subsequent November. The balance in the current account is amortized as amounts are reflected in customer billings. In fiscal 2023, Spire Missouri filed two changes to its tariff, which were approved and became effective November 29, 2022 and January 19, 2023.

In mid- February 2021, the central U.S. experienced a period of unusually severe cold weather ("Winter Storm Uri"), and Spire Missouri implemented an Operational Flow Order (OFO) to preserve the integrity of its distribution system. During this time, Spire Missouri was required to purchase additional natural gas supply, both to ensure adequate supply for its firm utility customers, and to cover the shortfall created when third-party marketers failed to deliver natural gas supply to its city gates on behalf of their customers. In accordance with its MoPSC-approved OFO tariff, Spire Missouri invoiced the cost of gas and associated penalties totaling $195.8 to non-compliant marketers and recorded accounts receivable. Recoveries collected are an offset to cost of natural gas for firm utility customers through the PGA and Actual Cost Adjustment (ACA), so are net income neutral to Spire Missouri. The three largest counterparties did not remit payment when due, so Spire Missouri filed suit against them in federal court to recover the invoiced amounts. In late February 2022, the parties to the OFO waiver suits agreed to a settlement in principle, pursuant to which marketers will reimburse Spire Missouri for the actual cost of its incremental gas purchases to serve marketers' customers during Winter Storm Uri, so Spire Missouri reduced revenue, accounts receivable, cost of gas and regulatory liabilities by approximately $150 in the second quarter of fiscal 2022. The settlement, which reduced the total amount due from the three marketers to approximately $42, was approved by the MoPSC in late May 2022, and the marketers are making timely payments to Spire Missouri.

As a result of the significant net deferred gas costs and average inventory cost in the second quarter of fiscal 2021, primarily due to Winter Storm Uri, Spire Missouri filed for and received MoPSC approval for an adjustment to the PGA tariff to increase a Filing Adjustment Factor (FAF) credit on customers' bills for three years. This lowered the net PGA rate to mitigate the impact of Winter Storm Uri costs on customers. All gas costs will eventually be recovered by Spire Missouri through the PGA or ACA mechanisms and carrying costs will be applied per the terms of the tariff.

In the first quarter of fiscal 2022, the MoPSC approved Spire Missouri compliance tariffs with an effective date of December 23, 2021, consistent with its order in Spire Missouri's general rate case. These new tariffs were designed to increase Spire Missouri's aggregate annual gross base rate revenues by $72.2, which includes $24.9 incremental and $47.3 already being collected through the Infrastructure System Replacement Surcharge (ISRS). The MoPSC required Spire Missouri to defer all non-operational overheads from December 23, 2021 through September 30, 2022 into a regulatory asset totaling $42.8. On April 1, 2022, Spire Missouri filed tariff sheets to initiate a new general rate case proceeding intended to address the deferred amounts, along with other matters. The parties reached a Full Unanimous Stipulation and Agreement (the "Stipulation") to resolve all issues in the

case, which was filed with the MoPSC on November 4, 2022. On November 18, 2022, the Stipulation was approved, including authorization of $78.0 in new base rate revenue (including $19.0 already being collected through ISRS) and recovery of deferred overheads through amortization of the related regulatory asset. New base rates became effective on December 26, 2022.

ISRS allows Spire Missouri expedited recovery for its investment to replace qualifying components of its infrastructure without the necessity of a formal rate case. As noted above, all prior ISRS revenues were reset to zero as of December 26, 2022 as a result of Spire Missouri's most recent base rate case. On April 20, 2023, the MoPSC approved an incremental annual ISRS revenue increase of $7.7, effective May 6, 2023, reflecting eligible pipe replacement from October 2022 through February 2023. On October 4, 2023, the MoPSC approved an incremental annual ISRS revenue increase of $12.4, effective October 23, 2023, reflecting eligible pipe replacement from March 2023 through August 2023.

On May 27, 2022, the MoPSC staff filed an ACA Review Recommendation and Report for the ACA period that first includes transportation charges incurred by Spire Missouri for service on the Spire STL Pipeline. That report concluded that the transaction complied with Missouri affiliate transaction rules and was prudent, and it recommended no disallowance of any Spire STL Pipeline related costs from the ACA mechanism. On July 11, 2022, Spire Missouri filed its response comments in support of the recommendation. The Missouri Office of the Public Counsel and Environmental Defense Fund (EDF) filed comments on July 29 and August 1, 2022, respectively, raising concerns about the Spire STL Pipeline transaction, the ACA process itself, and other matters. On January 6, 2023, Spire Missouri filed a Partial Stipulation and Agreement resolving all other issues raised by the MoPSC staff in its Recommendation and Report. The partial stipulation was approved by the MoPSC on January 25, 2023, resulting in a $0.6 credit to the ACA balance, but issues relating to Spire STL Pipeline costs remained contested. An evidentiary hearing on this matter was scheduled to be held July 25-26, 2023; however, on July 21, 2023, MoPSC suspended the procedural schedule in recognition that the parties had reached an agreement in principle to resolve the matter via settlement stipulation. The stipulation and agreement was approved by the Commission on August 23, 2023 and included an increase in customer assistance program funding among other non-monetary commitments.

In 2022, the MoPSC initiated their annual ACA dockets (GR-2022-0135 and GR-2022-0136) to audit gas commodity and transportation costs for the 2020-2021 heating season, which included the impact of Winter Storm Uri on Spire Missouri's natural gas portfolio. On December 15, 2022, the MoPSC staff filed its Reports and Recommendations in these cases proposing various disallowances relating to imbalance cash-outs and an off-system sale. On January 19, 2023, Spire Missouri filed its response to this proposal setting forth its position that there is no basis in law or fact for either disallowance. On July 12, 2023, the MoPSC entered a scheduling order in this matter which includes several rounds of pre-filed testimony prior to an evidentiary hearing to be held in early May 2024. On November 2, 2023, Spire Missouri filed an unopposed settlement stipulation by which the MoPSC Staff agreed to withdraw its recommendation of a proposed disallowance relating to imbalance cash-outs. The proposed disallowance relating to an off-system sale remains pending in the case. Management believes the likelihood of an unfavorable outcome is remote.

Spire Alabama

In September 2022, the APSC approved the renewal of RSE through September 30, 2025, with certain modifications to the previous terms. Under RSE, the APSC conducts reviews in March, June and September to determine whether Spire Alabama's return on average common equity (ROE) at the end of the rate year will be within the allowed range of return. Reductions in rates can be made quarterly to bring the projected ROE within the allowed range; increases, however, are allowed only once each rate year, effective December 1, and cannot exceed 4% of prior-year revenues. Effective October 1, 2022, Spire Alabama's allowed range of ROE is 9.50% to 9.90% with an adjusting point of 9.70%. Previously, the allowed range was 10.15% to 10.65% with an adjusting point of 10.40%. Spire Alabama is subject to a performance-based adjustment of plus or minus 10 basis points to the ROE adjusting point, based upon the terms of the previously approved Accelerated Infrastructure Modernization (AIM) Program tariff; however, Spire applied for and received approval to suspend the operation of the AIM performance-based adjustment for 2022, 2023, and 2024, impacting fiscal years 2023 through 2025. Spire Alabama's equity as a percent of total capitalization is limited to 55.5%, and Average Common Equity growth is limited to 6.00% each year.

The inflation-based Cost Control Measure (CCM) established by the APSC allows for annual changes in operation and maintenance ("O&M") expense relative to an index range. Effective October 1, 2022, the Base Year O&M expense was computed by averaging the actual O&M expenses for 2020, 2021, and 2022. The Base CPI-U was computed by averaging the August CPI-U for 2020, 2021, 2022. The "Index" is computed by measuring the change from the Base CPI-U to the August CPI-U of the most recently completed fiscal year, less a factor of 1.50%. The index range will be computed by adjusting the Index plus or minus 1.50%. If rate year O&M expense falls within the index range, no adjustment is required. If rate year O&M expense exceeds the index range, three-quarters of the difference is returned to customers through future rate adjustments. To the extent rate year O&M is less than the index range, Spire Alabama benefits by one-half of the difference through future rate adjustments. If a benefit is achieved, the Base Year and the Base CPI-U for the following year will each be reset to an average of the three preceding completed years. If a benefit is not achieved, the Base Year and Base CPI-U will not be updated. Certain items that fluctuate based on situations demonstrated to be beyond Spire Alabama's control may be excluded from the CCM calculation.

The RSE reduction for September 30, 2021 following the year-end point of test was $2.2 to bring the expected rate of return on average common equity to within the allowed rate of return. The CCM benefit for rate year 2021 was $8.8. To mitigate the impact on ratepayers, Spire Alabama requested and received approval from the APSC to recover the 2021 CCM benefit over five years (with recognition of revenue only up to 24 months in advance of recovery). As a part of the annual update for RSE, on December 29, 2021, Spire Alabama filed an increase for rate year 2022 of $5.3. The 2021 RSE reduction of $2.2, the five-year recovery of the 2021 CCM benefit of $8.8 and the annual RSE increase of $5.3 were all effective on January 1, 2022. There was no RSE reduction in 2022 for the January 31, April 30, July 31 or September 30 quarterly points of test. Spire Alabama recorded a CCM benefit for rate year 2022 of $17.2. Similar to the rate year 2021 CCM benefit, Spire requested and received approval to recover the rate year 2022 CCM benefit over five years. On October 26, 2022, Spire Alabama made its annual RSE rate filing with the APSC, presenting the utility's budget for the fiscal year ended September 30, 2023, including net income and a calculation of allowed ROE. The budget reflected the start of amortization of the accumulated deferred income tax (ADIT) adjustment related to the Tax Cuts and Jobs Act of 2017 (TCJA). New rates designed to provide an annual revenue increase of $15.0 became effective January 1, 2023. There was no RSE reduction in 2023 for the March 31, June 30 or September 30 points of test. Spire Alabama recorded a CCM benefit for rate year 2023 of $4.4. On October 26, 2023, Spire Alabama made its annual RSE rate filing, presenting the utility's budget for the fiscal year ending September 30, 2024, including net income and a calculation of allowed ROE. New rates designed to provide an annual revenue increase of $15.8 are anticipated to become effective December 1, 2023.

Spire Alabama's rate schedules for natural gas distribution charges contain a GSA rider which permits the pass-through to customers of changes in the cost of gas supply. Spire Alabama's tariff provides a temperature adjustment mechanism, also included in the GSA rider, which is designed to moderate the impact of departures from normal temperatures on Spire Alabama's earnings. The temperature adjustment applies primarily to residential, small commercial and small industrial customers. Other non-temperature weather-related conditions that may affect customer usage are not included in the temperature adjustment. There is also a mechanism under Spire Alabama's GSA rider allowing the utility to create value through off-system sales of excess natural gas supply and capacity and to give 75% of the value created to customers while retaining 25%. As of April 2022, the first $1.6 of value from capacity release goes entirely to customers before Spire Alabama retains 25%. In the past year, Spire Alabama filed GSA rate increases effective December 1, 2022 and January 1, 2023, and GSA rate decreases effective October 1, 2023 and anticipated to become effective December 1, 2023, primarily attributable to changes in natural gas prices.

The APSC approved an Enhanced Stability Reserve (ESR) in 1998, which was subsequently modified and expanded in 2010. As currently approved, the ESR provides deferred treatment and recovery for the following: (1) extraordinary O&M expenses related to environmental response costs; (2) extraordinary O&M expenses related to self-insurance costs that exceed $1.0 per occurrence; (3) extraordinary O&M expenses, other than environmental response costs and self-insurance costs, resulting from a single force majeure event or multiple force majeure events greater than $0.3 and $0.4, respectively, during a rate year; and (4) negative individual large commercial and industrial customer budget revenue variances that exceed $0.4 during a rate year. Charges to the ESR are subject to certain limitations which may disallow deferred treatment and which prescribe the timing of recovery. Subject to APSC authorization, Spire Alabama expects to be able to recover underfunded ESR balances over a five-year amortization period with an annual limitation of $0.7. Amounts in excess of this limitation are deferred for recovery in future years.

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Spire

In addition to those discussed above for Spire Missouri and Spire Alabama, Spire is affected by the following regulatory matters.

Spire Gulf has similar rate regulation to Spire Alabama. Its RSE rate-setting mechanism was renewed in September 2021 for a four-year term through September 2025. The RSE allowed ROE range was 10.45% to 10.95% with an adjusting point of 10.70% in fiscal 2021, while the ROE range is 9.70% to 10.30% with an adjusting point of 9.95% for fiscal 2022 through fiscal 2025. In October 2021 and 2022, Spire Gulf made its annual RSE rate filings with the APSC based on its budget for the new fiscal year and an allowed ROE of 9.95%, and new rates designed to provide increased annual revenues of $1.0 and $2.5 became effective at the beginning of January 2022 and 2023, respectively. The fiscal 2023 budget reflected the start of amortization of the excess ADIT from the TCJA. Spire Gulf filed its RSE point of test as of April 30, 2023 with the APSC reflecting that its projected ROE exceeded the allowed ROE resulting in an annualized refund of $1.8 that became effective July 1, 2023. Spire Gulf filed its RSE point of test as of September 30, 2023, reflecting that its actual ROE exceeded the allowed ROE resulting in an additional annualized refund of $2.0 that are anticipated to become effective December 1, 2023. The CCM has similar evaluation and recovery provisions when expenses exceed or are under a band of plus or minus 1.50% around the CPI-U inflated O&M per customer expense level from the base year, excluding expenses for pensions and gas bad debt. The base year for the O&M index was 2017 for fiscal 2021 and was 2021 for fiscal 2022. Since a CCM benefit was recorded in fiscal 2022, the base year O&M index for fiscal 2023 through fiscal 2025 will be the 2022 O&M level. Spire Gulf recorded a CCM benefit for rate year 2021 of $2.3 to revenues, resulting in a net income benefit of $1.6. A CCM benefit of $1.7 was recorded for fiscal 2022 to an economic development fund that can be used for economic development purposes subject to APSC approval. Spire Gulf's O&M for fiscal 2023 was within the O&M per customer inflation adjusted band. Spire Gulf has a Cast Iron Main Replacement Factor (CIF) that provides an enhanced return on the pro-rata costs associated with cast iron main replacement exceeding 10 miles per year based on a 75% weighting for the equity content. Capital expenditures recovered under the CIF have not increased since fiscal 2019 pursuant to applicable tariff provisions although the Company is continuing to recover costs of service associated with accumulated expenditures under the CIF. Spire Gulf also has an ESR for negative revenue variances over $0.1 or a force majeure event expense of $0.1 (or two events that exceed $0.15) and an Environmental Cost Recovery Factor that recovers 90% of prudently incurred costs for compliance with environmental laws, rules and regulations. Spire Gulf has an APSC-approved intercompany revolving credit agreement with Spire to borrow in a principal amount not to exceed $75.0 and to loan up to $25.0.

Spire Mississippi utilizes a formula rate-making process under the Rate Stabilization Adjustment Rider (RSA). An allowed return on equity (currently 10.04%) is computed annually and compared to the actual return on equity based on a rate year ending June 30. If the actual equity return on an end of period rate base is beyond the allowed return on equity by 1.0%, then 75% of any shortfall is recovered through a rate increase and 50% of any excess results in a rate decrease. Updates may include known and measurable adjustments to historic costs from the 12 months ended June 30, submitted September 15 for an effective date of November 1, unless disputed by the Mississippi Public Utilities Staff (MPUS), with any disputes to be resolved by the Mississippi Public Service Commission (MSPSC) by January 15 of the following year. The MSPSC approved stipulation agreements between the MPUS and Spire Mississippi that provided for increased annual revenues of $0.8 through rates effective on February 1, 2022 and an additional $0.8 effective on January 1, 2023. Spire Mississippi's RSA filing made on September 1, 2023 reflected a rate increase of $1.3 and is pending review by the MPUS. Additionally, a Supplemental Growth Rider provides recovery of certain Spire Mississippi system expansion projects to serve qualified economic development projects.

In August 2018, the FERC approved an order issuing Certificates of Public Convenience and Necessity ("FERC Certificates") for the Spire STL Pipeline ("August 2018 Order"). In June 2021, the U.S. Court of Appeals for the District of Columbia Circuit issued an order vacating the FERC Certificates and remanding the matter back to the FERC for further action. In September and December 2021, the FERC issued temporary certificates for the continued authorized operation of the Spire STL Pipeline pending the outcome of its determination on remand. On December 15, 2022, the FERC issued its order on remand reissuing permanent FERC Certificates for the continued operation of the Spire STL Pipeline, and that order is final and no longer appealable.

16. COMMITMENTS AND CONTINGENCIES

Commitments

The Company and the Utilities have entered into contracts with various counterparties, expiring on dates through calendar 2039, for the storage, transportation, and supply of natural gas. Minimum payments required under the contracts in place at September 30, 2023, are estimated at $1,613.2, $1,182.0 and $251.6 for the Company, Spire Missouri and Spire Alabama, respectively. Additional contracts are generally entered into prior to or during the heating season of November through April. The Utilities recover their costs from customers in accordance with their PGA clauses or GSA riders.

In May 2023, Spire entered into an agreement to acquire MoGas Pipeline, an interstate natural gas pipeline, and Omega Pipeline, a connected gas distribution system, from CorEnergy Infrastructure Trust, Inc., for $175 cash, subject to customary working capital and other closing adjustments. Spire has received a request for additional information ("Second Request") from the Federal Trade Commission (FTC) with regard to this proposed acquisition. The Company is cooperating fully with the FTC regarding the Second Request and expects to close in the second quarter of fiscal 2024 subject to receiving FTC approval.

A consolidated subsidiary of Spire is a limited partner in Inter-Atlantic Energy Capital Ventures, L.P., an unconsolidated partnership focusing on sustainability initiatives largely tied to the natural gas utility sector. Spire committed to contribute a total of $10.0 of capital to the partnership as and when requested by the general partner. As of September 30, 2023, the remaining unfunded commitment was $4.9.

Contingencies

The Company and the Utilities account for contingencies, including environmental liabilities, in accordance with accounting standards under the loss contingency guidance of ASC Topic 450, *Contingencies*, when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

In addition to matters noted below, the Company and the Utilities are involved in other litigation, claims, and investigations arising in the normal course of business. Management, after discussion with counsel, believes the final outcome will not have a material effect on the statements of income, balance sheets, and statements of cash flows of the Company, Spire Missouri, or Spire Alabama. However, there is uncertainty in the valuation of pending claims and prediction of litigation results.

The Company and the Utilities own and operate natural gas distribution, transmission, and storage facilities, the operations of which are subject to various environmental laws, regulations, and interpretations. While environmental issues resulting from such operations arise in the ordinary course of business, such issues have not materially affected the Company's or Utilities' financial position and results of operations. As environmental laws, regulations, and their interpretations change, the Company or the Utilities may incur additional environmental liabilities that may result in additional costs, which may be material.

In the natural gas industry, many gas distribution companies have incurred environmental liabilities associated with sites they or their predecessor companies formerly owned or operated where manufactured gas operations took place. The Utilities each have former manufactured gas plant (MGP) operations in their respective service territories, some of which are discussed under the Spire Missouri and Spire Alabama headings below. To the extent costs are incurred associated with environmental remediation activities, the Utilities would request authority from their respective regulators to defer such costs (less any amounts received from insurance proceeds or as contributions from other potentially responsible parties (PRPs)) and collect them through future rates.

To date, costs incurred for all Spire MGP sites for investigation, remediation and monitoring have not been material. However, the amount of costs relative to future remedial actions at these and other sites is unknown and may be material. The actual future costs that Spire Missouri and Spire Alabama may incur could be materially higher or lower depending upon several factors, including whether remediation will be required, final selection and regulatory approval of any remedial actions, changing technologies and government regulations, the ultimate ability of other PRPs to pay, and any insurance recoveries.

In 2020, Spire retained an outside consultant to conduct probabilistic cost modeling of its former MGP sites in Missouri and Alabama. The purpose of this analysis was to develop an estimated range of probabilistic future liability for each of their MGP sites. That analysis, completed in March 2021, provided a range of demonstrated possible future expenditures to investigate, monitor and remediate the former MGP sites. Spire Missouri and Spire Alabama have recorded their best estimates of the probable expenditures that relate to these matters. The amount remains immaterial, and Spire Missouri, Spire Alabama and the Company do not expect potential liabilities that may arise from remediating these sites to have a material impact on their future financial condition or results of operations.

Spire Missouri

Spire Missouri has identified three former MGP sites in the city of St. Louis, Missouri (the "City") where costs have been incurred and claims have been asserted. Spire Missouri has enrolled two of the sites in the Missouri Department of Natural Resources (MoDNR) Brownfields/Voluntary Cleanup Program (BVCP). The third site is the result of an assertion by the United States Environmental Protection Agency (EPA).

In conjunction with redevelopment of the Carondelet Coke site, Spire Missouri and another former owner of the site entered into an agreement (the "Remediation Agreement") with the City development agencies, the developer, and an environmental consultant that obligates one of the City agencies and the environmental consultant to remediate the site and obtain a No Further Action (NFA) letter from the MoDNR. The Remediation Agreement also provides for a release of Spire Missouri and the other former site owner from certain liabilities related to the past and current environmental condition of the site and requires the developer and the environmental consultant to maintain certain insurance coverage, including remediation cost containment, premises pollution liability, and professional liability. The operative provisions of the Remediation Agreement were triggered on December 20, 2010, on which date Spire Missouri and the other former site owner, as full consideration under the Remediation Agreement, paid a small percentage of the cost of remediation of the site. The property was divided into seven parcels, and MoDNR NFA letters have been received for six of the parcels. Remediation is ongoing on the last parcel.

In a letter dated June 29, 2011, the Attorney General for the State of Missouri informed Spire Missouri that the MoDNR had completed an investigation of the second site, Station A. The Attorney General requested that Spire Missouri participate in the follow up investigations of the site. In a letter dated January 10, 2012, Spire Missouri stated that it would participate in future environmental response activities at the site in conjunction with other PRPs. Accordingly, Spire Missouri entered into a cost sharing agreement for remedial investigation with other PRPs. MoDNR never approved the agreement, so no remedial investigation took place. Recently, Spire Missouri was approached by a real estate developer interested in purchasing the northern half of the Station A site and developing the same for industrial purposes. Consequently, Spire Missouri is now in discussions with the developer, other PRPs and MoDNR to develop a new remedial investigation plan for the site.

Additionally, in correspondence dated November 30, 2016, Region 7 of the EPA has asserted that Spire Missouri is liable under Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) for alleged coal gas waste contamination at a third site, Station B. Spire Missouri and the site owner notified the EPA that information and data provided by the EPA to date does not rise to the level of documenting a threat to the public health or environment. As such, in March 2017 Spire Missouri requested more information from the EPA. Spire Missouri never received a response from the EPA.

Spire Missouri has notified its insurers that it seeks reimbursement for costs incurred in the past and future potential liabilities associated with these MGP sites. While some of the insurers have denied coverage and reserved their rights, Spire Missouri retains the right to seek potential reimbursements from them.

On March 10, 2015, Spire Missouri received a Section 104(e) information request under CERCLA from EPA Region 7 regarding the former Thompson Chemical/Superior Solvents site in the City. In turn, Spire Missouri issued a Freedom of Information Act (FOIA) request to the EPA on April 3, 2015, to identify the basis of the inquiry. The FOIA response from the EPA was received on July 15, 2015, and a response was provided to the EPA on August 15, 2015. Spire Missouri has received no further inquiry from the EPA regarding this matter.

In its western service area, Spire Missouri has six owned MGP sites enrolled in the BVCP, including Joplin MGP #1, St. Joseph MGP #1, Kansas City Coal Gas Station B, Kansas City Station A Railroad area, Kansas City Coal Gas Station A, and Independence MGP #2. Source removal has been conducted at all the owned sites since 2003 with the exception of Joplin. On September 15, 2016, a request was made with the MoDNR for a restrictive covenant use limitation with respect to Joplin. Remediation efforts at the six sites are at various stages of completion, ranging from groundwater monitoring and sampling following source removal activities to the aforementioned request for the Joplin site. As part of its participation in the BVCP, Spire Missouri communicates regularly with the MoDNR with respect to its remediation efforts and monitoring activities at these sites. On May 11, 2015, MoDNR approved the next phase of investigation at the Kansas City Station A Railroad area.

Spire Alabama

Spire Alabama is in the chain of title of nine former MGP sites, four of which it still owns, and five former manufactured gas distribution sites, one of which it still owns. All are located in the state of Alabama.

In 2011, a removal action was completed and an NFA letter was received at the Huntsville MGP site pursuant to an Administrative Settlement Agreement and Order on Consent among the EPA, Spire Alabama and the current site owner.

In 2012, Spire Alabama responded to an EPA Request for Information Pursuant to Section 104 of CERCLA relating to the 35th Avenue Superfund Site located in North Birmingham, Jefferson County, Alabama. Spire Alabama was identified as a PRP under CERCLA for the cleanup of the site or costs the EPA incurs in cleaning up the site. At this point, Spire Alabama has not been provided information that would allow it to determine the extent, if any, of its potential liability with respect to the 35th Avenue Superfund Site and vigorously denies its inclusion as a PRP.

Assessments were performed by the EPA of the former MGP sites in Gadsden and Anniston, and NFA letters were received after each assessment.

Spire

In addition to those discussed above for Spire Missouri and Spire Alabama, Spire is aware of the following contingent matters.

Spire Marketing, along with many natural gas industry participants, faced the unprecedented effects of Winter Storm Uri in February 2021. Numerous natural gas producers and midstream operators were unable to deliver natural gas to market as they experienced wellhead freeze-offs, power outages and equipment failure due to the extreme weather. These events resulted in supply curtailments, and related notices of force majeure to excuse performance, from and to certain counterparties. Further, these events have made Spire Marketing subject to various commercial disputes (including regarding force majeure). As such, Spire Marketing has recorded an estimate of potential liabilities for damages based on communications with counterparties and the facts and circumstances surrounding each transaction. These estimates are adjusted as new facts emerge or settlement agreements are reached, and it is possible that final settlement amounts may materially differ from the current estimate.

17. LEASES

The lease agreement covering the Company's primary office space in St. Louis extends through February 2035, with an option to renew for an additional five years. Spire Alabama's lease agreement for office space in Birmingham extends through January 2037, with an option to renew for two additional five-year terms. The lease agreement covering Spire Marketing and Spire Storage office space in Houston extends through December 2028, with options to terminate three years earlier or to renew for an additional five years. The renewal options in the St. Louis and Houston leases are reasonably certain to be exercised and are included in the lease term used to determine the right-of-use assets and lease liabilities. The Company and its subsidiaries have other relatively minor rental arrangements for real estate and equipment with remaining terms of up to ten years.

Operating lease cost, cash flow and noncash information are shown in the following table.

	Spire			Spire Missouri			Spire Alabama		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Operating lease cost, including amounts capitalized	$ 7.3	$ 7.4	$ 7.2	$ 0.5	$ 0.5	$ 0.4	$ 2.0	$ 2.1	$ 2.1
Cash flow and noncash information about operating leases:									
Operating cash flows representing cash paid for amounts included in the measurement of lease liabilities	7.3	7.3	7.2	0.5	0.5	0.4	2.1	2.1	2.1

Right-of-use assets obtained in exchange for lease liabilities	0.8	24.6	—	0.8	1.1	—	—	23.5	—

The following table shows year-end balance sheet and weighted-average information about operating leases.

	Spire		Spire Missouri		Spire Alabama	
	2023	2022	2023	2022	2023	2022
Right-of-use assets	$ 70.6	$ 73.7	$ 2.1	$ 1.7	$ 19.2	$ 20.2
Lease liabilities, current	6.8	6.5	0.5	0.4	1.9	1.9
Lease liabilities, noncurrent	70.2	73.7	1.8	1.5	23.5	24.6
Weighted-average remaining lease term (in years)	14.1	15.0	5.6	5.1	13.3	14.3
Weighted-average discount rate	4.2%	4.1%	3.3%	2.2%	3.7%	3.7%

On the balance sheets, right-of-use assets are included in “Deferred Charges and Other Assets: Other,” current lease liabilities are in “Current Liabilities: Other,” and noncurrent lease liabilities are in “Deferred Credits and Other Liabilities: Other.”

Following is a maturity analysis by fiscal year for operating lease liabilities as of September 30, 2023.

	Spire	Spire Missouri	Spire Alabama
2024	$ 6.9	$ 0.5	$ 1.9
2025	7.5	0.6	2.2
2026	7.5	0.4	2.2
2027	7.4	0.3	2.3
2028	7.4	0.3	2.3
Thereafter	65.9	0.5	21.7
Total undiscounted lease payments	102.6	2.6	32.6
Less present value discount	(25.6)	(0.3)	(7.2)
Total current and noncurrent lease liabilities	$ 77.0	$ 2.3	$ 25.4

There are no significant finance leases, short-term leases, subleases, variable lease payments, residual value guarantees, restrictions or covenants pertaining to leases.

The Company elected, for all asset classes, not to recognize right-of-use assets and lease liabilities for short-term leases. Instead, the lease payments for short-term leases are recognized in profit or loss on a straight-line basis over the lease term and variable lease payments are recognized in the period in which the obligation for those payments is incurred. The Company elected, for all asset classes, not to separate nonlease components from lease components and instead to account for each separate lease component and the nonlease components associated with that lease component as a single lease component.

The discount rate used for all the leases is the applicable incremental borrowing rate, which is the rate of interest that a lessee would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. For a subsidiary lessee, the rate applicable to the subsidiary is used unless the lease terms are influenced by parent credit.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There have been no changes in or disagreements on accounting and financial disclosure with Spire's, Spire Missouri's, or Spire Alabama's outside auditors that are required to be disclosed.

Item 9A. Controls and Procedures

Spire

Management Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting. Spire Inc.'s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Spire Inc.'s management, including its Chief Executive Officer and Chief Financial Officer, conducted an assessment of the effectiveness of Spire Inc.'s internal control over financial reporting as of September 30, 2023. In making this assessment, management used the criteria in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management concluded that Spire Inc.'s internal control over financial reporting was effective as of September 30, 2023. Deloitte & Touche LLP, an independent registered public accounting firm, has issued an attestation report on Spire Inc.'s internal control over financial reporting, which is included in Item 8, Financial Statements and Supplementary Data.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon such evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Change in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Spire Missouri

Management Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting. Spire Missouri Inc.'s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Spire Missouri Inc.'s management, including its Chief Executive Officer and Chief Financial Officer, conducted an assessment of the effectiveness of Spire Missouri Inc.'s internal control over financial reporting as of September 30, 2023. In making this assessment, management used the criteria in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management concluded that Spire Missouri Inc.'s internal control over financial reporting was effective as of September 30, 2023.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Spire Alabama

Management Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting. Spire Alabama Inc.'s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Spire Alabama Inc.'s management, including its Chief Executive Officer and Chief Financial Officer, conducted an assessment of the effectiveness of Spire Alabama Inc.'s internal control over financial reporting as of September 30, 2023. In making this assessment, management used the criteria in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management concluded that Spire Alabama Inc.'s internal control over financial reporting was effective as of September 30, 2023.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the quarterly period ended September 30, 2023, no director or officer of the Company adopted or terminated any contract, instruction or written plan for the purchase or sale of securities of the Company intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) of the Exchange Act or any "non-Rule 10b5-1 trading arrangement" (as defined in the Exchange Act).

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information about:

- our directors is incorporated by reference from the discussion under Proposal 1 of our proxy statement to be filed on or about December 13, 2023 ("2023 proxy statement");
- our executive officers is reported in Part I of this Form 10-K;
- our Financial Code of Ethics is posted on our website, www.SpireEnergy.com, under Investors/Governance/Governance documents (http://investors.spireenergy.com/governance/governance-documents); and
- our Audit Committee, our Audit Committee financial experts, and submitting nominations to the Corporate Governance Committee

is incorporated by reference from the discussion in our 2023 proxy statement under the heading "Governance."

In addition, our Code of Business Conduct, Corporate Governance Guidelines, and charters for our Audit, Compensation and Corporate Governance Committees are available under "Governance documents" on our website, as indicated above, and a copy will be sent to any shareholder upon written request.

Item 11. Executive Compensation

Information about director and executive compensation is incorporated by reference from the discussion in our 2023 proxy statement under the headings "Directors' compensation" and "Executive compensation."

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information about:

- security ownership of certain beneficial owners and management and
- aggregate information regarding the Company's equity compensation plan

is incorporated by reference from the discussion in our 2023 proxy statement under "Beneficial ownership of Spire stock."

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information about:

- our policy and procedures for related party transactions and
- the independence of our directors

is included in our 2023 proxy statement under "Governance" and is incorporated by reference. There were no related party transactions in fiscal 2023.

Item 14. Principal Accounting Fees and Services

Information about fees paid to our independent registered public accountant and our policy for pre-approval of services provided by our independent registered public accountant is incorporated by reference from our 2023 proxy statement under "Fees of independent registered public accountant" and "Governance," respectively.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) (1) Financial Statements

See Item 8, Financial Statements and Supplementary Data, filed herewith, for a list of financial statements.

(2) Financial Statement Schedules

Schedules have been omitted because they are not applicable, related significance tests were not met, or the required data has been included in the financial statements or notes to financial statements.

(3) Exhibits

Exhibit Number	Description
2.01*	Agreement and Plan of Merger and Reorganization; filed as Appendix A to proxy statement/prospectus contained in the Company's Registration Statement on Form S-4 filed October 27, 2000, No. 333-48794.
3.01*	Articles of Incorporation of Spire Inc., as amended, effective as of April 28, 2016; filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on May 3, 2016.
3.02*	Amended Bylaws of Spire Inc., effective as of July 27, 2023; filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on July 28, 2023.
3.03*	Spire Missouri Inc.'s Amended Articles of Incorporation, as amended, effective August 30, 2017; filed as Exhibit 3.1 to Spire Missouri's Current Report on Form 8-K on September 1, 2017.
3.04*	Amended Bylaws of Spire Missouri Inc., effective as of March 26, 2020; filed as Exhibit 3.1 to Spire Missouri's Current Report on Form 8-K on March 27, 2020.
3.05*	Articles of Amendment of the Articles of Incorporation of Spire Alabama Inc., dated September 1, 2017; filed as Exhibit 3.3 to Spire Alabama's Current Report on Form 8-K filed September 1, 2017.
3.06*	Amended Bylaws of Spire Alabama Inc. effective March 26, 2020; filed as Exhibit 3.2 to Spire Alabama's Current Report on Form 8-K on March 27, 2020.
3.07*	Certificate of Designations with respect to the Series A Preferred Stock, dated May 16, 2019; filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.01*3	Mortgage and Deed of Trust, dated as of February 1, 1945, between Laclede Gas Company and Mississippi Valley Trust Company; filed as Exhibit 4.10 to the Company's Registration Statement on Form S-3 (No. 333-264799) on May 9, 2022.
4.02*3	Fourteenth Supplemental Indenture, dated as of October 26, 1976, between Laclede Gas and Mercantile Trust Company National Association; filed as Exhibit 4.11 to the Company's Registration Statement on Form S-3 (No. 333-264799) on May 9, 2022.
4.03*†3	Laclede Gas Board of Directors' Resolution dated August 28, 1986 which generally provides that the Board may delegate its authority in the adoption of certain employee benefit plan amendments to certain designated Executive Officers; filed as Exhibit 4.12 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1991.
4.04*†2	Indenture dated as of November 1, 1993, between Alagasco and NationsBank of Georgia, National Association, Trustee, ("Alagasco 1993 Indenture"); filed as Exhibit 4(k) to Alagasco's Registration Statement on Form S-3 (Registration No. 33-70466).
4.05*3	Twenty-Fourth Supplemental Indenture, dated as of June 1, 1999, between Laclede Gas and State Street Bank and Trust Company of Missouri, N.A., as trustee; filed as Exhibit 4.01 to Laclede Gas' Current Report on Form 8-K on June 4, 1999.
4.06*3	Twenty-Fifth Supplemental Indenture, dated as of September 15, 2000, between Laclede Gas and State Street Bank and Trust Company of Missouri, as trustee; filed as Exhibit 4.01 to Laclede Gas' Current Report on Form 8-K on September 29, 2000.
4.07*3	Laclede Gas' Board of Directors' Resolutions dated March 27, 2003, updating authority delegated pursuant to August 28, 1986 Laclede Gas resolutions; filed as Exhibit 4.19(a) to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 2003.

Exhibit Number	Description
4.08*3	Twenty-Eighth Supplemental Indenture, dated as of April 15, 2004, between Laclede Gas and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.02 to Laclede Gas' Current Report on Form 8-K on April 28, 2004.
4.09*3	Twenty-Ninth Supplemental Indenture, dated as of June 1, 2006, between Laclede Gas and UMB Bank and Trust, N.A., as trustee; filed as Exhibit 4.1 to Laclede Gas' Current Report on Form 8-K on June 9, 2006.
4.10*2	Officers' Certificate, dated January 16, 2007, pursuant to Section 301 of the Alagasco 1993 Indenture setting forth the terms of the 5.90 percent Notes due January 15, 2037; filed as Exhibit 4.2 to Alagasco's Current Report on Form 8-K on January 16, 2007.
4.11*3	Thirty-First Supplemental Indenture, dated as of March 15, 2013, between Laclede Gas and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to Laclede Gas' Form 10-Q for the quarter ended March 31, 2013.
4.12*3	Thirty-Second Supplemental Indenture, dated as of August 13, 2013, between Laclede Gas and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to Laclede Gas' Current Report on Form 8-K on August 13, 2013.
4.13*	Indenture, dated as of August 19, 2014, between the Company and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on August 19, 2014.
4.14*	First Supplemental Indenture, dated as of August 19, 2014, between the Company and UMB Bank & Trust, N.A., as trustee (including Form of Floating Rate Senior Notes due 2017, Form of 2.55% Senior Notes due 2019 and Form of 4.70% Senior Notes due 2044); filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on August 19, 2014.
4.15*2	Master Note Purchase Agreement, dated as of June 5, 2015, among Alagasco and certain institutional purchasers; filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015.
4.16*	Second Supplemental Indenture, dated as of February 27, 2017, between Spire Inc. and UMB Bank & Trust, N.A., as Trustee (including Form of 3.543% Senior Notes due 2024); filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on February 27, 2017.
4.17*	Master Note Purchase Agreement dated June 20, 2016, among Spire Inc. and certain institutional purchasers party thereto; filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.
4.18*	First Supplement to Master Note Purchase Agreement dated as of March 15, 2017, among Spire Inc. and certain institutional purchasers party thereto; filed as Exhibit 4.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.
4.19*3	Bond Purchase Agreement dated March 20, 2017, among Laclede Gas Company and certain institutional purchasers party thereto; filed as Exhibit 4.4 to the Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.
4.20*	First Supplement to Master Note Purchase Agreement, dated as of December 1, 2017, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2017.
4.21*	Second Supplement to Master Note Purchase Agreement, dated as of January 15, 2019, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.1 to Spire Alabama's Current Report on Form 8-K on January 22, 2019.
4.22*	Deposit Agreement, dated as of May 21, 2019, among the Company, Computershare Inc. and Computershare Trust Company, N.A., acting jointly as depositary, and the holders from time to time of the depositary receipts described therein; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.23*	Form of depositary receipt representing the Depositary Shares; filed as Exhibit A to Exhibit 4.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.24*	Form of Certificate representing the Series A Preferred Stock; filed as Exhibit A to Exhibit 3.1 to the Company's Current Report on Form 8-K on May 21, 2019.
4.25*	Thirty-Third Supplemental Indenture, dated as of September 15, 2017, between Spire Missouri Inc. and UMB Bank & Trust, N.A., as trustee, filed as Exhibit 4.28 to Spire Missouri's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.
4.26*	Thirty-Fourth Supplemental Indenture, dated as of November 12, 2019, between Spire Missouri Inc. and UMB Bank & Trust, N.A., as trustee, filed as Exhibit 4.1 to Spire Missouri's Quarterly Report on Form 10-Q for the quarter ended December 31, 2019.

Exhibit Number	Description
4.27*	Third Supplement to Master Note Purchase Agreement, dated as of December 2, 2019, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.1 to Spire Alabama's Current Report on Form 8-K on December 4, 2019.
4.28*	Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934; filed as Exhibit 4.29 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.
4.29*	Fourth Supplement to Master Note Purchase Agreement, dated as of December 15, 2020, between Spire Alabama Inc. and certain institutional investors; filed as Exhibit 4.1 to Spire Alabama's Current Report on Form 8-K on December 18, 2020.
4.30*	Indenture (For Unsecured Debt Securities), dated as of February 16, 2021, between the Company and U.S. Bank National Association, as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on February 16, 2021.
4.31*	First Supplemental Indenture, dated as of February 16, 2021, between the Company and U.S. Bank National Association, as trustee; filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on February 16, 2021.
4.32*	Form of Series A 0.75% Remarketable Senior Note due 2026; included in Exhibit 4.2 to the Company's Current Report on Form 8-K on February 16, 2021.
4.33*	Purchase Contract and Pledge Agreement, dated as of February 16, 2021, between the Company and U.S. Bank National Association, as purchase contract agent, collateral agent, custodial agent and securities intermediary; filed as Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.34*	Form of Remarketing Agreement; included in Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.35*	Form of Corporate Unit; included in Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.36*	Form of Treasury Unit; included in Exhibit 4.4 to the Company's Current Report on Form 8-K on February 16, 2021.
4.37*	Thirty-Fifth Supplemental Indenture, dated as of May 20, 2021, between Spire Missouri and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on May 20, 2021.
4.38*	Form of 3.300% Series First Mortgage Bonds due 2051; included in Exhibit 4.1 to the Company's Current Report on Form 8-K on May 20, 2021.
4.39*	Thirty-Sixth Supplemental Indenture, dated as of December 7, 2021, between Spire Missouri and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on December 7, 2021.
4.40*	Form of First Mortgage Bonds, Floating Rate Series due 2024; included in Exhibit 4.1 to the Company's Current Report on Form 8-K on December 7, 2021.
4.41*	Thirty-Seventh Supplemental Indenture, dated as of May 2, 2022, between Spire Missouri and UMB Bank & Trust, N.A., as trustee; filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022.
4.42*	Fifth Supplement to Master Note Purchase Agreement, dated as of October 13, 2022, between Spire Alabama Inc. and certain institutional investors, filed as Exhibit 4.1 to the Company's and Spire Alabama's Current Report on Form 8-K on October 19, 2022.
4.43*	Thirty-Eighth Supplemental Indenture, dated as of February 13, 2023 between Spire Missouri and Regions Bank, as trustee (including Form of 4.800% Series First Mortgage Bond due 2033); filed as Exhibit 4.1 to the Company's and Spire Missouri's Current Report on Form 8-K on February 13, 2023.
4.44*	Second Supplement to Master Note Purchase Agreement, dated as of March 7, 2023, between Spire Inc. and certain institutional investors (including Form of 5.80% Series 2023 Senior Note, Tranche D, due March 15, 2033); filed as Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023.

Exhibit Number	Description
10.01*†3	**Form of Indemnification Agreement between Laclede Gas and its Directors and Officers; filed as Exhibit 10.13 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1990.**
10.02*†3	**Salient Features of Laclede Gas' Deferred Income Plan for Directors and Selected Executives, including amendments adopted by the Board of Directors on July 26, 1990; filed as Exhibit 10.12 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1991.**
10.03*†3	**Amendment to Laclede Gas' Deferred Income Plan for Directors and Selected Executives, adopted by the Board of Directors on August 27, 1992; filed as Exhibit 10.12a to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 1992.**
10.04*3	**Amendment and Restatement of Retirement Plan for Non-Employee Directors of Laclede Gas as of November 1, 2002; filed as Exhibit 10.08c to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 2002.**
10.05*3	**Amendment to Terms of Retirement Plan for Non-Employee Directors of Laclede Gas as of October 1, 2004; filed as Exhibit 10.2 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended June 30, 2004.**
10.06*	**Form of Non-Qualified Stock Option Award Agreement with Mandatory Retirement Provisions; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on November 5, 2004.**
10.07*	**Form of Non-Qualified Stock Option Award Agreement without Mandatory Retirement Provisions; filed as Exhibit 10.2 to the Company's Current Report on Form 8-K on November 5, 2004.**
10.08*3	Automated Meter Reading Services Agreement with Amendment dated as of July 1, 2017, between Landis+Gyr Technology, Inc., formerly known as Cellnet Technology, Inc., and Laclede Gas Company; filed as Exhibit 10.08 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2020.
10.09*3	**Restated Laclede Gas Supplemental Retirement Benefit Plan, as amended and restated as of January 1, 2005; filed as Exhibit 10.06 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.10*3	**Laclede Gas Supplemental Retirement Benefit Plan II, effective as of January 1, 2005; filed as Exhibit 10.7 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.11*3	**Salient Features of Laclede Gas' Deferred Income Plan II for Directors and Selected Executives (as amended and restated effective as of January 1, 2005); filed as Exhibit 10.1 to Laclede Gas' Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.12*	**Salient Features of the Company's Deferred Income Plan for Directors and Selected Executives (effective as of January 1, 2005); filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.13*	**The Company's Form of Restricted Stock Award Agreement; filed as Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.14*3	**The Laclede Group Management Continuity Protection Plan, effective as of January 1, 2005; filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.15*	**Form of Management Continuity Protection Agreement; filed as Exhibit 10.5a to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008.**
10.16*3	**The Laclede Group 2011 Management Continuity Protection Plan; filed as Exhibit 10.25 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010.**
10.17*	**Form of Agreement under the Company's 2011 Management Continuity Protection Plan; filed as Exhibit 10.25a to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010.**
10.18*	**The Company's Form of Performance Contingent Restricted Stock Unit Award Agreement; filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2012.**
10.19*3	**Laclede Gas Cash Balance Supplemental Retirement Benefit Plan, effective as of January 1, 2009; filed as Exhibit 10.19 to Laclede Gas' Annual Report on Form 10-K for the fiscal year ended September 30, 2012.**

Exhibit Number	Description
10.20*	Lease Agreement, dated January 21, 2014, between the Company, as Tenant, and Market 700, LLC, as Landlord; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on January 27, 2014.
10.21*	**The Company's Deferred Income Plan for Directors and Selected Executives, as Amended and Restated as of January 1, 2015; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on November 4, 2014.**
10.22*[1]	**The Laclede Group 2015 Equity Incentive Plan; filed as the Appendix to the Company's Definitive Proxy Statement on Form DEF 14A on December 19, 2014.**
10.23*[1]	**The Laclede Group, Inc. Annual Incentive Plan, as Amended; filed as Appendix to the Company's Definitive Proxy Statement on Schedule 14A on December 18, 2015.**
10.24*[2] [3]	Loan Agreement, dated December 14, 2016, by and among Spire Inc., Alabama Gas Corporation, Laclede Gas Company, and the several banks party thereto, including Wells Fargo Bank, National Association, as Administrative Agent; JPMorgan Chase Bank, N.A. and U.S. Bank National Association, as Co-Syndication Agents; Wells Fargo Securities, LLC, JPMorgan Chase Bank, N.A., and U.S. Bank National Association, as Joint Lead Arrangers and Joint Bookrunners; and Bank of America, N.A., Credit Suisse AG, Cayman Islands Branch, Morgan Stanley Bank, N.A., Regions Bank, Royal Bank of Canada, and TD Bank, N.A., as Documentation Agents; filed as Exhibit 99.1 to the Company's Current Report on Form 8-K on December 16, 2016.
10.25*	Commercial Paper Dealer Agreement, dated December 21, 2016, between Spire Inc. and Wells Fargo Securities, LLC; filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2016.
10.26*	Commercial Paper Dealer Agreement, dated December 21, 2016, between Spire Inc. and Credit Suisse Securities (USA) LLC; filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2016.
10.27*	**Spire Inc. Executive Severance Plan; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on May 2, 2017.**
10.28*[1]	**Amendment 1 to The Laclede Group Annual Incentive Plan effective January 1, 2018; filed as Exhibit 10.53 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.29*[1]	**Amendment 1 to The Laclede Group 2015 Equity Incentive Plan effective January 1, 2018; filed as Exhibit 10.54 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.30*	**Amendment 1 to Spire Inc. Executive Severance Plan effective January 1, 2018; filed as Exhibit 10.55 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.31*[1]	**Amendment 1 to The Laclede Group 2011 Management Continuity Protection Plan effective January 18, 2018; filed as Exhibit 10.56 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.**
10.32*	First Amendment to Loan Agreement, dated as of October 31, 2018, by and among Spire Inc., a Missouri corporation, Spire Alabama Inc. (formerly Alabama Gas Corporation), an Alabama corporation, and Spire Missouri Inc. (formerly Laclede Gas Company), a Missouri corporation, the Banks from time to time party thereto, and Wells Fargo Bank, National Association, as Administrative Agent for the Banks; filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on November 6, 2018.
10.33*	**Spire Deferred Income Plan, Amended and Restated Effective January 1, 2019; filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.**
10.34*	**The Company's Form of Restricted Stock Award Agreement; filed as Exhibit 10.38 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.**
10.35*	**The Company's Form of Restricted Stock Unit Award Agreement; filed as Exhibit 10.39 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.**
10.36*	**The Company's Form of Performance Contingent Stock Unit Award Agreement; filed as Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.**

Exhibit Number	Description
10.37*	Amended and Restated Loan Agreement, dated July 22, 2022, among Spire Inc., Spire Missouri Inc., Spire Alabama Inc., Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto as Banks; filed as Exhibit 99.1 to the Company's Current Report on Form 8-K on July 28, 2022.
10.38*	Equity Distribution Agreement of the Company, dated as of February 6, 2019; filed as Exhibit 1.1 to the Company's Current Report on Form 8-K on February 6, 2019.
10.39*	Letter Agreement to the Equity Distribution Agreement of the Company, dated as of May 14, 2019; filed as Exhibit 1.1 to the Company's Current Report on Form 8-K on May 14, 2019.
10.40*	Second Letter Agreement to the Equity Distribution Agreement of the Company, dated as of May 10, 2022, dated as of May 9, 2022; filed as Exhibit 1.1 to the Company's Current Report on Form 8-K on May 10, 2022.
21	Subsidiaries of the Company.
23.1	Consent of Independent Registered Public Accounting Firm of the Company.
23.2	Consent of Independent Registered Public Accounting Firm of Spire Missouri Inc.
23.3	Consent of Independent Registered Public Accounting Firm of Spire Alabama Inc.
31.1	Certifications under Rule 13a-14(a) of the CEO and CFO of the Company.
31.2	Certifications under Rule 13a-14(a) of the CEO and CFO of Spire Missouri Inc.
31.3	Certifications under Rule 13a-14(a) of the CEO and CFO of Spire Alabama Inc.
32.1	Section 1350 Certifications under Rule 13a-14(b) of the CEO and CFO of the Company.
32.2	Section 1350 Certifications under Rule 13a-14(b) of the CEO and CFO of Spire Missouri Inc.
32.3	Section 1350 Certifications under Rule 13a-14(b) of the CEO and CFO of Spire Alabama Inc.
97	Spire Inc. Clawback Policy
101	Interactive Data Files including the following information from the Annual Report on Form 10-K for the fiscal year ended September 30, 2023, formatted in inline extensible business reporting language ("Inline XBRL"): (i) Cover Page Interactive Data and (ii) the Financial Statements listed on the first page of Item 8.
104	Cover Page Interactive Data File (formatted in Inline XBRL and included in the Interactive Data Files submitted under Exhibit 101).

* Incorporated herein by reference and made a part hereof. Spire Inc. File No. 1-16681. Spire Missouri Inc. File No. 1-1822. Spire Alabama Inc. File No. 2-38960.

† Paper exhibit.

1 The Laclede Group, Inc. changed its name to Spire Inc. effective April 28, 2016.

2 Alabama Gas Corporation ("Alagasco") changed its name to Spire Alabama Inc. effective September 1, 2017.

3 Laclede Gas Company changed its name to Spire Missouri Inc. effective August 30, 2017.

Bold items reflect management contracts or compensatory plans or arrangements.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Spire Inc.

Date November 16, 2023

By /s/ Steven P. Rasche
Steven P. Rasche
Executive Vice President and Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date	Signature	Title
November 16, 2023	/s/ Steven L. Lindsey Steven L. Lindsey	Director, President and Chief Executive Officer (Principal Executive Officer)
November 16, 2023	/s/ Steven P. Rasche Steven P. Rasche	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)
November 16, 2023	/s/ Edward L. Glotzbach Edward L. Glotzbach	Chairman of the Board
November 16, 2023	/s/ Mark A. Borer Mark A. Borer	Director
November 16, 2023	/s/ Vincent J. Ferrari Vincent J. Ferrari	Director
November 16, 2023	/s/ Maria V. Fogarty Maria V. Fogarty	Director
November 16, 2023	/s/ Carrie J. Hightman Carrie J. Hightman	Director
November 16, 2023	/s/ Rob L. Jones Rob L. Jones	Director
November 16, 2023	/s/ Paul D. Koonce Paul D. Koonce	Director
November 16, 2023	/s/ Brenda D. Newberry Brenda D. Newberry	Director
November 16, 2023	/s/ Stephen S. Schwartz Stephen S. Schwartz	Director
November 16, 2023	/s/ Suzanne Sitherwood Suzanne Sitherwood	Director
November 16, 2023	/s/ John P. Stupp Jr. John P. Stupp Jr.	Director

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Spire Missouri Inc.

Date November 16, 2023

By /s/ Timothy W. Krick
Timothy W. Krick
Controller and Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date	Signature	Title
November 16, 2023	/s/ Steven L. Lindsey Steven L. Lindsey	Director and Chief Executive Officer (Principal Executive Officer)
November 16, 2023	/s/ Adam W. Woodard Adam W. Woodard	Chief Financial Officer and Treasurer (Principal Financial Officer)
November 16, 2023	/s/ Timothy W. Krick Timothy W. Krick	Controller and Chief Accounting Officer (Principal Accounting Officer)
November 16, 2023	/s/ Suzanne Sitherwood Suzanne Sitherwood	Chairman of the Board
November 16, 2023	/s/ Matthew J. Aplington Matthew J. Aplington	Director
November 16, 2023	/s/ Stephen M. Mills Stephen M. Mills	Director and President
November 16, 2023	/s/ Steven P. Rasche Steven P. Rasche	Director

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Spire Alabama Inc.

Date November 16, 2023

By /s/ Timothy W. Krick
Timothy W. Krick
Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date	Signature	Title
November 16, 2023	/s/ Steven L. Lindsey Steven L. Lindsey	Director and Chief Executive Officer (Principal Executive Officer)
November 16, 2023	/s/ Adam W. Woodard Adam W. Woodard	Chief Financial Officer and Treasurer (Principal Financial Officer)
November 16, 2023	/s/ Timothy W. Krick Timothy W. Krick	Chief Accounting Officer (Principal Accounting Officer)
November 16, 2023	/s/ Suzanne Sitherwood Suzanne Sitherwood	Chairman of the Board
November 16, 2023	/s/ Matthew J. Aplington Matthew J. Aplington	Director
November 16, 2023	/s/ Joseph B. Hampton Joseph B. Hampton	Director and President
November 16, 2023	/s/ Steven P. Rasche Steven P. Rasche	Director

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Quote or Search

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Income Investor

Stocks Under $10

Value Investor

Top 10 Stocks

\N Other Services\N

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n
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5/14/25

Current Quarter	**2.92**
EPS Last Quarter	**2.23**
Last EPS Surprise	**1.36%**
ABR	**1.88**

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Earnings ESP \n
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3.77%

Current Year	**7.18**
Next Year	**7.74**
EPS (TTM)	**7.02**
P/E (F1)	**21.24**

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Next 5 Years	7.10	6.40	NA
PE	21.24	12.50	20.18
PEG Ratio	2.99	1.95	NA

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\n **Research for ATO**\n \n \n \n
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\n Analyst Snapshot \n

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Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	1.90B	977.86M	5.20B	5.62
Low Estimate	1.87B	941.91M	4.47B	4.83
Year ago Sales	1.65B	701.55M	4.17B	4.85
Year over Year Growth Est.	14.48%	36.82%	16.47%	9.18

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.03	0.02	0.03	0.23	0.08
Surprise	1.36%	2.38%	2.86%	8.78%	3.85%

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Annual Estimates By Analyst

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Top 10 Stocks

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/14/25
Current Quarter	0.86
EPS Last Quarter	0.49
Last EPS Surprise	4.26%
ABR	1.13

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	1.88
Next Year	2.02
EPS (TTM)	1.75
P/E (F1)	21.29

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Next 5 Years	8.20	8.30	NA
PE	21.29	23.20	20.18
PEG Ratio	2.60	2.80	NA

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\n **Research for NI**\n \n \n \n
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\n Analyst Snapshot \n

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Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	1.84B	1.19B	6.21B	6.55
Low Estimate	1.84B	1.19B	5.91B	6.23
Year ago Sales	1.71B	1.08B	5.46B	6.06
Year over Year Growth Est.	7.65%	10.09%	11.05%	5.47

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.02	0.06	0.06	0.04	0.05
Surprise	4.26%	42.86%	40.00%	4.94%	23.02%

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Annual Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/5/25
Current Quarter	2.09
EPS Last Quarter	1.41
Last EPS Surprise	-0.70%
ABR	2.20

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Earnings ESP \n \n \n \n \n \n \n	-6.22%
Current Year	2.83
Next Year	3.03
EPS (TTM)	2.32
P/E (F1)	15.09

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Next 5 Years	NA	6.40	NA
PE	15.09	12.50	20.18
PEG Ratio	NA	1.95	NA

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\n **Research for NWN**\n \n \n \n
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\n Snapshot \n

Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	498.00M	246.00M	1.29B	1.33
Low Estimate	458.34M	223.46M	1.22B	1.28
Year ago Sales	433.47M	211.71M	1.15B	1.26
Year over Year Growth Est.	10.31%	10.87%	8.87%	3.70

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	-0.01	0.08	0.05	-0.13	0.00
Surprise	-0.70%	10.13%	41.67%	-7.14%	10.99%

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Annual Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/5/25
Current Quarter	1.86
EPS Last Quarter	1.34
Last EPS Surprise	0.75%
ABR	2.80

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Earnings ESP \n \n \n \n \n \n \n	1.26%
Current Year	4.26
Next Year	4.43
EPS (TTM)	3.91
P/E (F1)	17.83

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Next 5 Years	4.70	6.40	NA
PE	17.83	12.50	20.18
PEG Ratio	3.82	1.95	NA

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\n **Research for OGS**\n \n \n \n
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\n Analyst Snapshot \n

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Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	831.45M	437.44M	2.54B	2.60
Low Estimate	775.60M	376.74M	2.16B	2.23
Year ago Sales	758.32M	354.14M	2.08B	2.34
Year over Year Growth Est.	6.03%	15.25%	12.40%	4.53

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.01	-0.07	-0.01	-0.03	-0.03
Surprise	0.75%	-17.07%	-2.04%	-1.69%	-5.01%

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Quarterly Estimates By Analyst

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Annual Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/14/25
Current Quarter	1.66
EPS Last Quarter	1.39
Last EPS Surprise	20.87%
ABR	2.57

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	3.70
Next Year	4.22
EPS (TTM)	3.16
P/E (F1)	19.74

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Next 5 Years	6.60	6.40	NA
PE	19.74	12.50	20.18
PEG Ratio	2.99	1.95	NA

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\n **Research for SWX**\n \n \n \n
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\n Analyst Snapshot \n

Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	1.70B	1.21B	5.25B	5.48
Low Estimate	1.70B	1.21B	5.25B	5.48
Year ago Sales	1.58B	1.18B	5.11B	5.25
Year over Year Growth Est.	7.25%	2.57%	2.78%	4.20

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.24	0.02	-0.12	-0.33	-0.05
Surprise	20.87%	28.57%	-27.91%	-19.41%	0.53%

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Annual Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/7/25
Current Quarter	3.70
EPS Last Quarter	1.34
Last EPS Surprise	-5.63%
ABR	2.27

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Earnings ESP \n \n \n \n \n \n \n	-1.08%
Current Year	4.50
Next Year	5.00
EPS (TTM)	4.11
P/E (F1)	17.39

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Next 5 Years	6.50	6.40	NA
PE	17.39	12.50	20.18
PEG Ratio	2.66	1.95	NA

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\n **Research for SR**\n \n \n \n
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\n Analyst Snapshot \n

Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	1.24B	451.40M	2.84B	3.06
Low Estimate	881.14M	341.13M	2.18B	2.18
Year ago Sales	1.13B	414.10M	2.59B	2.54
Year over Year Growth Est.	-2.97%	-0.43%	-2.22%	3.77

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	-0.08	-0.02	0.04	-0.41	-0.12
Surprise	-5.63%	-3.85%	22.22%	-10.62%	0.53%

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Quarterly Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/6/25
Current Quarter	0.73
EPS Last Quarter	0.69
Last EPS Surprise	15.00%
ABR	3.25

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	3.34
Next Year	3.53
EPS (TTM)	3.11
P/E (F1)	23.28

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Next 5 Years	1.80	12.90	NA
PE	23.28	22.20	20.18
PEG Ratio	13.31	1.72	NA

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\n **Research for AWR**\n \n \n \n
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\n Analyst Snapshot \n

Price and EPS Surprise Chart

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Sales Estimates

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High Estimate	142.00M	169.00M	621.00M	660.00
Low Estimate	142.00M	169.00M	621.00M	660.00
Year ago Sales	135.25M	155.33M	595.46M	621.00
Year over Year Growth Est.	4.99%	8.80%	4.29%	6.28

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.09	-0.04	0.01	0.03	0.02
Surprise	15.00%	-4.04%	1.19%	5.08%	4.31%

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Annual Estimates By Analyst

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Stocks Under $10

Value Investor

Top 10 Stocks

\N Other Services\N

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	4/24/25
Current Quarter	0.17
EPS Last Quarter	0.33
Last EPS Surprise	120.00%
ABR	1.40

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	2.32
Next Year	2.51
EPS (TTM)	3.27
P/E (F1)	20.84

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Next 5 Years	42.40	12.90	NA
PE	20.84	22.20	20.18
PEG Ratio	0.49	1.72	NA

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\n **Research for CWT**\n \n \n \n
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\n Analyst Snapshot \n

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Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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High Estimate	182.00M	227.00M	945.00M	1.01
Low Estimate	178.26M	223.09M	926.08M	962.38
Year ago Sales	270.75M	244.30M	1.04B	935.54
Year over Year Growth Est.	-33.47%	-7.88%	-9.77%	5.20

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.18	-0.06	0.31	1.00	0.36
Surprise	120.00%	-5.50%	79.49%	476.19%	167.55%

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Quarterly Estimates By Analyst

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Annual Estimates By Analyst

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BBB Rating: A+
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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/14/25
Current Quarter	0.50
EPS Last Quarter	0.49
Last EPS Surprise	36.11%
ABR	2.00

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	2.50
Next Year	2.63
EPS (TTM)	2.47
P/E (F1)	25.39

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Next 5 Years	14.00	12.90	NA
PE	25.39	22.20	20.18
PEG Ratio	1.82	1.72	NA

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\n **Research for MSEX**\n \n \n \n
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\n Snapshot \n

Price and EPS Surprise Chart

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Interactive Chart | Fundamental Chart
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Sales Estimates

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Low Estimate	42.00M	52.00M	199.00M	212.00
Year ago Sales	40.52M	49.15M	191.88M	199.00
Year over Year Growth Est.	3.65%	5.80%	3.71%	6.53

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Surprise	36.11%	19.40%	-7.81%	31.11%	19.70%

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Annual Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	4/24/25
Current Quarter	0.30
EPS Last Quarter	0.74
Last EPS Surprise	34.55%
ABR	1.80

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	2.95
Next Year	3.10
EPS (TTM)	2.94
P/E (F1)	18.18

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Next 5 Years	4.50	12.90	NA
PE	18.18	22.20	20.18
PEG Ratio	4.02	1.72	NA

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\n **Research for SJW**\n \n \n \n
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\n \n Snapshot \n

Price and EPS Surprise Chart

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Sales Estimates

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High Estimate	156.13M	184.00M	768.00M	791.00
Low Estimate	155.00M	183.71M	752.05M	768.05
Year ago Sales	149.38M	176.17M	748.44M	760.03
Year over Year Growth Est.	4.14%	4.36%	1.55%	2.57

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Earnings Estimates

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Magnitude - Consensus Estimate Trend \N

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Dif erence	0.19	0.00	0.09	0.01	0.07
Surprise	34.55%	0.00%	15.79%	2.86%	13.30%

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Quarterly Estimates By Analyst

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Annual Estimates By Analyst

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Detailed Estimates

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EPS Estimates

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Exp Earnings Date\n \n\n \n	5/1/25
Current Quarter	0.80
EPS Last Quarter	0.67
Last EPS Surprise	1.52%
ABR	1.40

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Earnings ESP \n \n \n \n \n \n \n	0.00%
Current Year	2.12
Next Year	2.24
EPS (TTM)	1.93
P/E (F1)	18.56

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Next 5 Years	6.60	12.90	NA
PE	18.56	22.20	20.18
PEG Ratio	2.82	1.72	NA

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\n **Research for WTRG**\n \n \n \n
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\n Analyst Snapshot \n

Price and EPS Surprise Chart

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Sales Estimates

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Low Estimate	690.00M	469.00M	2.24B	2.38
Year ago Sales	612.07M	434.41M	2.09B	2.29
Year over Year Growth Est.	13.47%	7.98%	10.00%	6.21

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Earnings Estimates

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Surprise	1.52%	8.70%	-6.67%	-3.95%	-0.10%

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Blue Chip Financial Forecasts®

Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them

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Stagflation-lite Poses a Threat to Financial Markets

At the end of last year, financial markets generally thought that the near-term US economic outlook was bright. The Fed appeared to be on the way to achieving the historically elusive "soft landing" where it reins in inflation without a meaningful rise in unemployment. Moreover, the incoming Trump administration, accompanied by Republican majorities in both houses of Congress, engendered expectations of a growth-enhancing macroeconomic policy environment—less government, lower taxes and reduced regulation. But how quickly things can change. Over the past couple of months, policy uncertainty has skyrocketed, not just in the US but across the globe, significantly increasing financial market volatility.

Stagflation-lite. The Trump Administration's on again, off again tariff increases threaten to boost already sticky inflation. And the threat of a trade war, coupled with imposed restraints on immigration and the possibility of significantly lower federal government spending, have generated fears of an economic slowdown. In short, the specter of stagflation (more accurately, stagflation-lite—a period of elevated inflation accompanied by below-trend GDP growth) is now concerning financial markets. Indeed, the Blue Chip Financial Forecasts (BCFF) consensus estimates a 48% probability that the US economy will experience "stagflation-lite" during the next 12 months.

Rising inflation expectations. The anxiety over the inflation outlook is being reflected in rising longer-term US interest rates. After having fallen since mid-January, the yield on the benchmark 10-year Treasury note has generally risen since early March. Survey-based inflation expectations continue to surge. After jumping from 4.2% in January to 4.7% in February, the Conference Board's year-ahead inflation expectations leapt to 5.1% in March. Similarly, year-ahead inflation expectations in the University of Michigan survey have risen markedly, from 3.3% in January to 4.3% in February and 5.0% in March. Even with rising inflation expectations, the BCFF consensus expects that the recent rebound in longer-term yields has essentially run its course, most likely due to slower growth. It looks for little change in longer-term rates from current levels over the remainder of this year.

Increased tariffs are seen as a primary factor behind the worsening inflation outlook. The FOMC raised its 2025 inflation outlook markedly in the Summary of Economic Projections released after the mid-March FOMC meeting. In the ensuing press conference, Fed Chair Powell noted repeatedly that the near-term inflation outlook had been boosted by the increase in tariffs. Similarly, the BCFF consensus estimates a 47% probability of a meaningful acceleration in inflation over the next six months, up from 40% last month with increased tariffs a primary cause. Ninety-six percent of respondents think that increased tariffs will boost inflation significantly although only 34% think that the impact on inflation will be lasting. The other 62% think that increased tariffs will provide only a one-time boost to prices and inflation. Still, with inflation expectations already on the rise, there is a real risk that even a temporary boost to inflation could raise expectations further and thereby provide a more extended fillip to inflation.

Rising observed inflation. The March flash PMI report provided some empirical support for a tariff-driven increase in prices. It showed that cost pressures have intensified for both goods and services. Input costs increased at the fastest pace in 23 months, surging particularly in manufacturing (where the rate of inflation hit a 31-month high). The primary factor given for the increased pressure on input prices was higher tariffs. Furthermore, higher input costs are feeding through into a faster rise in manufacturers' selling prices, which rose in March at the fastest rate in 25 months. Also, PCE price inflation has accelerated recently to worryingly high rates. In January and February, the headline PCE price index increased at a 3.6% annual rate from Q4 versus a 2.4% quarterly gain in Q4. Similarly, the core PCE price index rose 3.2% annualized in January/February versus 2.6% in Q4.

The BCFF consensus outlook for economic growth and inflation reflects the stagflation risks the economy currently faces. The probability of the economy falling into recession over the next 12 months increased by 9%-points in this survey to a still relatively low 33%, but this is the highest estimated probability since last April. The BCFF panel was not asked for a Q1 GDP forecast in this month's survey, but gauging from the downgrade to its Q2 forecast, the forecast for Q1 GDP growth has likely been lowered meaningfully from last month's 2.3%. The consensus now anticipates that GDP growth will drop to 1.6% in Q2 and then be followed by an extended period of below-trend GDP growth, averaging just 1.7% over the last three quarters of this year, down from 1.9% expected in last month's survey. Accordingly, unemployment is expected to rise with the unemployment rate increasing to 4.4% by year-end.

For inflation, the consensus had already raised its outlook for Q1 in last month's survey. Moreover, in this month's survey, the consensus raised its outlook markedly for the rest of this year. It now looks for PCE price inflation of 2.8% in Q2, 2.7% on Q3, and 2.6% in Q4 up from 2.6%, 2.5% and 2.5%, respectively, in last month's survey and for inflation to remain above the Fed's 2% target over the entire six-quarter forecast period.

Sticky interest rates. With inflation sticky and expected to be boosted further by tariff increases, the BCFF consensus continues to look for a more cautious and patient Fed on interest rates. Only two respondents expect a cut in the fed funds rate (FFR) at the May FOMC meeting while 41% expect the next cut in June with 51% not looking for the next cut to occur until later than June. There is a unanimous view that the next cut will be only 25bps. The consensus expects 49bps of cuts in the FFR in 2025, about the same as it expected last month.

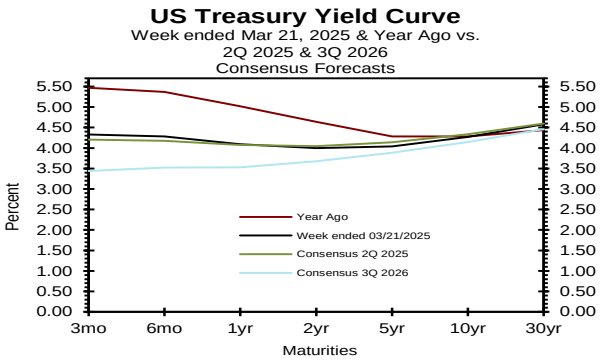
Shorter-term market interest rates were little changed in March, reflecting the Fed having refrained from changing the FFR at both its late January and mid-March FOMC meetings. Going forward, the BCFF consensus looks for shorter-term rates to continue to follow the Fed. For example, it looks for roughly 45bps of decline in the 3-month Treasury bill rate from current levels over the rest of this year.

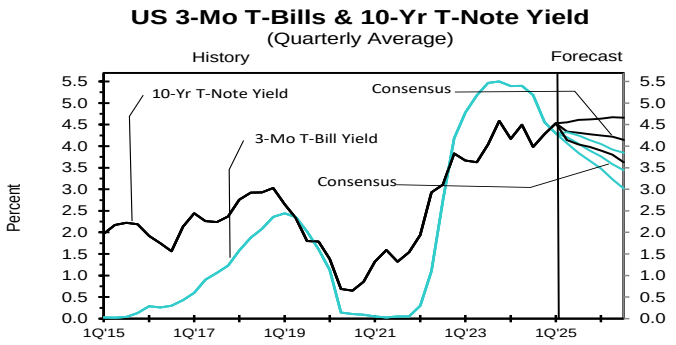
Sandy Batten (Haver Analytics, New York, NY)

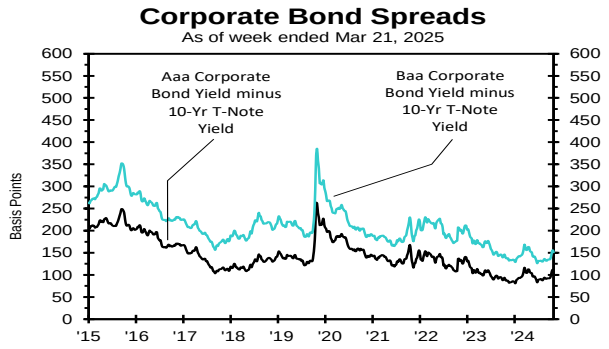
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

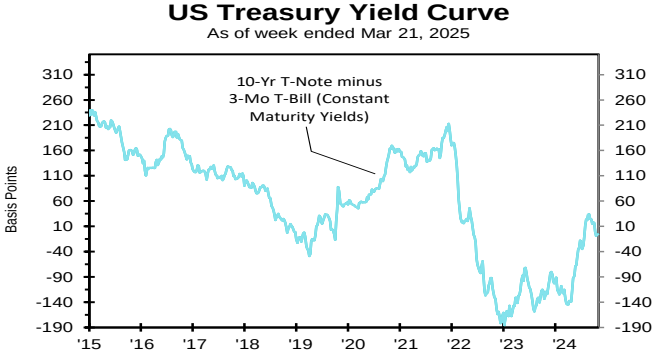
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	2Q	3Q	4Q	1Q	2Q	3Q
Interest Rates	Mar 21	Mar 14	Mar 7	Feb 28	Feb	Jan	Dec	1Q 2025*	2025	2025	2025	2026	2026	2026
Federal Funds Rate	4.33	4.33	4.33	4.33	4.33	4.33	4.48	4.33	**4.3**	**4.2**	**4.0**	**3.8**	**3.7**	**3.6**
Prime Rate	7.50	7.50	7.50	7.50	7.50	7.50	7.65	7.50	**7.4**	**7.3**	**7.1**	**7.0**	**6.8**	**6.7**
SOFR	4.30	4.31	4.34	4.35	4.34	4.32	4.53	4.33	**4.3**	**4.1**	**4.0**	**3.8**	**3.6**	**3.5**
Commercial Paper, 1-mo.	4.29	4.32	4.32	4.32	4.31	4.32	4.50	4.32	**4.3**	**4.2**	**4.0**	**3.9**	**3.7**	**3.6**
Treasury bill, 3-mo.	4.33	4.34	4.34	4.31	4.33	4.34	4.39	4.34	**4.2**	**4.1**	**3.9**	**3.8**	**3.6**	**3.4**
Treasury bill, 6-mo.	4.28	4.27	4.29	4.28	4.30	4.26	4.32	4.28	**4.2**	**4.1**	**3.9**	**3.8**	**3.7**	**3.5**
Treasury bill, 1 yr.	4.09	4.04	4.05	4.12	4.19	4.18	4.23	4.15	**4.1**	**4.0**	**3.9**	**3.8**	**3.7**	**3.5**
Treasury note, 2 yr.	4.00	3.96	3.97	4.06	4.21	4.27	4.23	4.16	**4.0**	**4.0**	**3.9**	**3.8**	**3.8**	**3.7**
Treasury note, 5 yr.	4.04	4.04	4.04	4.11	4.28	4.43	4.25	4.26	**4.1**	**4.1**	**4.0**	**4.0**	**4.0**	**3.9**
Treasury note, 10 yr.	4.27	4.28	4.25	4.30	4.45	4.63	4.39	4.46	**4.3**	**4.3**	**4.3**	**4.2**	**4.2**	**4.1**
Treasury note, 30 yr.	4.58	4.59	4.55	4.56	4.68	4.85	4.58	4.72	**4.6**	**4.6**	**4.5**	**4.5**	**4.5**	**4.5**
Corporate Aaa bond	5.34	5.40	5.33	5.28	5.39	5.55	5.29	5.44	**5.3**	**5.3**	**5.2**	**5.2**	**5.3**	**5.2**
Corporate Baa bond	5.78	5.84	5.75	5.70	5.82	5.97	5.71	5.87	**6.0**	**6.0**	**6.0**	**6.1**	**6.1**	**6.1**
State & Local bonds	4.23	4.21	4.13	4.11	4.16	4.18	4.10	4.19	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**	**4.2**
Home mortgage rate	6.67	6.65	6.63	6.76	6.84	6.96	6.72	6.83	**6.7**	**6.6**	**6.5**	**6.5**	**6.4**	**6.3**
	History								Consensus Forecasts-Quarterly					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Key Assumptions	2023	2023	2023	2024	2024	2024	2024	2025**	2025	2025	2025	2026	2026	2026
Fed's AFE $ Index	114.6	115.0	116.6	115.5	117.3	114.9	117.9	120.0	**118.5**	**117.7**	**117.1**	**116.8**	**116.5**	**116.2**
Real GDP	2.4	4.4	3.2	1.6	3.0	3.1	2.4	2.3	**1.6**	**1.7**	**1.7**	**1.9**	**1.9**	**2.0**
GDP Price Index	1.9	3.2	1.5	3.0	2.5	1.9	2.3	2.7	**2.7**	**2.7**	**2.5**	**2.5**	**2.1**	**2.2**
Consumer Price Index	3.0	3.5	2.8	3.7	2.8	1.4	3.0	3.5	**2.9**	**2.9**	**2.7**	**2.6**	**2.4**	**2.4**
PCE Price Index	2.9	2.7	1.7	3.4	2.5	1.5	2.4	2.8	**2.8**	**2.7**	**2.6**	**2.5**	**2.2**	**2.2**

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. *Interest rate data for 1Q 2025 based on historical data through the week ended March 21. **Data for 1Q 2025 for the Fed's AFE $ Index based on data through the week ended March 21. Figures for 1Q 2025 Real GDP, GDP Chained Price Index, Consumer Price Index, and PCE Price Index are consensus forecasts from the March 2025 survey.









----------Policy Rates[1]----------

	History: Latest:	Month Ago:	Year Ago:	Consensus Forecasts Months From Now: 3	6	12
U.S.	4.38	4.38	5.38	**4.32**	**4.14**	**3.92**
Japan	0.50	0.50	0.05	**0.58**	**0.72**	**0.92**
U.K.	4.50	4.50	5.25	**4.30**	**4.02**	**3.70**
Switzerland	0.25	0.50	1.50	**0.31**	**0.31**	**0.34**
Canada	2.75	3.00	5.00	**2.68**	**2.55**	**2.53**
Australia	4.10	4.10	4.35	**4.00**	**3.83**	**3.66**
Euro area	2.65	2.90	4.50	**2.33**	**2.15**	**2.07**

----------10-Yr. Government Bond Yields[2]------

	History: Latest:	Month Ago:	Year Ago:	Consensus Forecasts Months From Now: 3	6	12
U.S.	4.25	4.42	4.22	**4.40**	**4.45**	**4.55**
Germany	2.76	2.45	2.32	**2.75**	**2.79**	**2.86**
Japan	1.53	1.43	0.76	**1.48**	**1.56**	**1.64**
U.K.	4.67	4.53	3.96	**4.62**	**4.58**	**4.51**
France	3.42	3.21	2.84	**3.44**	**3.51**	**3.58**
Italy	3.84	3.59	3.64	**3.83**	**3.92**	**4.03**
Switzerland	0.66	0.58	0.63	**0.58**	**0.67**	**0.74**
Canada	3.01	3.11	3.44	**3.09**	**3.15**	**3.32**
Australia	4.40	4.52	4.04	**4.38**	**4.42**	**4.55**
Spain	3.40	3.21	3.19	**3.37**	**3.46**	**3.56**

----------Foreign Exchange Rates[3]----------

	History: Latest:	Month Ago:	Year Ago:	Consensus Forecasts Months From Now: 3	6	12
U.S.	117.78	119.46	116.50	**119.4**	**119.1**	**115.9**
Japan	148.98	149.49	151.35	**149.9**	**149.0**	**145.2**
U.K.	1.29	1.26	1.26	**1.27**	**1.26**	**1.25**
Switzerland	0.88	0.90	0.90	**0.89**	**0.89**	**0.88**
Canada	1.44	1.42	1.36	**1.45**	**1.46**	**1.46**
Australia	0.63	0.64	0.65	**0.63**	**0.63**	**0.65**
Euro	1.08	1.05	1.08	**1.06**	**1.06**	**1.06**

	Consensus Policy Rates vs. US Rate: Now	In 12 Mo.
Japan	-3.88	**-3.00**
U.K.	0.13	**-0.22**
Switzerland	-4.13	**-3.57**
Canada	-1.63	**-1.39**
Australia	-0.28	**-0.25**
Euro area	-1.73	**-1.85**

	Consensus 10-Year Gov't Yields vs. U.S. Yield: Now	In 12 Mo.
Germany	-1.49	**-1.68**
Japan	-2.72	**-2.91**
U.K.	0.42	**-0.04**
France	-0.78	**-0.97**
Italy	-0.41	**-0.51**
Switzerland	-3.59	**-3.81**
Canada	-1.24	**-1.22**
Australia	0.15	**0.00**
Spain	-0.86	**-0.99**

Forecasts of panel members are on pages 10 and 11. Definitions of variables are as follows: [1]Monetary policy rates. [2]Government bonds are yields to maturity. [3]Foreign exchange rate forecasts for U.K., Australia and the Euro are U.S. dollars per currency unit. For the U.S dollar, forecasts are of the U.S. Federal Reserve Board's AFE Dollar Index.

International. In recent weeks, financial markets have been gripped by rising uncertainty over US trade policy, slowing domestic growth, and broader global concerns. The Trump administration's latest round of tariffs has injected fresh volatility, as investors weigh their inflation impact against the potential impact on supply chains. Geopolitical tensions in the Middle East have also intensified. The ceasefire agreed to in January between Israel and Hamas has collapsed, with renewed Israeli airstrikes and escalating violence ending the fragile truce. In the meantime, momentum around a possible ceasefire in Ukraine has picked up, but doubts persist over the durability of any agreement.

In response to a more protectionist US trade policy and lingering geopolitical tensions, Europe—led by Germany—is potentially ramping up fiscal support, both to boost infrastructure investment as well as to increase defense spending. At the same time, China has also instigated a looser fiscal policy with some targeted stimulus measures designed to shore up its economy. This combination of US trade disruption, geopolitical shifts and fiscal intervention from Europe and China have led to a broader recalibration in financial markets with US equity markets underperforming global peers, global (ex US) bond yields shifting higher, and the US dollar softening, albeit modestly, as relative growth and interest rate expectations converged.

Latest data have reinforced this reassessment of relative growth prospects. In the US, recent economic indicators have been disappointing, with softer-than-expected retail sales and weakening consumer confidence signaling that economic momentum may be fading. In stark contrast, activity in the euro area has shown some signs of improvement, with stronger-than-expected regional industrial production figures and a recovery in business sentiment, suggesting that the worst of the region's slowdown may be behind it. In the meantime, China's economy has exhibited signs of stabilization, with a recent pick up in export activity helping to counterbalance lingering property sector woes. Although concerns over deflation persist, consumer spending and investment spending have also shown some signs of recovery.

Against this backdrop, and notwithstanding signs of improvement in Europe and China, our panelists are stressing the downside risks to the global economic outlook. More specifically, in response to a special question, 69% of our panelists suggested there were moderate downside risks to their forecasts over the next 12-24 months, while 31% suggested there were significant downside risks.

To counter these headwinds, several major central banks eased policy in recent weeks. The ECB and BoC, for instance, cut policy rates by 25bps in mid-March, following similar moves from the BoE and, for the first time this cycle, the RBA in February. As these decisions were widely anticipated, most panelists left their policy rate forecasts broadly unchanged this month. Further modest cuts are still expected.

Our panelists have, however, revised up their outlook for European bond yields, likely reflecting the fiscal policy activism discussed earlier. For instance, Germany's 10-year bund yield is now projected to reach 2.86% in 12 months, up from 2.53% in last month's survey, and compared with a current level of around 2.67%. In contrast, expectations for 10-year US Treasury yields have changed far less, implying a greater narrowing of interest rate differentials between the US and Europe in coming months relative to previous projections. This shift has also influenced our panelists' exchange rate forecasts, with a slightly larger projected weakening of the US dollar versus last month.

A similar pattern emerges in our panelists' views on Japan, though for somewhat different reasons. Here, the narrative is focused more on rising inflation concerns and a slightly greater willingness by the Bank of Japan to begin normalizing its still-accommodative monetary policy. Panelists now expect nearly 50bps of rate hikes over the next 12 months, with more than half anticipating some tightening as early as June. This outlook, alongside firming inflation expectations, has translated into higher forecasts for JGB yields, and, via narrowing interest differentials, a stronger forecast for the yen versus the US dollar.

Second Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	A. Fed's Adv Fgn Econ $ Index	B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
	Percent Per Annum -- Average For Quarter															Avg. For ---Qtr.---	(Q-Q % Change) (SAAR)			
	Short-Term							Intermediate-Term			Long-Term									
Scotiabank Group	4.5 H	na	4.3	na	4.1	na	na	3.9	4.0	4.2	4.3 L	na	na	na	na	na	2.0	2.1	2.8	1.7 L
Bank of America	4.4	na	na	na	na	na	na	4.0	4.1	4.3	4.7	na	na	na	na	na	1.5	3.0	2.8	3.2
BMO Capital Markets	4.4	7.5 H	4.3	4.4	4.3	4.3	4.1	3.9	4.0	4.2	4.6	5.1	5.8	3.9 L	6.6	118.0	1.2	3.1	3.8	3.6
Daiwa Capital Markets America	4.4	7.5 H	4.2	na	4.3	na	na	4.0	na	4.3	na	na	na	na	6.9	119.0	1.3	2.5	3.0	2.7
Georgia State University	4.4	7.5 H	na	na	4.2	4.1	4.1	4.2	4.3	4.6	4.8	5.9	6.8	na	6.9	na	1.7	2.7	3.6	2.6
ING	4.4	na	na	na	na	na	na	4.1	4.4	4.8 H	5.1 H	na	na	na	na	na	2.4	na	na	na
J.P. Morgan Chase	4.4	na	na	na	na	na	na	3.8	4.0	4.3	4.5	na	na	na	na	na	1.0	2.3	2.6	2.3
KPMG	4.4	7.5 H	4.4	4.4	4.3	4.2	4.0	4.1	4.2	4.5	4.7	5.2	6.4	na	6.9	na	0.9	4.1 H	3.9	4.1 H
Nomura Securities, Inc.	4.4	7.5 H	na	na	na	na	na	4.2	4.3	4.5	na	na	na	na	na	na	1.8	1.6 L	2.5	2.7
Oxford Economics	4.4	7.5 H	4.4	na	4.3	4.3	4.2	4.2	4.3	4.5	4.7	4.8 L	na	na	6.9	120.9 H	1.9	3.3	4.4 H	4.0
S&P Global Market Intelligence	4.4	7.5 H	4.3	na	4.2	4.0	4.0	4.0	4.2	4.4	4.7	na	na	na	6.7	na	1.2	4.0	3.6	4.0
The Lonski Group	4.4	7.5 H	4.3	4.3	4.4 H	4.3	4.2	4.1	4.1	4.4	4.8	5.5	6.0	4.3	6.8	117.0	1.8	2.6	2.2	2.4
The Northern Trust Company	4.4	7.5 H	4.3	4.4	4.3	4.4 H	4.4 H	4.4	4.5	4.6	4.9	5.3	6.0	4.4	6.9	118.2	1.9	2.5	3.0	2.8
Action Economics	4.3	7.4	4.7 H	4.2	4.2	4.2	4.0	4.0	4.0	4.1	4.3 L	5.1	5.7	4.2	6.7	120.4	2.0	2.5	2.7	2.4
Chmura Economics & Analytics	4.3	7.5 H	4.3	4.3	4.3	4.3	4.1	4.1	4.1	4.3	4.6	5.3	na	na	6.7	na	3.5 H	2.8	2.9	2.5
DePrince & Assoc.	4.3	7.4	4.3	4.3	4.3	4.2	4.0	3.9	4.0	4.2	4.5	5.3	6.1	4.4	6.5	115.6 L	2.3	3.0	2.7	3.0
Fannie Mae	4.3	7.5 H	na	na	4.2	4.1	4.0	4.0	4.1	4.4	4.7	na	na	na	6.6	na	1.3	3.0	2.7	3.0
Loomis, Sayles & Company	4.3	7.5 H	4.3	4.4	4.4 H	4.3	4.1	4.1	4.2	4.4	4.6	5.1	5.8	4.1	6.7	117.3	1.4	3.3	3.9	3.9
MacroFin Analytics & Rutgers Bus School	4.3	7.4	4.3	4.3	4.3	4.2	4.2	4.0	4.0	4.3	4.6	5.3	5.8	4.2	6.7	117.6	0.5	2.5	3.6	3.0
MacroPolicy Perspectives	4.3	7.5 H	4.3	4.3	4.2	4.3	4.3	4.3	4.3	4.3	4.5	4.8 L	5.1 L	4.3	6.8	118.2	2.0	1.9	1.8 L	1.8
Moody's Analytics	4.3	7.5 H	4.3	4.4	4.2	4.1	4.1	4.1	4.2	4.4	4.7	5.5	6.2	4.1	6.6	na	1.7	3.4	3.5	3.4
NatWest Markets	4.3	7.5 H	na	4.4	4.3	4.3	4.3	4.5 H	4.8 H	4.7	4.7	6.3 H	7.2 H	5.7 H	7.1 H	na	3.3	1.7	2.1	3.0
Regions Financial Corporation	4.3	7.5 H	4.3	4.3	4.3	4.3	4.0	4.0	4.0	4.2	4.6	5.0	5.8	4.2	6.6	117.3	1.1	3.0	3.5	3.1
Roberts Capital Advisors	4.3	7.5 H	4.4	4.3	4.3	4.2	4.2	4.2	4.2	4.4	4.7	5.3	6.1	4.4	6.8	118.0	1.7	2.7	3.0	2.7
Santander Capital Markets	4.3	7.5 H	4.3	4.3	4.2	4.1	4.1	4.1	4.2	4.3	4.5	5.3	5.9	4.1	6.8	118.5	1.8	2.6	2.4	2.2
Societe Generale	4.3	7.5 H	4.3	na	4.2	4.0	3.9	3.7 L	3.9	4.3	4.5	na	na	na	na	na	2.5	2.1	2.6	2.3
TS Lombard	4.3	7.4	4.3	4.3	4.2	4.3	4.3	4.3	4.4	4.5	4.6	5.3	6.2	4.5	6.3 L	120.0	2.0	2.5	2.5	2.5
EY-Parthenon	4.2	na	na	na	4.2	na	na	na	na	4.2	na	na	na	na	na	na	1.8	3.0	2.3	2.7
Naroff Economics LLC	4.2	7.2 L	4.1 L	4.5 H	4.2	4.2	4.2	4.2	4.3	4.4	4.7	na	na	4.0	6.5	117.5	2.6	2.4	2.3	2.3
PNC Financial Services Corp.	4.2	7.4	4.2	na	3.9 L	3.8 L	3.8 L	3.8	3.9	4.1	4.4	na	5.8	4.2	6.5	120.7	1.6	2.2	2.6	2.5
Barclays	4.1 L	na	na	na	na	na	na	3.7 L	3.8 L	4.0 L	4.3 L	na	na	na	na	na	0.5	3.0	3.0	2.9
Chan Economics	4.1 L	7.3	4.1 L	4.1 L	4.1	4.1	3.9	3.8	3.8 L	4.1	4.3 L	5.0	5.8	4.1	6.4	117.9	0.5	2.5	2.8	2.6
Economist Intelligence Unit	4.1 L	7.3	na	na	3.9 L	na	3.8 L	na	na	4.2	na	5.2	na	na	na	na	0.8	na	3.5	na
Goldman Sachs & Co.	4.1 L	na	na	na	4.0	na	na	4.1	4.2	4.4	4.6	na	na	na	na	na	2.1	3.1	2.9	3.0
Via Nova Investment Mgt.	4.1 L	7.3	4.1 L	4.1 L	4.0	4.0	4.0	3.8	3.9	4.1	4.3 L	5.2	5.6	3.9 L	6.4	120.0	-1.0 L	2.5	2.6	2.4
Wells Fargo	4.1 L	7.3	4.2	4.1 L	4.1	4.0	3.8 L	3.9	4.0	4.2	4.6	5.4	6.4	4.8	6.6	na	2.1	2.5	2.4	2.5
April Consensus	**4.3**	**7.4**	**4.3**	**4.3**	**4.2**	**4.2**	**4.1**	**4.0**	**4.1**	**4.3**	**4.6**	**5.3**	**6.0**	**4.3**	**6.7**	**118.5**	**1.6**	**2.7**	**2.9**	**2.8**
Top 10 Avg.	4.4	7.5	4.4	4.4	4.3	4.3	4.2	4.3	4.4	4.6	4.8	5.5	6.3	4.5	6.9	119.4	2.5	3.3	3.7	3.5
Bottom 10 Avg.	4.2	7.3	4.2	4.2	4.1	4.0	3.9	3.8	3.9	4.1	4.4	5.1	5.7	4.1	6.5	117.4	0.7	2.1	2.3	2.2
Standard Deviation	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	1.4	0.8	0.6	0.6	0.6
March Consensus	4.3	7.4	4.3	4.3	4.2	4.1	4.1	4.1	4.3	4.5	4.7	5.4	6.2	4.4	6.8	120.0	2.0	2.5	2.7	2.6
Number of Forecasts Changed From A Month Ago:																				
Down	2	1	2	1	3	3	8	21	22	21	19	14	11	8	13	13	25	7	10	6
Same	28	22	20	12	17	14	11	10	7	12	9	5	7	7	11	3	3	7	5	7
Up	6	6	3	7	10	9	7	3	4	3	4	2	2	4	2	2	8	20	20	21
Diffusion Index	56%	59%	52%	65%	62%	62%	48%	24%	23%	25%	27%	21%	28%	39%	29%	19%	26%	69%	64%	72%

Third Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For Qtr. A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR) B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
Bank of America	4.4 H	na	na	na	na	na	na	4.0	4.2	4.4	4.8	na	na	na	na	na	2.0	2.6	2.6	2.5
Georgia State University	4.4 H	7.5 H	na	na	4.1	4.2	4.2	4.0	4.6 H	4.9	5.0	6.4 H	7.3 H	na	7.1	na	1.5	2.6	1.7	2.1
KPMG	4.4 H	7.5 H	4.3	4.4 H	4.3 H	4.2	4.1	4.1	4.2	4.5	4.8	5.3	6.6	na	6.9	na	1.0	3.9 H	3.4	3.3
Nomura Securities, Inc.	4.4 H	7.5 H	na	na	na	na	na	4.2	4.3	4.5	na	na	na	na	na	na	1.5	1.7	3.5	3.2
Oxford Economics	4.4 H	7.5 H	4.4	na	4.3 H	4.3 H	4.2	4.2	4.2	4.5	4.7	4.8	na	na	6.9	122.3 H	2.0	1.6 L	2.1	1.6
S&P Global Market Intelligence	4.4 H	7.5 H	4.3	na	4.1	4.0	4.0	3.9	4.1	4.4	4.6	na	na	na	6.6	na	1.6	3.4	3.0	2.9
BMO Capital Markets	4.3	7.4	4.3	4.3	4.3 H	4.3 H	4.0	3.8	3.9	4.2	4.5	5.1	5.8	4.0	6.6	116.8	1.6	2.8	3.4	3.2
Chmura Economics & Analytics	4.3	7.4	4.3	4.3	4.3 H	4.3 H	4.1	4.1	4.1	4.3	4.6	5.3	na	na	6.6	na	3.2 H	2.8	2.9	2.5
Daiwa Capital Markets America	4.3	7.4	4.0	na	4.2	na	na	3.9	na	4.3	na	na	na	na	6.9	118.0	1.6	2.4	3.1	2.8
Fannie Mae	4.3	7.4	na	na	4.0	4.0	3.9	3.9	4.1	4.4	4.7	na	na	na	6.5	na	1.8	3.5	3.3	3.0
J.P. Morgan Chase	4.3	na	na	na	na	na	na	3.7	3.9	4.2	4.5	na	na	na	na	na	2.0	2.9	3.1	2.9
Loomis, Sayles & Company	4.3	7.5 H	4.3	4.3	4.3 H	4.2	4.1	4.0	4.1	4.3	4.5	5.0	5.6	4.0	6.4	117.3	1.1	3.6	3.5	3.0
Moody's Analytics	4.3	7.5 H	4.3	4.3	4.1	4.0	4.0	4.0	4.2	4.4	4.7	5.7	6.5	4.2	6.5	na	1.6	2.9	3.3	3.2
NatWest Markets	4.3	7.5 H	na	4.4 H	4.3 H	4.3 H	4.3	4.4	4.6 H	4.5	4.4	6.4 H	7.3 H	5.8 H	7.2 H	na	1.9	2.0	2.5	2.4
The Northern Trust Company	4.3	7.5 H	4.3	4.4 H	4.2	4.3 H	4.3	4.4	4.5	4.6	4.9	5.4	6.1	4.5	6.9	117.0	1.6	2.5	2.9	2.7
TS Lombard	4.3	7.4	4.3	4.3	4.2	4.3 H	4.4 H	4.5 H	4.6 H	4.7	4.8	5.5	6.4	4.7	6.5	115.0 L	2.4	3.0	3.0	3.0
Roberts Capital Advisors	4.2	7.3	4.2	4.2	4.1	4.1	4.2	4.2	4.2	4.5	4.9	5.3	6.1	4.6	6.8	117.0	1.8	2.6	3.0	2.7
Action Economics	4.1	7.3	4.5 H	4.1	4.1	4.0	3.9	3.9	3.9	4.0	4.2	4.9	5.5	4.1	6.6	119.1	2.2	2.5	3.1	2.7
DePrince & Assoc.	4.1	7.3	4.1	4.1	4.1	4.0	3.8	3.7	3.8	4.2	4.5	5.3	6.2	4.5	6.4	115.2	2.5	3.1	2.7	3.0
EY-Parthenon	4.1	na	na	na	4.1	na	na	na	na	4.0	na	na	na	na	na	na	1.7	3.1	2.5	2.7
Goldman Sachs & Co.	4.1	na	na	na	3.9	na	na	4.0	4.2	4.4	4.6	na	na	na	na	na	1.6	3.2	3.2	3.1
ING	4.1	na	na	na	na	na	na	4.0	4.5	5.0 H	5.4 H	na	na	na	na	na	1.6	na	na	na
MacroFin Analytics & Rutgers Bus School	4.1	7.3	4.2	4.1	4.1	4.1	4.1	4.0	3.9	4.2	4.6	5.3	5.7	4.1	6.6	117.4	1.3	2.5	3.0	2.9
MacroPolicy Perspectives	4.1	7.3	4.1	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.3	4.6 L	4.8 L	4.1	6.6	117.7	1.4	3.0	3.7	2.9
The Lonski Group	4.1	7.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.3	4.6	5.3	6.2	4.3	6.5	116.0	1.4	2.0	2.3	2.6
Naroff Economics LLC	4.0	7.0	4.1	4.3	4.0	4.1	4.1	4.1	4.2	4.3	4.5	na	na	3.9	6.4	117.0	2.0	2.3	2.3	2.1
PNC Financial Services Corp.	4.0	7.1	3.9	na	3.7 L	3.6 L	3.7	3.7	3.9	4.1	4.5	na	5.8	4.3	6.4	121.0	1.8	2.3	2.9	2.7
Regions Financial Corporation	4.0	7.2	4.1	4.1	4.0	4.1	3.9	3.9	3.9	4.2	4.5	5.0	5.8	4.2	6.4	116.9	0.9	3.6	3.9 H	3.8 H
Santander Capital Markets	4.0	7.2	4.1	4.0	3.9	3.9	3.9	4.0	4.1	4.2	4.4	5.2	5.9	4.0	6.7	118.0	2.0	2.5	2.7	2.4
Scotiabank Group	4.0	na	3.8 L	na	3.8	na	na	3.9	4.1	4.3	4.6	na	na	na	na	na	1.6	2.3	1.4 L	1.5 L
Societe Generale	4.0	7.2	4.0	na	3.9	3.9	3.7	3.4 L	3.6 L	4.3	4.4	na	na	na	na	na	2.7	2.1	2.3	2.1
Barclays	3.9	na	na	na	na	na	na	3.6	3.7	4.0	4.3	na	na	na	na	na	0.5 L	3.5	3.5	3.4
Chan Economics	3.9	7.0	3.9	3.9	3.9	3.9	3.7	3.6	3.6 L	3.9	4.1	4.8	5.6	3.9	6.2	118.0	1.5	2.3	2.6	2.4
Wells Fargo	3.9	7.0	3.9	3.9	3.9	3.7	3.7	3.9	4.0	4.2	4.6	5.4	6.4	4.8	6.5	na	1.3	2.6	2.8	2.6
Economist Intelligence Unit	3.8 L	7.0	na	na	3.7 L	na	3.6 L	na	na	4.2	na	5.1	na	na	na	na	0.8	na	3.0	na
Via Nova Investment Mgt.	3.8 L	6.9 L	3.8 L	3.8 L	3.7 L	3.7	3.7	3.4 L	3.6 L	3.7 L	3.9 L	4.8	5.2	3.5 L	6.1 L	119.0	1.0	2.2	2.4	2.3
April Consensus	**4.2**	**7.3**	**4.1**	**4.2**	**4.1**	**4.1**	**4.0**	**4.0**	**4.1**	**4.3**	**4.6**	**5.3**	**6.0**	**4.3**	**6.6**	**117.7**	**1.7**	**2.7**	**2.9**	**2.7**
Top 10 Avg.	4.4	7.5	4.3	4.3	4.3	4.3	4.2	4.2	4.4	4.6	4.9	5.6	6.5	4.6	6.9	118.8	2.3	3.4	3.5	3.2
Bottom 10 Avg.	3.9	7.1	4.0	4.0	3.8	3.9	3.8	3.7	3.8	4.0	4.3	4.9	5.6	4.0	6.4	116.6	1.1	2.1	2.2	2.1
Standard Deviation	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.3	1.8	0.5	0.6	0.5	0.5
March Consensus	4.1	7.3	4.1	4.1	4.0	4.0	4.0	4.0	4.2	4.4	4.7	5.4	6.2	4.4	6.7	119.3	1.9	2.5	2.6	2.5
Number of Forecasts Changed From A Month Ago:																				
Down	3	3	3	2	3	4	8	18	18	18	17	12	13	10	12	13	18	6	3	5
Same	27	18	17	11	20	14	12	12	11	15	9	8	6	6	9	4	10	10	7	10
Up	6	8	5	7	7	8	6	4	4	3	6	1	1	3	5	1	8	18	25	19
Diffusion Index	54%	59%	54%	63%	57%	58%	46%	29%	29%	29%	33%	24%	20%	32%	37%	17%	36%	68%	81%	71%

Fourth Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For ---Qtr.--- A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR) B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
Bank of America	4.4 H	na	na	na	na	na	na	4.0	4.2	4.5	4.8	na	na	na	na	na	2.0	2.5	2.1	2.3
KPMG	4.4 H	7.5 H	4.3	4.4 H	4.2	4.2	4.2	4.2	4.2	4.4	4.7	5.1	6.4	na	6.8	na	1.6	3.0	2.7	2.6
Nomura Securities, Inc.	4.4 H	7.5 H	na	na	na	na	na	4.2	4.3	4.5	na	na	na	na	na	na	1.6	2.4	3.5	3.2
NatWest Markets	4.3	7.5 H	na	4.4 H	4.3 H	4.3 H	4.3	4.5 H	4.7	4.5	4.5	6.6 H	7.5 H	6.0 H	7.4 H	na	1.8	2.4	3.7	3.3
Oxford Economics	4.3	7.4	4.3	na	4.3 H	4.2	4.1	4.1	4.2	4.5	4.7	4.7	na	na	6.8	122.1 H	2.0	1.2 L	1.7	1.4 L
S&P Global Market Intelligence	4.3	7.4	4.3	na	4.0	3.9	4.0	3.8	4.0	4.3	4.6	na	na	na	6.5	na	2.1	2.7	2.5	2.3
TS Lombard	4.3	7.4	4.3	4.3	4.2	4.3 H	4.4 H	4.5 H	4.8 H	4.9	5.0	5.7	6.6	4.9	6.7	110.0 L	2.6 H	3.0	3.0	3.0
Chmura Economics & Analytics	4.1	7.3	4.1	4.1	4.2	4.2	4.1	4.1	4.1	4.3	4.6	5.3	na	na	6.4	na	2.3	2.6	2.6	2.4
Fannie Mae	4.1	7.3	na	na	3.9	3.9	3.9	3.9	4.1	4.4	4.7	na	na	na	6.4	na	2.2	2.8	2.8	2.5
J.P. Morgan Chase	4.1	na	na	na	na	na	na	3.7	3.9	4.2	4.5	na	na	na	na	na	2.3	2.1	2.3	2.1
The Northern Trust Company	4.1	7.3	4.1	4.2	4.1	4.2	4.2	4.3	4.5	4.6	4.9	5.6	6.2	4.6	6.9	116.0	1.7	2.5	2.9	2.7
Action Economics	4.0	7.2	4.5 H	4.0	3.9	3.8	3.7	3.7	3.8	3.8	4.0	4.8	5.4	3.9	6.4	118.8	2.3	2.2	2.8	2.5
BMO Capital Markets	4.0	7.2	4.0	4.1	4.0	4.0	3.8	3.6	3.8	4.1	4.4	5.1	5.9	4.0	6.5	115.8	1.7	2.4	2.9	2.7
Daiwa Capital Markets America	4.0	7.1	3.8	na	4.0	na	na	3.8	na	4.3	na	na	na	na	6.7	117.0	2.0	2.5	2.8	2.6
EY-Parthenon	4.0	na	na	na	3.9	na	na	na	na	4.0	na	na	na	na	na	na	1.4	3.1	3.0	3.2
Loomis, Sayles & Company	4.0	7.2	4.0	4.0	4.0	4.0	3.9	3.9	4.0	4.1	4.2	4.8	5.4	3.8	6.1 L	117.3	1.7	3.1	3.2	2.7
MacroFin Analytics & Rutgers Bus School	4.0	7.2	4.1	4.0	4.0	4.1	4.1	3.9	3.9	4.2	4.5	5.2	5.7	4.0	6.5	117.2	1.2	2.6	3.0	2.8
Moody's Analytics	4.0	7.2	4.0	4.0	3.8	3.8	4.0	4.0	4.1	4.3	4.7	5.7	6.6	4.3	6.4	na	1.4	3.0	3.1	3.0
Roberts Capital Advisors	4.0	7.2	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.5	4.9	5.3	6.1	4.6	6.7	117.0	1.9	2.6	2.9	2.6
Scotiabank Group	4.0	na	3.8	na	3.7	na	na	3.8	4.0	4.4	4.8	na	na	na	na	na	1.4	2.4	3.0	2.8
Barclays	3.9	na	na	na	na	na	na	3.5	3.7	4.0	4.3	na	na	na	na	na	1.0 L	2.7	2.4	2.5
Chan Economics	3.9	7.0	3.9	3.9	3.9	3.9	3.7	3.6	3.6 L	3.9	4.1	4.8	5.6	3.9	6.2	118.3	1.7	2.3	2.6	2.4
DePrince & Assoc.	3.9	7.0	3.8	3.9	3.8	3.8	3.6	3.5	3.7	4.1	4.4	5.3	6.2	4.5	6.2	115.3	2.3	2.9	2.6	2.9
Goldman Sachs & Co.	3.9	na	na	na	3.9	na	na	4.0	4.2	4.4	4.6	na	na	na	na	na	1.8	2.3	2.5	2.4
ING	3.9	na	na	na	na	na	na	3.8	4.5	5.0 H	5.4 H	na	na	na	na	na	1.4	na	na	na
PNC Financial Services Corp.	3.9	7.0	3.8	na	3.6	3.6	3.6	3.7	3.8	4.1	4.5	na	5.8	4.5	6.3	121.1	2.1	2.2	2.9	2.7
Georgia State University	3.8	7.0	na	na	3.6	3.8	3.9	3.9	4.3	4.8	4.9	6.2	7.3	na	7.0	na	1.3	2.7	1.8	2.0
MacroPolicy Perspectives	3.8	7.0	3.8	3.8	3.7	3.7	3.7	3.7	3.7	4.0	4.2	4.2 L	4.4 L	4.0	6.5	117.2	1.0 L	3.5 H	3.9 H	3.4 H
Naroff Economics LLC	3.8	6.8	3.8	4.1	3.9	4.0	4.0	4.1	4.1	4.2	4.4	na	na	3.9	6.3	116.2	1.5	2.3	2.1	2.2
Regions Financial Corporation	3.8	7.0	3.9	3.8	3.8	3.9	3.8	3.8	3.8	4.2	4.6	5.0	5.8	4.1	6.4	116.6	1.4	2.7	2.9	2.7
Santander Capital Markets	3.8	7.0	3.8	3.8	3.7	3.8	3.8	3.9	4.0	4.1	4.4	5.2	5.9	4.0	6.5	118.0	2.1	2.4	2.8	2.6
Societe Generale	3.8	7.0	3.8	na	3.8	3.7	3.5	3.3 L	3.6 L	4.3	4.4	na	na	na	na	na	1.7	2.1	2.3	2.1
Via Nova Investment Mgt.	3.8	6.9	3.8	3.8	3.7	3.7	3.7	3.4	3.6 L	3.7 L	3.9 L	4.8	5.2	3.5 L	6.1 L	118.0	2.0	2.0	2.2	2.1
Economist Intelligence Unit	3.6 L	6.7 L	na	na	3.5 L	na	3.3 L	na	na	4.1	na	5.1	na	na	na	na	1.0 L	na	2.6	na
The Lonski Group	3.6 L	6.7 L	3.5 L	3.6 L	3.6	3.5 L	3.7	3.9	3.9	4.1	4.3	5.2	6.2	4.1	6.2	116.5	1.7	2.1	1.6 L	2.4
Wells Fargo	3.6 L	6.8	3.7	3.6 L	3.7	3.7	3.7	3.8	4.0	4.2	4.6	5.4	6.4	4.8	6.4	na	1.2	2.2	2.5	2.2
April Consensus	**4.0**	**7.1**	**4.0**	**4.0**	**3.9**	**3.9**	**3.9**	**3.9**	**4.0**	**4.3**	**4.5**	**5.2**	**6.0**	**4.3**	**6.5**	**117.1**	**1.7**	**2.5**	**2.7**	**2.6**
Top 10 Avg.	4.3	7.4	4.2	4.2	4.1	4.2	4.2	4.2	4.4	4.6	4.9	5.6	6.6	4.6	6.8	118.5	2.2	3.0	3.2	3.0
Bottom 10 Avg.	3.7	6.9	3.8	3.8	3.7	3.7	3.6	3.6	3.7	4.0	4.2	4.8	5.5	3.9	6.3	115.8	1.2	2.1	2.1	2.1
Standard Deviation	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.7	0.6	0.3	2.5	0.4	0.4	0.5	0.4
March Consensus	4.0	7.1	4.0	4.0	3.9	3.9	3.9	3.9	4.1	4.4	4.6	5.4	6.2	4.4	6.6	118.5	1.9	2.5	2.6	2.5
Number of Forecasts Changed From A Month Ago:																				
Down	3	3	5	2	2	6	6	16	18	19	16	14	12	10	14	12	20	7	8	9
Same	28	20	16	12	22	13	13	13	11	14	13	5	7	7	7	5	10	15	9	6
Up	5	6	4	6	6	7	7	5	4	3	3	2	1	2	5	1	6	12	18	19
Diffusion Index	53%	55%	48%	60%	57%	52%	52%	34%	29%	28%	30%	21%	23%	29%	33%	19%	31%	57%	64%	65%

First Quarter 2026

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For ---Qtr.--- A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR) B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
TS Lombard	4.6 H	7.7 H	4.6 H	4.6 H	4.5 H	4.6 H	4.7 H	4.8 H	5.2 H	5.3 H	5.4 H	6.1	7.0	5.3	7.1	110.0 L	2.6	3.3	3.3	3.3
Bank of America	4.4	na	na	na	na	na	na	4.1	4.3	4.6	4.9	na	na	na	na	na	2.0	2.4	2.3	2.3
Nomura Securities, Inc.	4.4	7.5	na	na	na	na	na	4.1	4.3	4.5	na	na	na	na	na	na	1.7	2.3	3.3	3.0
NatWest Markets	4.3	7.5	na	4.4	4.2	4.2	4.2	na	na	na	na	6.6 H	7.5 H	6.0 H	7.4 H	na	2.1	2.3	3.1	3.6 H
KPMG	4.2	7.3	4.1	4.2	4.0	4.2	4.2	4.2	4.3	4.4	4.7	5.2	6.5	na	6.8	na	2.0	3.6 H	3.4 H	2.8
Oxford Economics	4.1	7.2	4.1	na	4.1	4.1	4.0	4.0	4.0	4.4	4.6	4.6	na	na	6.8	121.8 H	2.6	1.5 L	2.0	1.8 L
S&P Global Market Intelligence	4.1	7.2	4.0	na	3.8	3.8	3.9	3.8	3.9	4.2	4.5	na	na	na	6.4	na	2.3	3.3	3.1	2.5
The Northern Trust Company	4.1	7.3	4.1	4.2	4.1	4.1	4.2	4.3	4.5	4.6	4.9	5.6	6.3	4.8	6.9	115.0	1.6	2.4	2.8	2.6
Fannie Mae	4.0	7.2	na	na	3.8	3.8	3.9	4.0	4.1	4.4	4.7	na	na	na	6.3	na	2.3	3.1	3.1	2.5
J.P. Morgan Chase	4.0	na	na	na	na	na	na	3.7	3.9	4.2	4.5	na	na	na	na	na	2.0	2.0	2.0	1.8 L
Chan Economics	3.9	7.0	3.9	3.9	3.9	3.9	3.7	3.6	3.6	3.9	4.1	4.8	5.6	3.9	6.2	118.0	1.5	2.2	2.5	2.3
Chmura Economics & Analytics	3.9	7.0	3.9	3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.4	5.2	na	na	6.2	na	2.1	2.4	2.5	2.3
Goldman Sachs & Co.	3.9	na	na	na	3.9	na	na	4.0	4.2	4.4	4.6	na	na	na	na	na	2.0	2.5	2.6	2.5
PNC Financial Services Corp.	3.9	7.0	3.8	na	3.6	3.6	3.6	3.7	3.8	4.1	4.5	na	5.8	4.5	6.2	121.2	2.2	2.2	2.9	2.6
Action Economics	3.8	7.0	4.3	3.8	3.9	3.7	3.6	3.6	3.7	3.7 L	3.9 L	4.6	5.2	3.8	6.3	118.8	2.3	2.1	2.7	2.4
BMO Capital Markets	3.8	6.9	3.8	3.8	3.8	3.8	3.6	3.5	3.8	4.1	4.4	5.2	6.0	4.0	6.5	115.3	2.0	2.3	2.7	2.5
Daiwa Capital Markets America	3.8	6.9	3.7	na	3.8	na	na	3.6	na	4.2	na	na	na	na	6.5	116.0	1.9	2.6	2.6	2.4
Loomis, Sayles & Company	3.8	7.0	3.8	3.8	3.8	3.7	3.7	3.7	3.9	4.0	4.2	4.7	5.4	3.7	6.0	117.3	2.1	3.5	3.2	2.7
MacroFin Analytics & Rutgers Bus School	3.8	6.9	3.8	3.8	3.7	3.9	3.9	3.9	3.9	4.1	4.5	5.2	5.6	4.0	6.5	117.0	1.5	2.7	3.2	2.8
Moody's Analytics	3.8	7.0	3.8	3.8	3.6	3.6	3.8	3.9	4.1	4.3	4.7	5.8	6.7	4.3	6.4	na	1.2	2.7	3.0	2.7
Roberts Capital Advisors	3.8	7.0	3.9	3.8	4.0	4.0	4.0	4.0	4.0	4.4	4.8	5.2	6.0	4.5	6.6	116.0	2.0	2.5	2.9	2.6
Santander Capital Markets	3.8	7.0	3.8	3.8	3.8	3.8	3.8	3.8	3.9	4.1	4.4	5.2	5.9	4.1	6.4	117.5	2.3	2.8	3.0	2.9
Scotiabank Group	3.8	na	3.6	na	3.5	na	na	3.8	4.0	4.5	4.8	na	na	na	na	na	1.6	2.4	2.0	1.9
Societe Generale	3.8	7.0	3.8	na	3.7	3.5	3.3	3.3 L	3.6	4.3	4.5	na	na	na	na	na	2.1	2.1	2.3	2.0
DePrince & Assoc.	3.7	6.8	3.6	3.7	3.6	3.7	3.4	3.3 L	3.6	4.1	4.4	5.3	6.1	4.5	6.1	115.3	2.3	2.8	2.6	2.8
EY-Parthenon	3.7	na	na	na	3.8	na	na	na	na	3.9	na	na	na	na	na	na	1.4	2.5	3.2	2.6
Barclays	3.6	na	na	na	na	na	na	3.4	3.6	4.0	4.3	na	na	na	na	na	1.5	2.4	2.2	2.2
Georgia State University	3.6	6.7	na	na	3.3 L	3.6	3.8	4.0	4.3	4.7	4.8	6.3	7.4	na	7.0	na	1.4	3.1	1.9	2.4
ING	3.6	na	na	na	na	na	na	3.8	4.5	5.0	5.4 H	na	na	na	na	na	1.6	na	na	na
MacroPolicy Perspectives	3.6	6.8	3.6	3.6	3.5	3.5	3.5	3.5	3.5 L	3.8	4.0	4.2 L	4.5 L	3.8	6.3	116.7	na	na	na	na
Naroff Economics LLC	3.6	6.6	3.7	4.0	3.7	3.8	3.9	4.0	4.1	4.1	4.5	na	na	3.9	6.2	116.5	0.6 L	1.7	1.9	2.0
Regions Financial Corporation	3.6	6.8	3.6	3.7	3.7	3.8	3.7	3.8	3.8	4.3	4.6	5.1	5.8	4.1	6.3	116.2	1.7	2.3	2.4	2.3
Wells Fargo	3.6	6.8	3.7	3.6	3.7	3.7	3.7	3.8	4.0	4.3	4.7	5.5	6.5	4.9	6.5	na	2.8 H	2.3	2.7	2.3
Via Nova Investment Mgt.	3.5	6.7	3.5	3.5	3.4	3.4	3.4	3.4	3.6	3.7 L	3.9 L	4.8	5.3	3.5 L	6.1	117.0	2.0	2.0	2.0	2.0
Economist Intelligence Unit	3.3 L	6.5	na	na	3.3 L	na	3.1 L	na	na	4.0	na	5.0	na	na	na	na	1.5	na	2.5	na
The Lonski Group	3.3 L	6.4 L	3.3 L	3.4 L	3.3 L	3.3 L	3.4	3.6	3.7	3.9	4.1	5.0	6.0	3.9	5.8 L	116.8	1.9	2.2	1.6 L	2.0
April Consensus	**3.8**	**7.0**	**3.8**	**3.9**	**3.8**	**3.8**	**3.8**	**3.8**	**4.0**	**4.2**	**4.5**	**5.2**	**6.1**	**4.3**	**6.5**	**116.8**	**1.9**	**2.5**	**2.6**	**2.5**
Top 10 Avg.	4.2	7.3	4.1	4.1	4.1	4.1	4.1	4.2	4.4	4.6	4.9	5.7	6.6	4.7	6.8	118.2	2.4	3.1	3.2	2.9
Bottom 10 Avg.	3.5	6.7	3.6	3.7	3.5	3.6	3.5	3.5	3.7	3.9	4.2	4.8	5.5	3.9	6.1	115.4	1.4	2.0	2.0	2.0
Standard Deviation	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.7	0.6	0.4	2.5	0.4	0.5	0.5	0.4
March Consensus	3.9	7.0	3.9	3.9	3.8	3.8	3.8	3.9	4.1	4.3	4.6	5.4	6.2	4.4	6.5	118.0	2.0	2.5	2.6	2.5
Number of Forecasts Changed From A Month Ago:																				
Down	8	7	7	4	6	7	9	11	14	14	13	11	11	10	10	12	13	8	9	10
Same	25	17	16	10	20	13	12	14	13	16	13	8	8	6	12	5	16	15	13	10
Up	3	5	2	6	4	6	5	6	3	3	3	2	1	3	4	1	6	10	12	13
Diffusion Index	43%	47%	40%	55%	47%	48%	42%	42%	32%	33%	33%	29%	25%	32%	38%	19%	40%	53%	54%	55%

Second Quarter 2026

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For Qtr. A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR) B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
TS Lombard	4.8 H	7.9 H	4.8 H	4.8 H	4.7 H	4.8 H	4.9 H	5.0 H	5.4 H	5.5 H	5.6 H	6.4	7.2	5.5	7.3	110.0 L	2.8	3.3 H	3.3 H	3.3 H
Bank of America	4.4	na	na	na	na	na	na	4.1	4.3	4.6	4.9	na	na	na	na	na	2.0	2.5	2.5	2.5
NatWest Markets	4.3	7.5	na	4.4	4.1	4.1	4.1	na	na	na	na	6.6 H	7.5 H	6.0 H	7.4 H	na	2.1	1.8	1.6	2.2
Nomura Securities, Inc.	4.1	7.3	na	na	na	na	na	4.0	4.3	4.5	na	na	na	na	na	na	2.1	1.7	2.4	2.2
J.P. Morgan Chase	4.0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	1.8	1.9	1.7
Fannie Mae	3.9	7.0	na	na	3.8	3.8	3.9	4.0	4.2	4.4	4.7	na	na	na	6.2	na	2.2	1.3	1.8	1.8
PNC Financial Services Corp.	3.9	7.0	3.8	na	3.6	3.6	3.6	3.7	3.8	4.1	4.5	na	5.8	4.5	6.2	120.9	2.3	1.9	2.3	2.1
The Northern Trust Company	3.9	7.0	3.8	4.0	3.7	3.9	4.0	4.1	4.4	4.6	4.9	5.6	6.4	4.8	6.9	114.0	1.8	2.4	2.8	2.6
Action Economics	3.8	6.9	4.2	3.8	3.7	3.6	3.5	3.5	3.5	3.6	3.8	4.6 L	5.2 L	3.7	6.2	119.0	2.2	2.7	2.5	2.3
Oxford Economics	3.8	7.0	3.8	na	3.9	3.9	3.8	3.8	3.9	4.4	4.6	4.6 L	na	na	6.6	121.3 H	3.0 H	1.7	2.1	1.9
Roberts Capital Advisors	3.8	7.0	3.8	3.8	3.9	4.1	4.1	4.1	4.1	4.5	4.9	5.3	6.1	4.6	6.7	116.0	2.0	2.4	2.8	2.5
S&P Global Market Intelligence	3.8	7.0	3.8	na	3.6	3.6	3.8	3.7	3.8	4.1	4.4	na	na	na	6.2	na	1.9	1.2 L	1.5 L	1.6 L
Santander Capital Markets	3.8	7.0	3.8	3.8	3.8	3.8	3.9	3.9	4.0	4.1	4.4	5.2	5.9	4.1	6.4	117.0	2.5	2.5	2.8	2.6
Chan Economics	3.7	6.8	3.7	3.7	3.7	3.7	3.5	3.4	3.4	3.7	3.9	4.6 L	5.4	3.7	6.0	117.7	1.5	2.1	2.4	2.2
Chmura Economics & Analytics	3.7	6.8	3.7	3.7	3.7	3.8	3.9	3.9	4.0	4.1	4.4	5.1	na	na	6.1	na	2.8	2.4	2.5	2.3
KPMG	3.7	6.8	3.6	3.7	3.5	3.9	4.1	4.2	4.3	4.4	4.7	5.2	6.6	na	6.8	na	1.4	1.5	1.8	1.9
DePrince & Assoc.	3.6	6.7	3.5	3.6	3.6	3.5	3.3	3.2	3.5	4.0	4.4	5.3	6.1	4.5	6.0	115.2	2.5	2.8	2.6	2.8
EY-Parthenon	3.6	na	na	na	3.7	na	na	na	na	3.8	na	na	na	na	na	na	1.5	2.3	2.2	2.4
Goldman Sachs & Co.	3.6	na	na	na	3.9	na	na	4.0	4.2	4.4	4.6	na	na	na	na	na	2.0	2.4	2.5	2.4
ING	3.6	na	na	na	na	na	na	3.9	4.5	5.0	5.4	na	na	na	na	na	1.7	na	na	na
Regions Financial Corporation	3.6	6.8	3.6	3.6	3.6	3.7	3.7	3.7	3.8	4.3	4.7	5.2	5.9	4.2	6.3	116.6	2.1	2.1	2.3	2.1
Wells Fargo	3.6	6.8	3.7	3.6	3.7	3.7	3.7	3.9	4.1	4.3	4.7	5.5	6.5	4.9	6.5	na	2.9	2.3	2.7	2.3
BMO Capital Markets	3.5	6.7	3.5	3.6	3.5	3.6	3.4	3.3	3.7	4.0	4.3	5.2	6.1	4.1	6.4	114.7	2.0	2.0	2.5	2.3
Daiwa Capital Markets America	3.5	6.6	3.6	na	3.5	na	na	3.4	na	4.0	na	na	na	na	6.1	116.0	1.8	2.4	2.6	2.4
Loomis, Sayles & Company	3.5	6.7	3.5	3.5	3.5	3.6	3.6	3.7	3.8	4.0	4.2	4.7	5.4	3.7	6.0	117.3	1.9	1.4	2.2	1.9
MacroFin Analytics & Rutgers Bus School	3.5	6.7	3.6	3.5	3.4	3.7	3.7	3.8	3.9	4.1	4.5	5.1	5.6	4.0	6.5	116.8	1.6	2.9	3.3 H	2.8
Moody's Analytics	3.5	6.7	3.5	3.5	3.3	3.4	3.7	3.8	4.1	4.3	4.7	5.8	6.8	4.3	6.3	na	1.9	2.3	2.4	2.3
Scotiabank Group	3.5	na	3.3	na	3.3	na	na	3.8	4.0	4.5	4.9	na	na	na	na	na	1.4	2.1	2.4	1.7
Societe Generale	3.5	6.7	3.5	na	3.4	3.3	3.2	3.4	3.6	4.3	4.5	na	na	na	na	na	1.6	2.1	2.3	2.0
Via Nova Investment Mgt.	3.5	6.7	3.5	3.5	3.4	3.4	3.4	3.7	3.8	4.0	4.2	5.1	5.6	3.8	6.3	114.0	2.0	2.0	2.0	2.0
Barclays	3.4	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.5	2.4	2.4	2.2
Georgia State University	3.4	6.5	na	na	3.1	3.2	3.5	3.8	4.3	4.7	4.8	6.3	7.4	na	7.2	na	1.6	1.7	2.0	2.3
Economist Intelligence Unit	3.3	6.3	na	na	2.9 L	na	2.7 L	na	na	3.9	na	5.0	na	na	na	na	1.7	na	2.4	na
Naroff Economics LLC	3.3	6.3	3.5	3.8	3.4	3.6	3.7	3.8	4.0	4.0	4.4	na	na	4.1	6.0	115.9	-1.9 L	1.5	2.3	2.3
MacroPolicy Perspectives	3.1 L	6.3	3.1	3.1 L	3.0	3.0 L	3.0	3.0 L	3.0 L	3.3 L	3.5 L	5.1	5.4	3.3 L	5.8	116.2	na	na	na	na
The Lonski Group	3.1 L	6.2 L	3.0 L	3.1 L	3.1	3.1	3.2	3.4	3.5	3.7	3.9	4.8	5.7	3.7	5.5 L	118.0	2.0	1.9	2.1	1.7
April Consensus	**3.7**	**6.8**	**3.6**	**3.7**	**3.6**	**3.7**	**3.7**	**3.8**	**4.0**	**4.2**	**4.5**	**5.3**	**6.1**	**4.3**	**6.4**	**116.5**	**1.9**	**2.1**	**2.4**	**2.2**
Top 10 Avg.	4.1	7.2	3.9	4.0	3.9	4.0	4.1	4.1	4.4	4.7	5.0	5.7	6.7	4.7	6.8	118.1	2.5	2.6	2.8	2.6
Bottom 10 Avg.	3.4	6.5	3.4	3.5	3.2	3.4	3.3	3.4	3.6	3.8	4.1	4.9	5.6	3.8	6.0	114.9	1.2	1.6	1.9	1.8
Standard Deviation	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.5	2.6	0.8	0.5	0.4	0.4
March Consensus	3.8	6.9	3.7	3.7	3.7	3.7	3.7	3.8	4.0	4.3	4.6	5.4	6.2	4.4	6.5	117.5	2.0	2.2	2.5	2.3
Number of Forecasts Changed From A Month Ago:																				
Down	9	8	7	5	9	9	10	9	10	13	10	9	9	9	10	11	9	11	11	12
Same	23	17	15	10	17	11	11	16	16	16	14	9	9	6	13	5	15	14	12	12
Up	4	4	3	5	4	6	5	5	3	3	4	3	2	4	3	2	10	7	10	8
Diffusion Index	43%	43%	42%	50%	42%	44%	40%	43%	38%	34%	39%	36%	33%	37%	37%	25%	51%	44%	48%	44%

Third Quarter 2026

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter															Avg. For	(Q-Q % Change) (SAAR)			
	Short-Term							Intermediate-Term			Long-Term					Qtr.				
	1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	A. Fed's Adv Fgn Econ $ Index	B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
TS Lombard	4.8 H	7.9 H	4.8 H	4.8 H	4.7 H	4.8 H	4.9 H	5.0 H	5.4 H	5.5 H	5.6 H	6.4	7.2	5.5	7.3	110.0 L	2.8	3.3 H	3.3 H	3.3 H
Bank of America	4.4	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.0	2.5	2.1	2.4
NatWest Markets	4.3	7.5	na	4.4	4.1	4.1	4.0	na	na	na	na	6.6 H	7.5	6.0 H	7.4 H	na	2.1	1.8	1.8 L	1.8
J.P. Morgan Chase	4.0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	1.7	2.3	2.1
Nomura Securities, Inc.	3.9	7.0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.2	1.9
PNC Financial Services Corp.	3.9	7.0	3.8	na	3.6	3.6	3.6	3.7	3.8	4.1	4.5	na	5.8	4.5	6.2	120.6	2.2	1.8	2.3	2.1
The Northern Trust Company	3.9	7.0	3.8	4.0	3.7	3.8	3.9	4.1	4.4	4.6	4.9	5.6	6.4	4.8	6.9	113.0	1.9	2.3	2.7	2.5
Fannie Mae	3.8	6.9	na	na	3.8	3.9	3.9	4.0	4.2	4.5	4.7	na	na	na	6.2	na	2.0	1.9	2.2	1.9
Santander Capital Markets	3.8	7.0	3.8	3.8	3.8	3.8	3.9	4.0	4.0	4.2	4.5	5.3	6.0	4.1	6.4	117.0	2.6	2.4	2.6	2.3
Action Economics	3.6	6.8	4.0	3.6	3.6	3.5	3.4	3.4	3.5	3.6	3.8	4.6	5.2 L	3.7	6.2	119.1	na	na	na	na
DePrince & Assoc.	3.6	6.7	3.5	3.7	3.6	3.5	3.3	3.2	3.5	4.0	4.3	5.3	6.1	4.5	6.0	115.2	2.6	2.8	2.5	2.7
Goldman Sachs & Co.	3.6	na	na	na	3.9	na	na	4.0	4.3	4.5	4.7	na	na	na	na	na	2.0	2.1	2.3	2.2
ING	3.6	na	na	na	na	na	na	3.9	4.5	5.0	5.4	na	na	na	na	na	1.8	na	na	na
Oxford Economics	3.6	6.7	3.6	na	3.6	3.6	3.6	3.7	3.8	4.3	4.5	4.4 L	na	na	6.5	120.7 H	3.2 H	1.6 L	2.0	1.8
Regions Financial Corporation	3.6	6.8	3.6	3.6	3.6	3.6	3.7	3.7	3.9	4.4	4.8	5.2	6.0	4.3	6.3	117.0	2.3	1.9	2.3	2.1
S&P Global Market Intelligence	3.6	6.7	3.5	na	3.3	3.5	3.6	3.6	3.7	4.0	4.3	na	na	na	6.1	na	1.6	2.0	2.6	2.1
Wells Fargo	3.6	6.8	3.7	3.6	3.7	3.7	3.8	4.0	4.1	4.4	4.8	5.6	6.6	5.0	6.5	na	3.0	2.1	2.5	2.1
Chan Economics	3.5	6.5	3.5	3.5	3.5	3.5	3.3	3.2	3.2	3.5	3.7	4.4 L	5.2 L	3.5	5.8	117.5	1.5	2.0	2.3	2.1
EY-Parthenon	3.5	na	na	na	3.5	na	na	na	na	3.8	na	na	na	na	na	na	1.7	2.4	2.2	2.5
Roberts Capital Advisors	3.5	6.7	3.5	3.5	3.6	3.8	3.9	3.9	3.9	4.4	4.7	5.2	5.9	4.5	6.6	116.0	2.0	2.3	2.7	2.4
Scotiabank Group	3.5	na	3.3	na	3.3	na	na	3.8	4.0	4.5	4.9	na	na	na	na	na	1.9	2.3	1.8 L	2.3
Via Nova Investment Mgt.	3.5	6.7	3.5	3.5	3.4	3.4	3.4	3.7	3.8	4.0	4.2	5.1	5.6	3.8	6.3	113.0	2.5	2.0	2.0	2.0
Chmura Economics & Analytics	3.4	6.5	3.4	3.4	3.4	3.5	3.6	3.6	3.7	3.8	4.1	4.9	na	na	5.8	na	2.9	2.3	2.4	2.1
Daiwa Capital Markets America	3.4	6.5	3.6	na	3.4	na	na	3.4	na	3.9	na	na	na	na	5.9	116.0	2.0	2.1	2.5	2.3
Georgia State University	3.4	6.5	na	na	3.1	3.2	3.4	3.9	4.4	4.8	4.9	6.5	7.6 H	na	7.3	na	1.6	2.2	1.9	2.3
KPMG	3.4	6.5	3.3	3.3	3.2	3.5	3.7	3.9	4.2	4.4	4.7	5.2	6.5	na	6.7	na	0.9	2.3	3.0	2.4
MacroFin Analytics & Rutgers Bus School	3.4	6.5	3.4	3.4	3.3	3.6	3.6	3.7	3.8	4.0	4.4	5.1	5.5	3.9	6.4	116.6	1.6	3.0	3.2	2.8
BMO Capital Markets	3.3	6.4	3.3	3.3	3.3	3.3	3.3	3.2	3.6	4.0	4.3	5.2	6.2	4.1	6.4	114.1	1.8	2.1	2.7	2.5
Economist Intelligence Unit	3.3	6.3	na	na	2.5 L	na	2.3 L	na	na	3.7	na	4.8	na	na	na	na	2.2	na	2.3	na
Loomis, Sayles & Company	3.3	6.5	3.3	3.3	3.3	3.4	3.5	3.7	3.8	4.0	4.2	4.7	5.4	3.7	6.0	117.3	1.7	2.0	2.7	2.1
Moody's Analytics	3.3	6.5	3.3	3.2	3.1	3.2	3.5	3.7	4.0	4.3	4.7	5.8	6.8	4.3	6.3	na	2.3	2.2	2.1	2.1
Societe Generale	3.3	6.5	3.3	na	3.2	3.1	3.1	3.4	3.7	4.3	4.5	na	na	na	na	na	1.8	2.0	2.2	1.9
Barclays	3.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.5	2.2	2.1	1.9
Naroff Economics LLC	3.1	6.1	3.2	3.6	3.2	3.3	3.5	3.6	3.9	3.9	4.2	na	na	3.9	5.9	115.0	0.8 L	2.3	2.4	2.4
The Lonski Group	2.8	6.0	2.8	2.9	2.8	2.9	3.0	3.1	3.2	3.3	3.6	4.4 L	5.4	3.3	5.1 L	118.5	2.0	1.7	2.1	1.7 L
MacroPolicy Perspectives	2.6 L	5.8 L	2.6 L	2.6 L	2.5 L	2.5 L	2.5	2.5 L	2.5 L	2.8 L	3.0 L	5.1	5.4	2.8 L	5.3	115.7	na	na	na	na
April Consensus	**3.6**	**6.7**	**3.5**	**3.6**	**3.4**	**3.5**	**3.5**	**3.7**	**3.9**	**4.1**	**4.5**	**5.2**	**6.1**	**4.2**	**6.3**	**116.2**	**2.0**	**2.2**	**2.4**	**2.2**
Top 10 Avg.	4.0	7.1	3.8	3.9	3.9	3.9	3.9	4.1	4.4	4.7	4.9	5.8	6.7	4.8	6.8	118.0	2.6	2.6	2.8	2.6
Bottom 10 Avg.	3.2	6.3	3.2	3.2	3.0	3.2	3.1	3.3	3.4	3.6	3.9	4.8	5.5	3.7	5.8	114.5	1.5	1.8	2.0	1.9
Standard Deviation	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.5	2.7	0.5	0.4	0.4	0.3
March Consensus	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Number of Forecasts Changed From A Month Ago:																				
Down	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Same	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Up	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Diffusion Index	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na

International Interest Rate And Foreign Exchange Rate Forecasts

United States

Blue Chip Forecasters	Fed Fund Target Rate			10 Yr. Gov't Bond Yield %			Fed's AFE $ Index		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	4.13	3.88	3.63	4.00	4.00	--	--	--	--
BMO Capital Markets	4.38	4.13	3.63	4.23	4.17	4.06	118.0	116.8	115.3
ING Financial Markets	4.38	4.13	3.63	4.75	5.00	5.00	120.1	119.3	117.5
Moody's Analytics	4.37	4.37	4.06	4.42	4.40	4.35	--	--	--
Nomura Securities	4.38	4.38	4.38	4.50	4.50	4.50	--	--	--
Northern Trust	4.38	4.13	4.13	4.60	4.60	4.60	118.2	117.0	115.0
Oxford Economics	4.38	4.38	3.88	4.50	4.49	4.41	120.9	122.3	121.8
Scotiabank	4.38	3.88	3.63	4.15	4.30	4.50	--	--	--
TS Lombard	4.25	4.25	4.55	4.65	4.85	5.25	120.0	120.0	110.0
Wells Fargo	4.13	3.88	3.63	4.20	4.15	4.25	--	--	--
April Consensus	**4.32**	**4.14**	**3.92**	**4.40**	**4.45**	**4.55**	**119.4**	**119.1**	**115.9**
High	4.38	4.38	4.55	4.75	5.00	5.25	120.9	122.3	121.8
Low	4.13	3.88	3.63	4.00	4.00	4.06	118.0	116.8	110.0
Last Months Avg.	4.37	4.25	3.94	4.51	4.51	4.52	121.0	121.2	116.5

Japan

Blue Chip Forecasters	Policy-Rate Balance Rate			10 Yr. Gov't Bond Yield %			Yen per US$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.50	0.75	1.00	1.50	1.50	--	155.0	152.0	--
BMO Capital Markets	0.75	1.00	1.25	1.40	1.43	1.20	146.8	145.0	139.5
ING Financial Markets	0.75	0.75	1.00	1.70	1.80	2.00	152.0	155.0	155.0
Moody's Analytics	0.44	0.50	0.75	1.27	1.33	1.46	152.2	151.0	143.3
Nomura Securities	0.50	0.75	1.00	--	--	--	145.0	142.5	--
Northern Trust	0.75	0.75	1.00	1.55	1.60	1.70	148.0	147.0	143.0
Oxford Economics	0.50	0.63	0.75	1.42	1.51	1.67	151.7	153.3	152.2
S&P Global Market Intelligence	--	--	--	--	--	--	146.4	144.1	138.2
Scotiabank	--	--	--	--	--	--	157.0	160.0	155.0
TS Lombard	0.25	0.35	0.50	1.40	1.60	1.80	145.0	140.0	135.0
Wells Fargo	0.75	1.00	1.00	1.60	1.70	1.65	--	--	--
April Consensus	**0.58**	**0.72**	**0.92**	**1.48**	**1.56**	**1.64**	**149.9**	**149.0**	**145.2**
High	0.75	1.00	1.25	1.70	1.80	2.00	157.0	160.0	155.0
Low	0.25	0.35	0.50	1.27	1.33	1.20	145.0	140.0	135.0
Last Months Avg.	0.57	0.74	0.90	1.28	1.37	1.51	152.1	150.6	147.6

United Kingdom

Blue Chip Forecasters	Official Bank Rate			10 Yr. Gilt Yields %			US$ per Pound Sterling		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	4.00	3.50	3.50	4.60	4.70	--	1.28	1.30	--
BMO Capital Markets	4.25	4.00	4.00	4.36	4.24	4.19	1.29	1.27	1.31
ING Financial Markets	4.25	4.00	3.50	4.60	4.60	4.70	1.27	1.27	1.30
Moody's Analytics	4.60	4.35	4.10	4.60	4.57	4.50	1.24	1.22	1.23
Nomura Securities	4.25	4.00	3.50	--	--	--	1.29	1.30	--
Northern Trust	4.25	4.00	3.50	4.80	4.70	4.60	1.27	1.28	1.30
Oxford Economics	4.35	4.10	3.60	4.68	4.65	4.47	1.27	1.25	1.25
S&P Global Market Intelligence	--	--	--	--	--	--	1.25	1.25	1.26
Scotiabank	4.25	4.00	3.50	--	--	--	1.24	1.22	1.25
TS Lombard	4.50	4.25	4.25	4.75	4.75	4.75	1.25	1.20	1.12
Wells Fargo	4.25	4.00	3.50	4.60	4.45	4.35	--	--	--
April Consensus	**4.30**	**4.02**	**3.70**	**4.62**	**4.58**	**4.51**	**1.27**	**1.26**	**1.25**
High	4.60	4.35	4.25	4.80	4.75	4.75	1.29	1.30	1.31
Low	4.00	3.50	3.50	4.36	4.24	4.19	1.24	1.20	1.12
Last Months Avg.	4.31	4.04	3.68	4.53	4.47	4.36	1.24	1.23	1.23

Switzerland

Blue Chip Forecasters	SNB Policy Rate			10 Yr. Gov't Bond Yield %			CHF per US$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.25	0.25	0.25	--	--	--	0.88	0.89	--
BMO Capital Markets	0.25	0.25	0.25	--	--	--	0.87	0.86	0.85
ING Financial Markets	0.00	0.00	0.00	0.60	0.70	0.80	0.90	0.89	0.87
Moody's Analytics	0.25	0.25	0.25	0.52	0.77	0.84	0.89	0.88	0.87
Northern Trust	0.00	0.00	0.00	0.65	0.70	0.75	0.88	0.87	0.86
Oxford Economics	0.50	0.50	0.50	0.63	0.60	0.60	0.90	0.91	0.90
S&P Global Market Intelligence	--	--	--	--	--	--	0.92	0.93	0.93
Scotiabank	--	--	--	--	--	--	0.91	0.92	0.89
TS Lombard	1.00	1.00	1.25	0.50	0.60	0.70	0.90	0.90	0.90
Wells Fargo	0.25	0.25	0.25	--	--	--	--	--	--
April Consensus	**0.31**	**0.31**	**0.34**	**0.58**	**0.67**	**0.74**	**0.89**	**0.89**	**0.88**
High	1.00	1.00	1.25	0.65	0.77	0.84	0.92	0.93	0.93
Low	0.00	0.00	0.00	0.50	0.60	0.60	0.87	0.86	0.85
Last Months Avg.	0.34	0.31	0.39	0.45	0.49	0.56	0.90	0.90	0.90

Canada

Blue Chip Forecasters	O/N MMkt Financing Rate			10 Yr. Gov't Bond Yield %			C$ per US$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	2.50	2.25	2.25	--	--	--	1.43	1.43	--
BMO Capital Markets	2.25	2.00	2.00	2.99	2.98	2.97	1.46	1.49	1.43
ING Financial Markets	2.50	2.50	2.50	3.00	3.25	3.75	1.45	1.44	1.42
Moody's Analytics	3.01	2.47	2.00	3.14	3.15	3.48	1.42	1.44	1.46
Nomura Securities	2.50	2.50	2.50	--	--	--	1.44	1.42	--
Northern Trust	2.75	2.50	2.50	3.10	3.00	2.90	1.43	1.41	1.37
Oxford Economics	2.75	2.75	2.75	3.26	3.40	3.68	1.47	1.48	1.47
S&P Global Market Intelligence	--	--	--	--	--	--	1.49	1.49	1.54
Scotiabank	2.75	2.75	2.75	3.00	3.05	3.15	1.43	1.45	1.44
TS Lombard	3.25	3.50	3.75	3.25	3.45	3.85	1.45	1.55	1.55
Wells Fargo	2.50	2.25	2.25	3.00	2.90	2.80	--	--	--
April Consensus	**2.68**	**2.55**	**2.53**	**3.09**	**3.15**	**3.32**	**1.45**	**1.46**	**1.46**
High	3.25	3.50	3.75	3.26	3.45	3.85	1.49	1.55	1.55
Low	2.25	2.00	2.00	2.99	2.90	2.80	1.42	1.41	1.37
Last Months Avg.	2.77	2.59	2.58	3.16	3.16	3.30	1.44	1.44	1.43

International Interest Rate And Foreign Exchange Rate Forecasts

Australia

Blue Chip Forecasters	Official Cash Rate			10 Yr. Gov't Bond Yield %			US$ per A$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	3.85	3.60	3.60	--	--	--	0.63	0.63	--
BMO Capital Markets	3.85	3.60	3.60	--	--	--	--	--	--
ING Financial Markets	3.85	3.60	3.35	4.25	4.50	5.00	0.62	0.63	0.64
Moody's Analytics	4.23	4.10	3.60	4.41	4.28	4.15	0.63	0.63	0.64
Nomura Securities	3.85	3.60	3.60	--	--	--	0.64	0.65	--
Northern Trust	4.10	3.85	3.60	4.50	4.40	4.30	0.64	0.65	0.67
Oxford Economics	4.10	4.10	3.73	4.25	4.20	4.19	0.63	0.63	0.65
S&P Global Market Intelligence	--	--	--	--	--	--	0.64	0.64	0.65
Scotiabank	--	--	--	--	--	--	0.62	0.60	0.63
TS Lombard	4.35	4.45	4.55	4.50	4.70	5.10	0.65	0.65	0.65
Wells Fargo	3.85	3.60	3.35	--	--	--	--	--	--
April Consensus	**4.00**	**3.83**	**3.66**	**4.38**	**4.42**	**4.55**	**0.63**	**0.63**	**0.65**
High	4.35	4.45	4.55	4.50	4.70	5.10	0.65	0.65	0.67
Low	3.85	3.60	3.35	4.25	4.20	4.15	0.62	0.60	0.63
Last Months Avg.	4.02	3.82	3.58	4.26	4.26	4.34	0.63	0.63	0.64

Euro area

Blue Chip Forecasters	Main Refinancing Rate			US$ per Euro		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	2.15	1.90	1.65	1.04	1.04	--
BMO Capital Markets	2.25	2.00	2.00	1.08	1.11	1.16
ING Financial Markets	2.25	2.25	2.25	1.05	1.07	1.09
Moody's Analytics	2.98	2.61	2.40	1.05	1.07	1.09
Nomura Securities	2.25	2.25	2.25	1.10	1.12	--
Northern Trust	2.15	2.15	2.15	1.07	1.08	1.10
Oxford Economics	2.36	2.15	1.83	1.05	1.03	1.03
S&P Global Market Intelligence	--	--	--	1.05	1.05	1.06
Scotiabank	2.15	1.90	1.90	1.02	1.00	1.03
TS Lombard	2.50	2.25	2.25	1.05	1.00	0.95
Wells Fargo	2.25	2.00	2.00	--	--	--
April Consensus	**2.33**	**2.15**	**2.07**	**1.06**	**1.06**	**1.06**
High	2.98	2.61	2.40	1.10	1.12	1.16
Low	2.15	1.90	1.65	1.02	1.00	0.95
Last Months Avg.	2.44	2.16	1.97	1.03	1.02	1.03

10 Yr. Gov't Bond Yields %

Blue Chip Forecasters	Germany			France			Italy			Spain		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	2.75	2.80	--	--	--	--	--	--	--	--	--	--
ING Financial Markets	2.80	2.90	3.10	3.45	3.60	3.80	3.90	4.05	4.25	3.40	3.55	3.75
Moody's Analytics	2.60	2.70	2.66	3.35	3.33	3.13	3.73	3.86	3.82	3.29	3.46	3.45
Northern Trust	2.80	2.70	2.60	3.50	3.40	3.30	3.90	3.80	3.70	3.40	3.30	3.20
Oxford Economics	2.88	2.85	2.82	3.58	3.61	3.65	3.98	4.03	4.14	3.57	3.58	3.60
TS Lombard	2.65	2.85	3.25	3.30	3.60	4.00	3.65	3.85	4.25	3.20	3.40	3.80
Wells Fargo	2.80	2.70	2.75	--	--	--	--	--	--	--	--	--
April Consensus	**2.75**	**2.79**	**2.86**	**3.44**	**3.51**	**3.58**	**3.83**	**3.92**	**4.03**	**3.37**	**3.46**	**3.56**
High	2.88	2.90	3.25	3.58	3.61	4.00	3.98	4.05	4.25	3.57	3.58	3.80
Low	2.60	2.70	2.60	3.30	3.33	3.13	3.65	3.80	3.70	3.20	3.30	3.20
Last Months Avg.	2.43	2.44	2.53	3.20	3.24	3.29	3.58	3.64	3.76	3.15	3.17	3.25

Consensus Forecasts
10-year Bond Yields vs U.S. Yield

	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-2.72	-2.92	-2.89	-2.91
United Kingdom	0.42	0.22	0.14	-0.04
Switzerland	-3.59	-3.82	-3.77	-3.81
Canada	-1.24	-1.31	-1.30	-1.22
Australia	0.15	-0.02	-0.03	0.00
Germany	-1.49	-1.65	-1.66	-1.68
France	-0.78	-0.96	-0.94	-0.97
Italy	-0.41	-0.57	-0.53	-0.51
Spain	-0.86	-1.03	-0.99	-0.99

Consensus Forecasts
Policy Rates vs U.S. Target Rate

	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-3.88	-3.74	-4.86	-3.00
United Kingdom	0.13	-0.02	-0.12	-0.22
Switzerland	-4.13	-4.00	-3.83	-3.57
Canada	-1.63	-1.64	-1.59	-1.39
Australia	-0.28	-0.31	-0.31	-0.25
Euro area	-1.73	-1.99	-2.00	-1.85

Viewpoints:

A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

March FOMC Meeting: Watch And Wait . . . At Least For Now

› The FOMC made no change to the Fed funds rate target range, leaving the mid-point of the target range at 4.375 percent
› The updated dot plot implies fifty basis points of funds rate cuts by year-end 2025, matching the December edition

As was widely expected, the FOMC made no changes to the Fed funds rate target range at this week's meeting, leaving the mid-point of the target range at 4.375 percent. The main questions around this week's meeting centered on the updated Summary of Economic Projections (SEP). Specifically, whether, or to what extent, the revised projections would show slower real GDP growth, a higher unemployment rate, and higher inflation in Q4 2025 relative to the SEP issued in December, and whether the updated dot plot would deviate from the two twenty-five basis point funds rate cuts by year-end 2025 implied in the December edition. While the updated SEP did indeed downgrade the growth outlook and up the inflation forecast, the updated dot plot again implies two funds rate cuts by year-end 2025 while the median year-end dots for 2026 and 2027 are also unchanged from the December edition. The Committee expressed greater uncertainty around the path of the labor market and the broader economy and seem to have gone into "watch and wait" mode as they, like the rest of us, await clarity on the policy front in terms of trade, fiscal, regulatory, and immigration policy. The FOMC did vote to slow the pace at which the Federal Reserve's balance sheet is being run down, which they had telegraphed in advance of today's meeting. The vote to keep the Fed funds rate target range unchanged was unanimous, but Governor Waller opposed slowing the pace of balance sheet run-off.

Interestingly, the post-meeting policy statement again characterizes economic activity as expanding at "a solid pace" despite what seem clear signs of a slowing pace of activity. Along those same lines, labor market conditions are again characterized as "solid" despite a steadily slowing trend rate of job growth, suggesting that the unemployment rate remains the main labor market indicator members are watching even as what should be a much slower pace of labor supply growth this year will blunt upward pressure on the unemployment rate as job growth slows further. The statement did note that "uncertainty around the economic outlook has increased" while dropping the passage noting that the risks to the dual mandate of price stability and full employment are roughly in balance.

The updated SEP show real GDP growth of 1.7 percent in 2025, on a Q4/Q4 basis, down from 2.1 percent in the December SEP while showing a slightly higher Q4 2025 unemployment rate – 4.4 percent – than in the December SEP. Most notably, PCE inflation, again on a Q4/Q4 basis, is now expected to run at 2.7 percent for 2025 while core PCE inflation is now expected to run at 2.8 percent, up from 2.5 percent in the December SEP and 2.2 percent in the September SEP. Though acknowledging that higher tariffs may, over the course of 2025, delay further progress on pushing inflation back to the FOMC's 2.0 percent target rate, Chair Powell noted in his post-meeting press conference that while the Committee's base case is that higher tariffs will not lead to sustained inflation pressures, it is simply too soon to know and that "we are going to have to see how things actually work out."

At the same time they downgraded their growth forecasts, Committee members significantly changed their assessments of risks to those forecasts. Eighteen of the nineteen Committee members see the risks to their GDP forecast as being weighted to the downside, up from five who did so in December and the most in the history of the SEP (which go back to 2012). At the same time, seventeen members assessed the risks to their unemployment rate forecast as being weighted to the upside, up from the seven who did so in December. Risks to the inflation forecasts were again heavily weighted to the upside, with eighteen members making that assessment for both total and core PCE inflation.

The changes to the growth and inflation forecasts reflect a FOMC left somewhat in a bind by a volatile and uncertain policy landscape. In that sense, it is fitting that the updated dot plot conveys no change in how members see the appropriate path of the funds rate. That said, the dispersion of the dots is more hawkish than in the December edition. Chair Powell stressed that the Committee need not be in a hurry to adjust their policy stance, particularly as the hard data remain "solid." Chair Powell did acknowledge the deterioration in survey (sentiment) data, but also noted that survey data are not always a good barometer of how the hard data will evolve. As long as the Committee consider the labor market and the broader economy to be on solid ground, they have time to wait for clarity on the policy front. Chair Powell's post-meeting press conference made it clear that they intend to make full use of that time.

February Personal Income/Spending: Services Spending Softens

› Personal income rose by 0.8 percent in February, personal spending rose by 0.4 percent, and the saving rate rose to 4.6 percent
› The PCE Deflator rose by 0.3 percent and the core PCE Deflator rose by 0.4 percent in February; on an over-the-year basis, the PCE Deflator is up 2.5 percent and the core PCE Deflator is up 2.8 percent

Total personal income rose by 0.8 percent in February, blowing past what we and the consensus expected, while total personal spending rose by 0.4 percent, right between what we (0.3 percent) and the consensus (0.5 percent) expected. With income growth easily outpacing spending growth, the personal saving rate rose to 4.6 percent from 4.3 percent in January though, as we'll explain below, there is less to the reported saving rate than meets the eye. The PCE Deflator, the FOMC's preferred gauge of price changes, rose by 0.3 percent in February, in line with expectations, while the core PCE Deflator rose by 0.4 percent, matching our above-consensus forecast. As of February, the total PCE Deflator is up 2.5 percent year-on-year and the core PCE

Viewpoints:

A Sampling of Views on the Economy, Financial Markets and Government Policy
Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

Deflator is up 2.8 percent. Adjusting for price changes, total consumer spending was up 0.1 percent in February, retracing very little of the ground lost in January, when real spending fell by 0.6 percent. Barring a March binge of epic proportions, this leaves real consumer spending on course to at best post a negligible gain in Q1, which will act as a powerful drag on Q1 real GDP growth. As for the jump in the core PCE Deflator, many fear that is but a preview of what lies ahead as higher tariffs go into place and in turn unleash renewed upward pressure on goods prices, even if the extent to which either of those will actu ally occur is hard to get a grip on at present.

Our miss on our forecast of income growth owes mainly to a significantly larger increase in transfer payments than we anticipated. On the heels of January's 1.8 percent advance, total transfer payments rose by another 2.2 percent in February. February's increase in transfer payments in part reflects another round of sizable increases in Medicare and Medicaid outlays and in part, according to BEA, reflects payments of settlements of liability claims filed against a domestic medical device manufacturer and a social media company. A point we commonly make is that while transfer payments are included in personal income, a sizable portion of transfer payments do not reflect cash payments to consumers but instead, as in the cases of Medicare and Medicaid, reflect payments to providers of services made on behalf of consumers. As such, the measured personal saving rate can be skewed by sizable increases in non-cash transfer payments. This also goes to why we consider after-tax personal income excluding transfer payments as the more meaningful guide as to the funds available to consumers for consumption and debt service. To that point, after-tax personal income excluding transfer payments rose by 0.5 percent in February, leaving it up 3.3 percent year-on-year. Aggregate private sector wage and salary earnings, the largest single component of personal income were up by 0.5 percent in February, while rental income rose by 0.9 percent and asset-based income rose by 0.4 percent, a stronger gain than we anticipated which also helps account for our miss on growth in total personal income.

As we anticipated, services spending was notably soft in February, up by just 0.2 percent, which is the smallest monthly increase since last August. At the same time, spending on goods rose by 0.9 percent, slightly ahead of our forecast, which accounts for our forecast miss on the spending side of the ledger. We anticipated a marked slowdown in discretionary services spending, which proved to be the case, with our proxy for such spending up by just 0.2 percent and down after adjusting for price changes. After surging in December and January, utilities outlays fell in February, which acted as a drag on overall services spending. Spending on consumer durable goods was notably strong in February, with sizable increases in categories such as motor vehicles, furniture, and appliances, gains which in part could reflect consumers pulling purchases forward to avoid tariff-related price increases down the line.

Though down considerably from its peak, core inflation is proving to be frustratingly persistent. Moreover, many are concerned that higher tariffs will unleash another round of upward pressure on goods prices, pushing overall core inflation higher. Even aside from that, recent months have shown core inflation more or less leveling off, not getting worse but neither getting closer to the FOMC's 2.0 percent target rate. Core services prices excluding housing rose by 0.4 percent in February, though if we are correct in expecting discretionary services spending to slow further, that will take some of the steam out of services prices. Even so, inflation returning to 2.0 percent any time soon seems most unlikely.

February Residential Construction: Evening Out The Score After January's Dip

› Total housing starts rose to an annualized rate of 1.501 million units; total housing permits fell to an annualized rate of 1.456 million units

› Single family starts rose to 1.108 million units and single family permits fell to 992,000 units (seasonally adjusted annualized rates)

› Multi-family starts rose to 393,000 units and multi-family permits fell to 464,000 units (seasonally adjusted annualized rates)

Total housing starts rose to an annual rate of 1.501 million units in February, easily trouncing even the highest forecast, while total housing permits fell to an annual rate of 1.456 million units, stopping short of our forecast. Recall that thanks to atypically harsh winter weather across much of the nation, residential construction activity slowed sharply in January, particularly in the South region. While we anticipated some payback in the February data, we thought that any such payback would be somewhat muted given sagging builder confidence stemming from elevated spec inventories and softening demand. We were wrong on that score, as single family starts bounced more strongly than we anticipated, particularly in the South region. Our premise that the jump in housing starts in February was more payback from weather-related disruptions in January than builders gearing up for the spring sales season would seem to be supported by the permits data, with single family permits basically flat, and by a further deterioration in builder sentiment in February. While the decline in mortgage interest rates over recent weeks has helped draw out what we believe is still a high degree of pent-up demand for home purchases, that doesn't mean builders are suddenly planning to ramp up starts. Spec inventories remain uncomfortably higher for many builders, whose main focus right now is paring those inventories down. If we're correct on this point, the March data will show a slower pace of starts, perhaps dramatically so given how harsh the March seasonal adjustment factors will be.

Richard F. Moody (Regions Financial Corporation)

Special Questions:

1. a. At what FOMC meeting will the next fed funds rate (FFR) cut occur?

May 2025	7%	Jun 2025	41%	Jul 2025	10%	Later	41%

b. How much will the next cut be? 25 bps 100% 50 bps 0%

c. By how much will the FFR target decline in total in 2025? 49 bps

d. What is your estimate of the long-term neutral (nominal) fed funds rate? 3.30%

2. What is the probability of a recession occurring over the next 12 months in:

the US	33%	the euro area	35%	the UK	36%

3. a. What is the probability that US inflation readings turn up meaningfully again over the next 6 months??

Consensus	47%	Top 10	65%	Bot 10	28%	Median	50%

b. Will the expected increase in tariffs provide a significant boost to US inflation?

No meaningful effect on inflation	3%
A one-time increase in prices only	62%
A longer-lasting pickup in inflation as tariffs interact with firm economic growth to stir inflation expectations	34%

4. What is the probability that the US experiences "stagflation-lite" during the next 12 months - that is, an extended period of rising inflation and below-trend GDP growth?

Consensus	48%	Top 10	67%	Bot 10	30%	Median	50%

5. a. What is your estimate of the US unemployment rate in: Dec 2025 4.4% Jun 2026 4.4%

b. What is your estimate of the long-run natural unemployment rate? 4.1%

6. What is your estimate of the US potential GDP growth rate?

Consensus	2.0%	Top 10	2.1%	Bot 10	1.9%	Median	2.0%

7. a. When will the next ECB policy rate cut occur?

Apr 2025	48%	Jun 2025	52%	Jul 2025	0%	Later	0%

b. When will the next BoE Bank rate cut occur?

May 2025	57%	Jun 2025	35%	Aug 2025	9%	Later	0%

c. When will the Bank of Japan next increase its uncollateralized overnight call rate?

Apr 2025	22%	Jun 2025	35%	Jul 2025	17%	Later	26%	The next move is more likely to be a cut	0%

8. Given the current global economic backdrop, how is the evolving geopolitical climate - including US trade policy shifts and ongoing ceasefire negotiations in Ukraine and the Middle East - shaping your economic outlook over the next 12-24 months?

Significant downside risk	31%
Moderate downside risk	69%
Neutral impact	0%
Moderate upside risk	0%
Significant upside risk	0%

Databank:

2025 Historical Data

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	-1.2	0.2	....	....	....	....	....	....	....	....	....	....
Auto & Light Truck Sales (b)	15.50	16.00	....	....	....	....	....	....	....	....	....	....
Personal Income (a, current $)	0.7	0.8	....	....	....	....	....	....	....	....	....	....
Personal Consumption (a, current $)	-0.3	0.4	....	....	....	....	....	....	....	....	....	....
Consumer Credit (e)	4.4	....	....	....	....	....	....	....	....	....	....	....
Consumer Sentiment (U. of Mich.)	71.7	64.7	57.0	....	....	....	....	....	....	....	....	....
Household Employment (c)	2234	-588	....	....	....	....	....	....	....	....	....	....
Nonfarm Payroll Employment (c)	125	151	....	....	....	....	....	....	....	....	....	....
Unemployment Rate (%)	4.0	4.1	....	....	....	....	....	....	....	....	....	....
Average Hourly Earnings (All, cur. $)	35.83	35.93	....	....	....	....	....	....	....	....	....	....
Average Workweek (All, hrs.)	34.1	34.1	....	....	....	....	....	....	....	....	....	....
Industrial Production (d)	1.9	1.4	....	....	....	....	....	....	....	....	....	....
Capacity Utilization (%)	77.7	78.2	....	....	....	....	....	....	....	....	....	....
ISM Manufacturing Index (g)	50.9	50.3	....	....	....	....	....	....	....	....	....	....
ISM Nonmanufacturing Index (g)	52.8	53.5	....	....	....	....	....	....	....	....	....	....
Housing Starts (b)	1.350	1.501	....	....	....	....	....	....	....	....	....	....
Housing Permits (b)	1.473	1.459	....	....	....	....	....	....	....	....	....	....
New Home Sales (1-family, c)	664	676	....	....	....	....	....	....	....	....	....	....
Construction Expenditures (a)	-0.2	....	....	....	....	....	....	....	....	....	....	....
Consumer Price Index (nsa, d)	3.0	2.8	....	....	....	....	....	....	....	....	....	....
CPI ex. Food and Energy (nsa, d)	3.3	3.1	....	....	....	....	....	....	....	....	....	....
PCE Chain Price Index (d)	2.5	2.5	....	....	....	....	....	....	....	....	....	....
Core PCE Chain Price Index (d)	2.7	2.8	....	....	....	....	....	....	....	....	....	....
Producer Price Index (nsa, d)	3.7	3.2	....	....	....	....	....	....	....	....	....	....
Durable Goods Orders (a)	3.3	0.9	....	....	....	....	....	....	....	....	....	....
Leading Economic Indicators (a)	-0.2	-0.3	....	....	....	....	....	....	....	....	....	....
Balance of Trade & Services (f)	-131.4	....	....	....	....	....	....	....	....	....	....	....
Federal Funds Rate (%)	4.33	4.33	....	....	....	....	....	....	....	....	....	....
3-Mo. Treasury Bill Rate (%)	4.34	4.33	....	....	....	....	....	....	....	....	....	....
10-Year Treasury Note Yield (%)	4.63	4.45	....	....	....	....	....	....	....	....	....	....

2024 Historical Data

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	-0.8	1.0	0.4	-0.2	0.2	-0.3	1.2	-0.1	0.9	0.6	0.7	0.7
Auto & Light Truck Sales (b)	15.03	15.67	15.68	16.03	15.83	14.99	15.83	15.14	15.80	16.12	16.66	16.87
Personal Income (a, current $)	1.4	0.4	0.6	0.1	0.3	0.2	0.2	0.1	0.3	0.6	0.3	0.3
Personal Consumption (a, current $)	0.1	0.5	0.7	0.3	0.5	0.3	0.6	0.2	0.7	0.4	0.6	0.9
Consumer Credit (e)	3.7	2.6	-0.5	0.4	2.3	0.5	5.6	1.0	0.7	2.4	-3.3	8.7
Consumer Sentiment (U. of Mich.)	79.0	76.9	79.4	77.2	69.1	68.2	66.4	67.9	70.1	70.5	71.8	74.0
Household Employment (c)	66	-177	412	70	-331	-9	64	206	377	-346	-273	478
Nonfarm Payroll Employment (c)	119	222	246	118	193	87	88	71	240	44	261	323
Unemployment Rate (%)	3.7	3.9	3.9	3.9	4.0	4.1	4.2	4.2	4.1	4.1	4.2	4.1
Average Hourly Earnings (All, cur. $)	34.47	34.54	34.67	34.75	34.89	35.00	35.07	35.23	35.33	35.48	35.61	35.68
Average Workweek (All, hrs.)	34.2	34.3	34.4	34.2	34.3	34.3	34.2	34.3	34.2	34.3	34.3	34.2
Industrial Production (d)	-1.2	-0.1	-0.3	-0.8	0.0	0.9	-0.5	-0.1	-0.7	-0.3	-0.8	0.5
Capacity Utilization (%)	77.2	78.1	77.8	77.7	78.1	78.2	77.6	77.9	77.5	77.1	76.8	77.6
ISM Manufacturing Index (g)	48.9	47.6	49.8	48.8	48.5	48.3	47.0	47.5	47.5	46.9	48.4	49.2
ISM Nonmanufacturing Index (g)	53.2	52.2	51.3	49.6	53.5	49.2	51.4	51.6	54.5	55.8	52.5	54.0
Housing Starts (b)	1.376	1.546	1.299	1.377	1.315	1.329	1.262	1.379	1.355	1.344	1.305	1.526
Housing Permits (b)	1.508	1.563	1.485	1.440	1.399	1.454	1.406	1.470	1.425	1.419	1.493	1.482
New Home Sales (1-family, c)	664	643	683	736	672	672	707	691	726	623	676	713
Construction Expenditures (a)	1.0	0.5	0.1	1.3	0.2	-1.1	0.0	0.9	-0.9	1.6	0.4	0.5
Consumer Price Index (nsa, d)	3.1	3.2	3.5	3.4	3.3	3.0	2.9	2.5	2.4	2.6	2.7	2.9
CPI ex. Food and Energy (nsa, d)	3.9	3.8	3.8	3.6	3.4	3.3	3.2	3.2	3.3	3.3	3.3	3.2
PCE Chain Price Index (d)	2.6	2.6	2.8	2.7	2.6	2.4	2.5	2.3	2.1	2.3	2.5	2.6
Core PCE Chain Price Index (d)	3.1	2.9	3.0	2.9	2.7	2.6	2.7	2.7	2.7	2.8	2.8	2.9
Producer Price Index (nsa, d)	1.0	1.6	2.0	2.3	2.5	2.9	2.4	2.1	2.1	2.8	2.9	3.4
Durable Goods Orders (a)	-3.8	1.2	0.8	0.2	0.1	-6.9	9.8	-0.9	-0.4	0.7	-2.0	-1.8
Leading Economic Indicators (a)	-0.5	0.1	-0.2	-0.6	-0.4	-0.2	-0.5	-0.3	-0.4	-0.3	0.3	-0.1
Balance of Trade & Services (f)	-66.9	-69.3	-68.5	-75.9	-76.6	-74.2	-79.9	-71.4	-85.0	-73.7	-78.2	-98.1
Federal Funds Rate (%)	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.13	4.83	4.64	4.48
3-Mo. Treasury Bill Rate (%)	5.45	5.44	5.47	5.44	5.46	5.51	5.43	5.30	4.92	4.72	4.62	4.39
10-Year Treasury Note Yield (%)	4.06	4.21	4.21	4.54	4.48	4.31	4.25	3.87	3.72	4.10	4.36	4.39

(a) month-over-month % change; (b) millions, saar; (c) month-over-month change, thousands; (d) year-over-year % change; (e) annualized % change; (f) $ billions; (g) level. Most series are subject to frequent government revisions. Use with care.

Calendar of Upcoming Economic Data Releases

Monday	Tuesday	Wednesday	Thursday	Friday
31 Chicago PMI (Mar) Agricultural Prices (Feb) Texas Manufacturing Outlook Survey (Mar)	**April 1** ISM Manufacturing (Mar) S&P Global Mfg PMI (Mar) JOLTS (Feb) Construction (Feb) Texas Service Sector Outlook Survey (Mar)	**2** ADP Employment Report (Mar) Manufacturers' Shipments, Inventories & Orders (Feb) BEA Auto & Truck Sales (Mar) FRB Philadelphia Coincident Economic Activity Index (Jan) Mortgage Applications EIA Crude Oil Stocks	**3** International Trade (Feb) ISM Services PMI (Mar) S&P Global Services PMI (Mar) Challenger Employment Report (Mar) Weekly Jobless Claims	4 Employment Situation (Mar) Public Debt (Mar) Interest on Public Debt (Mar) Baker Hughes International Rig Count (Mar)
7 Consumer Credit (Feb) Dallas Fed Banking Conditions Survey (Mar) Treasury Auction Allotments (Mar)	**8** NFIB (Mar) Kansas City Fed Labor Market Conditions Indicators (Mar)	**9** Wholesale Trade (Feb) Kansas City Financial Stress Index (Mar) FRB Philadelphia Coincident Economic Activity Index (Feb) Mortgage Applications EIA Crude Oil Stocks	**10** CPI (Mar) Real Earnings (Mar) Transportation Services Index (Feb) Cleveland Fed Median CPI (Mar) Monthly Treasury (Mar) Weekly Jobless Claims	11 Producer Prices (Mar) Housing Affordability (Feb) Consumer Sentiment (Apr, Preliminary)
14 NABE Outlook (Q1) OPEC Crude Oil Spot Prices (Mar)	**15** Import & Export Prices (Mar) Empire State Mfg Survey (Apr)	**16** Advance Retail Sales (Mar) IP & Capacity Utilization (Mar) MTIS (Feb) Home Builders (Apr) TIC Data (Feb) Business Leaders Survey (Apr) Mortgage Applications EIA Crude Oil Stocks	**17** New Residential Construction (Mar) Philadelphia Fed Mfg Business Outlook Survey (Apr) Weekly Jobless Claims	**18** **Good Friday** **All Markets Closed**
21 Composite Indexes (Mar)	**22** H.6 Money Stock (Mar) Philadelphia Fed Nonmanufacturing Business Outlook Survey (Apr) Richmond Fed Mfg & Service Sector Surveys (Apr)	**23** New Residential Sales (Mar) Treas Auction Allotments (Apr) Final Building Permits (Mar) Steel Imports for Consumption (Mar, Preliminary) FRB Philadelphia Coincident Econ Activity Index (Mar) S&P Global Flash PMI (Apr) Mortgage Applications EIA Crude Oil Stocks	**24** Advance Durable Goods (Mar) Existing Home Sales (Mar) Chicago Fed National Activity Index (Mar) Kansas City Fed Manufacturing Survey (Apr) Weekly Jobless Claims	**25** Consumer Sentiment (Apr, Final) Retail Trade Revisions Strike Report (Apr) Alternate Measures of Labor Underutilization (Q1 Kansas City Fed Services (Apr))
28 Housing Vacancies (Q1) NABE Business Conditions Survey (Q1) Texas Manufacturing Outlook Survey (Apr) Housing Vacancies & Homeownership (Q1)	**29** Adv Trade & Inventories(Mar) FHFA HPI (Feb) Case Shiller HPI (Feb) JOLTS (Mar) Texas Service Sector Outlook Survey (Apr) Consumer Confidence (Apr)	**30** GDP, Key Source Data and Selected NIPA Tables(Q1,Adv) Underlying NIPA (Q1, Adv) Personal Income (Mar) ECI (Q1 & Revisions) ADP (Apr); Agri Prices (Mar) Dallas Fed TrimMean PCE(Mar) Chicago PMI (Apr) Pending Home Sales (Mar) Mort App & EIA Crude Oil Stocks	**May 1** ISM Manufacturing (Apr) S&P Global Mfg PMI (Apr) Construction (Mar) Challenger Employment Report (Apr) Weekly Jobless Claims	**2** Employment Situation (Apr) Manufacturers' Shipments, Inventories & Orders (Mar) BEA Auto and Truck Sales (Apr) Baker Hughes International Rig Count (Apr)
5 ISM Services PMI (Apr) S&P Global Services PMI (Apr)	**6** International Trade (Mar) Public Debt (Apr) Interest on Public Debt (Apr) Kansas City Fed Labor Market Conditions Indicators (Apr) State Imports & Exports (Mar) FOMC Meeting	**7** BED (Q3) Consumer Credit (Mar) Treasury Auction Allotments (Apr) Mortgage Applications EIA Crude Oil Stocks FOMC Meeting	**8** Productivity & Costs (Q1) Wholesale Trade (Mar) First Time Housing Affordability (Q1) Weekly Jobless Claims	**9** Kansas City Financial Stress Index (Apr)

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Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them

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Elections Have Consequences

What comes next? After winning the 2008 presidential election, Barack Obama commented that elections have consequences. That will likely be the case for the recent US national election that saw Donald Trump record an unexpectedly large victory in the presidential election, with the Republicans retaining control of the House and retaking control of the Senate, albeit with relatively small majorities. Financial markets are now attempting to figure out what the consequences of this political trifecta will be. On the one hand, it is widely expected that the economy will be boosted by lower taxes, less regulation and re-energized domestic energy markets. Also, there are expectations that the government will be downsized somewhat.

On the other hand, there is more uncertainty surrounding the range of policy changes that will be enacted and the fear that looser fiscal policy in an economy already growing above trend will lead to overheating and a rebound in inflation. Along with that, the prospect of meaningfully higher tariffs raises the specter of global trade conflict accompanied by higher domestic prices. And restraint on immigration could slow labor supply growth, putting upward pressure on wages and potentially on prices.

Financial markets are forward looking. So, they are already attempting to price in what the economic environment might look like in the near future. US equity markets appear to think that the new political environment will be good for businesses and profits. While a little of the initial run-up in equity prices has faded recently, the S&P500 stock price index has risen a little more than 5% since the election. The US dollar has also participated in this surge of optimism with its value against the euro rising about 4% since the election.

Market interest rates have continued to diverge. With the Fed cutting its fed funds rate (FFR) target another 25bps at the November 6-7 FOMC meeting, shorter-term market rates are continuing to follow the FFR lower. Longer-term rates have continued to edge up, likely reflecting an anticipated boost to economic growth from looser fiscal policy ahead and renewed concern over the inflation outlook. Recent inflation readings have been sticky, and market-based five-year inflation expectations have risen about 50bps since mid-September.

While the Blue Chip Financial Forecasts (BCFF) consensus inflation outlook is still relatively benign, it was increased slightly in the most recent survey all across the forecast period. Moreover, the consensus estimates a 36% probability of inflation reaccelerating over the next six months (up from 30% last month) with 63% of respondents saying that this estimate has risen since the election. None of the respondents thought it had declined. Even with higher inflation concerns, the consensus thinks that the rise in longer-term interest rates has about run its course. For example, it anticipates that the yield on the 10-year Treasury note will decline by about 30bps over the six-quarter forecast horizon but will end the period 32bps higher than expected last month.

Fed expected to slow pace of rate cuts. Both financial markets and the BCFF panel (79% of respondents) are expecting that the election results will slow the pace of FFR cuts going forward. FFR-cut expectations had already begun to recede ahead of the election, mostly on sticky inflation news and comments from Fed officials. But the expected slowdown in rate cuts has gained momentum since the election. The FFR futures market is currently pricing in just a 56% chance of a 25bps rate cut at the December FOMC meeting, down from around 80% just a month or so ago.

Not only has the FFR futures market lowered the probability of a near-term rate cut, it has also significantly lowered rate-cut expectations for the coming year. It is now pricing in a 76% chance of one 25bps cut in the first quarter of next year and an 84% chance of just one 25bps cut in the second quarter. For all of 2025, the FFR futures market now expects only 67bps of rate cuts. At the end of October, it had looked for 90bps of cuts in 2025 and at the beginning of October, it had anticipated 140bps of cuts next year.

While the BCFF consensus has also lowered its FFR cut expectations, the reduction has not been as dramatic as that in the FFR futures market. The consensus is still fully expecting a 25bps cut at the December FOMC meeting. For 2025, the BCFF consensus now looks for 103bps of cuts versus 126bps of cuts in the November survey. Some of this decline likely reflects the outcome of the election but a meaningful part also reflects statements made by Fed Chair Powell in the middle of November that pointed to a more patient Fed ahead and were subsequently supported by remarks from other Fed officials.

Long-range outlook. This month's survey also contains the semiannual long-range forecasts—extending out to 2035. The BCFF consensus looks for 2.0% growth in real GDP in 2026-2030 and 1.9% in the 2031-35 period. Each estimate is 0.1%-point lower than the June forecast, but still in line with the CBO estimate of the economy's potential growth rate. However, GDP growth is expected to be much slower than the 2.5% experienced during the five years prior to the pandemic.

On inflation, the consensus expects the Federal Reserve to essentially achieve its 2% target with the PCE price index inflation rate (the measure that the Fed targets) expected to average 2.2% from 2026 to 2030 and to slow to 2.1% over the following five years. The expectation for 2026-2030 is slightly above the June survey (2.1%) while the 2031-2035 estimate is the same. Both are well above the 1.3% that was experienced in the five years prior to the pandemic.

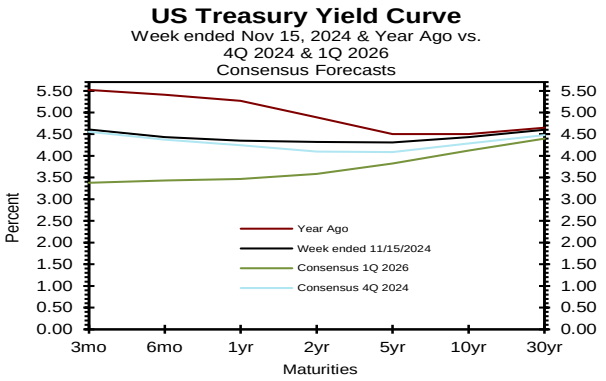
Of particular interest is that even though the economy is expected to grow at around its potential rate and that inflation is expected to stabilize near the Fed's target over the ten years from 2026, these occur at markedly higher expected interest rate levels (both short- and long-term) than in the five years prior to the pandemic. The fed funds rate is expected to average 3.25% over the entire 10-year period compared with 1.10% in the five years before the pandemic. This implies a meaningfully higher neutral FFR and higher real (inflation-adjusted) interest rates over the longer term than experienced in the five years preceding the pandemic.

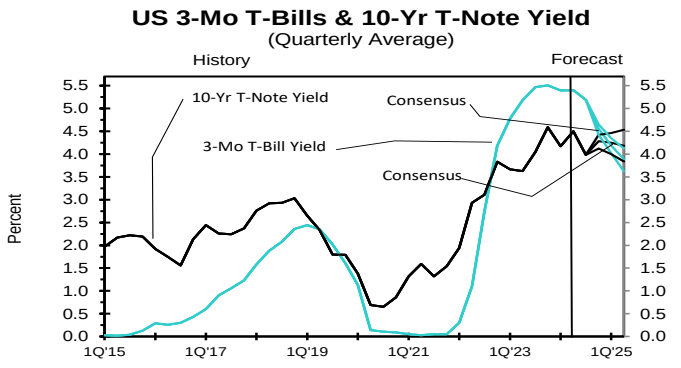
Sandy Batten (Haver Analytics, New York, NY)

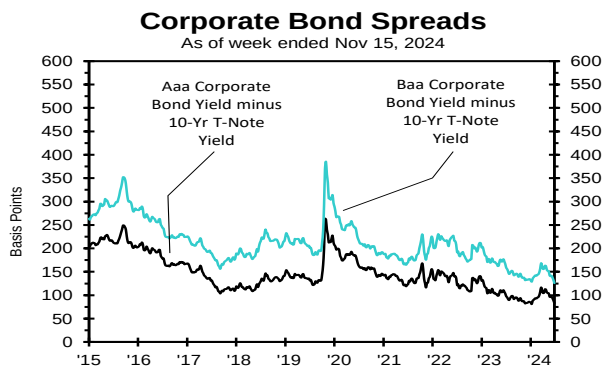
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

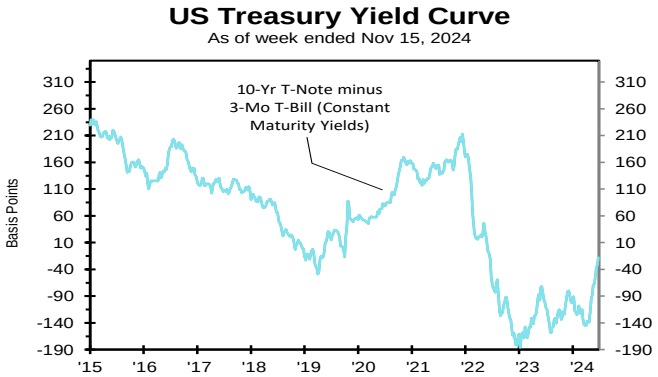
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	4Q	1Q	2Q	3Q	4Q	1Q
Interest Rates	Nov 15	Nov 8	Nov 1	Oct 25	Oct	Sep	Aug	3Q 2024	2024	2025	2025	2025	2025	2026
Federal Funds Rate	4.62	4.83	4.83	4.83	4.83	5.13	5.33	5.26	**4.6**	**4.2**	**3.9**	**3.7**	**3.6**	**3.5**
Prime Rate	7.79	8.00	8.00	8.00	8.00	8.30	8.50	8.43	**7.7**	**7.4**	**7.1**	**6.9**	**6.7**	**6.6**
SOFR	4.59	4.77	4.84	4.83	4.85	5.15	5.33	5.27	**4.6**	**4.3**	**4.0**	**3.7**	**3.5**	**3.4**
Commercial Paper, 1-mo.	4.57	4.64	4.74	4.76	4.78	5.02	5.29	5.20	**4.6**	**4.2**	**3.9**	**3.7**	**3.5**	**3.4**
Treasury bill, 3-mo.	4.61	4.64	4.66	4.72	4.72	4.92	5.30	5.22	**4.6**	**4.2**	**3.9**	**3.6**	**3.5**	**3.4**
Treasury bill, 6-mo.	4.43	4.40	4.44	4.48	4.44	4.55	4.96	4.92	**4.4**	**4.1**	**3.8**	**3.6**	**3.5**	**3.4**
Treasury bill, 1 yr.	4.35	4.29	4.28	4.26	4.20	4.03	4.43	4.45	**4.2**	**4.0**	**3.8**	**3.6**	**3.5**	**3.5**
Treasury note, 2 yr.	4.32	4.22	4.15	4.06	3.97	3.62	3.97	4.03	**4.1**	**4.0**	**3.8**	**3.7**	**3.6**	**3.6**
Treasury note, 5 yr.	4.31	4.19	4.15	4.03	3.91	3.50	3.71	3.79	**4.1**	**4.1**	**4.0**	**3.9**	**3.8**	**3.8**
Treasury note, 10 yr.	4.43	4.32	4.30	4.22	4.10	3.72	3.87	3.95	**4.3**	**4.3**	**4.2**	**4.1**	**4.1**	**4.1**
Treasury note, 30 yr.	4.60	4.51	4.52	4.49	4.38	4.04	4.15	4.22	**4.5**	**4.5**	**4.4**	**4.4**	**4.4**	**4.4**
Corporate Aaa bond	5.26	5.21	5.23	5.19	5.07	4.81	4.96	5.00	**5.1**	**5.1**	**5.1**	**5.1**	**5.1**	**5.1**
Corporate Baa bond	5.69	5.65	5.68	5.64	5.52	5.31	5.48	5.50	**5.9**	**5.9**	**5.9**	**5.9**	**5.9**	**6.0**
State & Local bonds	4.09	4.14	4.14	4.13	4.05	3.99	4.05	4.08	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**	**4.2**
Home mortgage rate	6.78	6.79	6.72	6.54	6.43	6.18	6.50	6.51	**6.6**	**6.5**	**6.4**	**6.3**	**6.2**	**6.2**
	History								Consensus Forecasts-Quarterly					
	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
Key Assumptions	2022	2023	2023	2023	2023	2024	2024	2024	2024	2025	2025	2025	2025	2026
Fed's AFE $ Index	119.8	115.5	114.6	115.0	116.6	115.5	117.3	114.9	**116.8**	**117.8**	**117.7**	**116.9**	**116.2**	**116.1**
Real GDP	3.4	2.8	2.4	4.4	3.2	1.6	3.0	2.8	**2.1**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**
GDP Price Index	3.7	3.6	1.9	3.2	1.5	3.0	2.5	1.8	**2.2**	**2.3**	**2.2**	**2.2**	**2.3**	**2.3**
Consumer Price Index	4.0	3.8	3.0	3.4	2.7	3.8	2.8	1.2	**2.5**	**2.5**	**2.4**	**2.4**	**2.4**	**2.5**
PCE Price Index	4.0	3.9	2.9	2.7	1.7	3.4	2.5	1.5	**2.2**	**2.3**	**2.2**	**2.3**	**2.3**	**2.3**

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP, GDP Price Index and PCE Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index history is from the Department of Labor's Bureau of Labor Statistics (BLS).









----------Policy Rates[1]----------

	History: Latest:	Month Ago:	Year Ago:	Consensus Forecasts Months From Now: 3	6	12
U.S.	4.63	4.88	5.38	**4.31**	**4.05**	**3.70**
Japan	0.25	0.25	-0.10	**0.42**	**0.57**	**0.73**
U.K.	4.75	5.00	5.25	**4.55**	**4.17**	**3.75**
Switzerland	1.00	1.00	1.75	**0.69**	**0.58**	**0.61**
Canada	3.75	4.25	5.00	**3.33**	**3.05**	**2.87**
Australia	4.35	4.35	4.35	**4.24**	**4.07**	**3.76**
Euro area	3.40	3.65	4.50	**2.88**	**2.48**	**2.26**

----------10-Yr. Government Bond Yields[2]------

	History: Latest:	Month Ago:	Year Ago:	Consensus Forecasts Months From Now: 3	6	12
U.S.	4.43	4.08	4.44	**4.33**	**4.35**	**4.40**
Germany	2.34	2.19	2.59	**2.32**	**2.31**	**2.37**
Japan	1.08	0.97	0.77	**1.13**	**1.19**	**1.32**
U.K.	4.44	4.10	4.15	**4.28**	**4.27**	**4.27**
France	3.06	2.93	3.08	**3.05**	**3.07**	**3.17**
Italy	3.55	3.35	4.36	**3.58**	**3.62**	**3.81**
Switzerland	0.38	0.44	0.93	**0.34**	**0.36**	**0.46**
Canada	3.28	3.13	3.68	**3.17**	**3.14**	**3.30**
Australia	4.64	4.31	4.47	**4.25**	**4.14**	**4.32**
Spain	3.09	2.90	3.58	**3.07**	**3.13**	**3.31**

----------Foreign Exchange Rates[3]----------

	History: Latest:	Month Ago:	Year Ago:	Consensus Forecasts Months From Now: 3	6	12
U.S.	119.09	115.94	116.52	**95.4**	**95.4**	**93.7**
Japan	154.59	149.58	149.82	**151.3**	**149.6**	**146.4**
U.K.	1.26	1.30	1.24	**1.27**	**1.26**	**1.28**
Switzerland	0.89	0.87	0.89	**0.89**	**0.89**	**0.89**
Canada	1.41	1.38	1.37	**1.38**	**1.38**	**1.36**
Australia	0.65	0.67	0.65	**0.66**	**0.66**	**0.67**
Euro	1.06	1.09	1.09	**1.06**	**1.05**	**1.07**

	Consensus Policy Rates vs. US Rate: Now	In 12 Mo.
Japan	-4.38	**-2.97**
U.K.	0.13	**0.05**
Switzerland	-3.63	**-3.09**
Canada	-0.88	**-0.83**
Australia	-0.28	**0.06**
Euro area	-1.23	**-1.44**

	Consensus 10-Year Gov't Yields vs. U.S. Yield: Now	In 12 Mo.
Germany	-2.09	**-2.02**
Japan	-3.35	**-3.08**
U.K.	0.01	**-0.13**
France	-1.34	**-1.23**
Italy	-0.88	**-0.59**
Switzerland	-4.05	**-3.94**
Canada	-1.15	**-1.09**
Australia	0.21	**-0.08**
Spain	-1.34	**-1.09**

Forecasts of panel members are on pages 10 and 11. Definitions of variables are as follows: [1]Monetary policy rates. [2]Government bonds are yields to maturity. [3]Foreign exchange rate forecasts for U.K., Australia and the Euro are U.S. dollars per currency unit. For the U.S dollar, forecasts are of the U.S. Federal Reserve Board's AFE Dollar Index.

International. The policy implications of a new US administration have been driving financial market sentiment since the election on November 5. So far, investors have responded with a more optimistic take on the outlook for the US economy but with more pessimistic views about the rest of the world. A potential easing of US fiscal policy (e.g., via tax cuts) has also triggered a re-evaluation of Fed policy, causing US yields and the value of the dollar to climb. The reverberations for the rest of the world could, in part, be felt via a stronger US dollar particularly for those countries that hold sizeable reservoirs of USD-denominated debt. A stronger dollar raises the cost of servicing this debt, straining public and private balance sheets in vulnerable economies. But potential protectionist measures mean that trade channels will also be significant not least for economies with large US exposures and/or those that have been heavily reliant on US import demand to fuel economic growth in recent months.

These broader global concerns have been reflected in our panelists' expectations for the world economy in the year ahead. As a result of the US election outcome, 46% of our panelists have lowered their forecast for global (ex US) growth for 2025 while 32% have left that forecast unchanged. However, 21% of panelists have raised their global (ex US) growth outlook, a likely consequence perhaps of shifts in US economic policy, their potential boost to US economic growth, and some spill-over from firmer US demand into activity elsewhere.

The consensus view regarding the potential benefits for the US economy and potential losses for the rest of the world have found a big echo, so far, in the incoming data. Latest flash PMI survey data for the US, for example, showed that business activity grew at a strong and accelerating pace in November. That contrasted, however, with the message from Europe, where the flash PMIs pointed to a renewed downturn in the euro area and, to a lesser degree, in the UK. Japan's PMI data, in the meantime, additionally revealed that a downturn persisted in November for the second consecutive month, albeit not as marked as recorded in October.

Europe's worsening plight has been exacerbated of late by a number of domestic factors including political gridlock in Germany and France, and an October budget that lifted the tax burden on the UK corporate sector. Implications for monetary policy, however, are ambiguous in light of the ramifications for the Fed and the role of interest rate differentials in driving exchange rates. In response to a special question, most of our panelists, specifically 84%, do not believe that likely US policy changes will slow the pace of policy rate reductions from either the ECB or the BoE in the year ahead. That contrasts with the US where 79% of panelists believe that those policy changes will necessitate a slower pace of policy rate reductions from the Fed. As noted, these views have already found an echo via a strengthening US dollar. But our panelists' forecasts for EUR/USD have additionally seen some big reductions at the 3-, 6- and 12-month ahead horizons.

Similar global dynamics have engulfed the outlook for Japan with our panelists now expecting a weaker JPY in the year ahead compared with November. However, forecasts for the BoJ's policy rate have also been lifted a little. This likely reflects Japan's persistent CPI inflation, especially in services, which is seen as positive for the economic outlook due to its link with domestic wage growth and the sustainability of higher inflation in coming months.

Finally, in China, concerns about the economic outlook have also intensified in financial markets largely thanks to the specific trade policy intentions of a new US administration. President-elect Trump has, for example, suggested raising tariffs on Chinese imports by up to 60%. Beyond the direct damage to China's exports, that could trigger some retaliation and lead to weaker world trade growth and global supply chain disruption. These tariffs align with a broader US policy goal of further decoupling the US from China and curbing its progress in key technologies..

Fourth Quarter 2024

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	A. Fed's Adv Fgn Econ $ Index	B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
	Percent Per Annum -- Average For Quarter															Avg. For ---Qtr.---	(Q-Q % Change) (SAAR)			
	Short-Term							Intermediate-Term			Long-Term									
Scotiabank Group	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.3	1.4 L	2.1	2.0
J.P. Morgan Chase	4.8 H	na	na	na	na	na	na	3.9	3.8	4.1	4.4	na	na	na	na	na	2.3	2.4	2.8	2.6
Chmura Economics & Analytics	4.7	7.8	4.7	4.6	4.6	4.4	4.3	4.1	4.1	4.3	4.5	5.1	6.7 H	na	6.6	na	0.8 L	2.4	2.7	2.4
Comerica Bank	4.7	7.8	4.7	na	4.5	4.4	4.2	4.2	4.2	4.3	4.6	5.1	5.8	na	6.7	na	1.5	1.9	1.9	1.7 L
DePrince & Assoc.	4.7	7.8	4.6	4.7 H	4.6	4.4	4.3	4.2	4.1	4.3	4.5	5.1	5.7	4.0	6.7	116.8	1.7	2.5	2.6	2.4
Georgia State University	4.7	7.9 H	na	na	4.7	4.3	4.3	4.2	4.0	4.4	4.5	5.0	5.8	na	6.5	na	1.9	1.8	2.2	1.8
GLC Financial Economics	4.7	7.8	4.8	4.6	4.6	4.4	4.0	3.7	3.6	4.0	4.3	5.0	5.7	4.2	6.4	115.1	1.9	2.1	2.4	2.1
KPMG	4.7	7.8	4.7	4.6	4.7	4.5	4.2	4.0	4.0	4.2	4.5	5.0	5.8	na	6.5	na	1.5	2.1	2.5	1.8
MacroPolicy Perspectives	4.7	7.8	4.7	4.7 H	4.7	4.4	4.3	4.2	4.1	4.4	4.5	4.9	5.6 L	4.1	6.7	118.8	2.4	2.9	2.9	2.5
PNC Financial Services Corp.	4.7	7.8	4.7	na	4.5	4.3	4.1	4.1	4.1	4.2	4.5	na	5.6 L	4.0	6.5	116.4	1.7	2.0	1.8 L	2.1
Roberts Capital Advisors	4.7	7.8	4.7	4.7 H	4.5	4.3	4.3	4.2	4.1	4.3	4.5	5.0	5.8	4.4	6.6	116.0	2.3	2.0	2.4	2.1
S&P Global Market Intelligence	4.7	7.8	4.7	na	4.6	4.3	4.2	4.0	4.0	4.2	4.4	na	na	na	6.5	na	1.5	2.1	2.5	1.8
The Lonski Group	4.7	7.8	4.6	4.7 H	4.6	4.4	4.2	4.2	4.2	4.3	4.5	5.2	5.8	4.2	6.7	118.6	2.3	2.3	2.0	2.1
The Northern Trust Company	4.7	7.8	4.6	4.7 H	4.6	4.5	4.3	4.2	4.2	4.3	4.6	5.1	5.7	4.1	6.6	119.0 H	2.9	3.0 H	2.4	2.2
Action Economics	4.6	7.8	5.3 H	4.5	4.5	4.4	4.2	4.2	4.2	4.3	4.5	5.1	5.8	4.3	7.3 H	114.9	2.3	2.3	2.5	2.2
BMO Capital Markets	4.6	7.8	4.6	4.6	4.6	4.4	4.3	4.1	4.1	4.3	4.5	5.1	5.8	4.4	6.7	118.1	2.0	2.1	2.7	2.5
Chan Economics	4.6	7.6	4.6	4.5	4.5	4.2	3.9 L	3.6 L	3.5 L	3.9 L	4.2 L	5.2	6.2	4.5	6.7	116.0	2.2	2.2	2.4	2.1
Daiwa Capital Markets America	4.6	7.8	4.6	na	4.5	na	na	3.8	3.7	4.0	4.3	na	na	na	6.2 L	114.0 L	1.8	2.4	2.6	2.5
EY-Parthenon	4.6	na	na	na	4.5	na	na	na	na	4.3	na	na	na	na	na	na	2.1	2.1	2.4	2.4
Fannie Mae	4.6	7.8	na	na	4.6	4.4	4.3	4.2	4.2	4.3	4.5	na	na	na	6.7	na	2.0	2.1	2.5	1.8
Loomis, Sayles & Company	4.6	7.8	4.6	4.6	4.6	4.4	4.3	4.0	4.2	4.2	4.4	5.0	5.8	4.2	6.6	116.7	1.5	2.5	2.8	2.5
MacroFin Analytics & Rutgers Bus School	4.6	7.7	4.6	4.6	4.6	4.5	4.3	4.2	4.3 H	4.3	4.5	5.2	5.7	4.4	6.6	119.0 H	1.9	1.9	2.4	2.3
Moody's Analytics	4.6	7.8	4.6	4.6	4.4	4.3	4.2	4.1	4.1	4.1	4.5	5.1	5.7	3.9 L	6.4	na	2.0	1.9	2.3	2.0
Naroff Economics LLC	4.6	7.6	4.7	4.7 H	4.6	4.5	4.3	4.0	4.1	4.3	4.4	na	na	4.0	6.6	116.6	2.5	2.5	2.7	2.5
Nomura Securities, Inc.	4.6	7.8	na	na	na	na	na	4.3 H	4.3 H	4.5	na	na	na	na	na	na	2.6	1.8	3.1 H	2.7
Oxford Economics	4.6	7.8	4.6	na	4.6	4.4	4.2	4.1	4.2	4.4	4.5	4.6 L	na	na	6.7	116.7	2.5	3.0 H	2.3	2.1
Regions Financial Corporation	4.6	7.8	4.7	4.6	4.6	4.4	4.3	4.2	4.2	4.3	4.5	5.2	5.9	4.4	6.6	117.7	1.5	1.9	2.2	1.9
Santander Capital Markets	4.6	7.8	4.7	4.6	4.6	4.4	4.3	4.2	4.2	4.3	4.5	5.1	5.7	4.1	6.7	117.8	2.3	2.5	2.9	2.3
Societe Generale	4.6	7.8	4.7	na	4.5	4.3	4.3	4.2	4.2	4.3	4.5	na	na	na	na	na	2.1	1.8	2.6	2.3
Swiss Re	4.6	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.5	na	na	na
Via Nova Investment Mgt.	4.6	7.8	4.6	4.6	4.6	4.4	4.3	4.2	4.1	4.3	4.6	5.4	5.8	4.3	6.6	115.9	2.5	2.1	2.1	2.1
Bank of America	4.4	na	na	na	na	na	na	4.3 H	4.3 H	4.4	4.6	na	na	na	na	na	2.0	2.2	2.5	2.3
Barclays	4.4	na	na	na	na	na	na	4.0	4.1	4.3	4.5	na	na	na	na	na	2.0	2.5	2.8	2.5
Economist Intelligence Unit	4.4	7.7	na	na	na	na	na	na	na	4.5	na	na	na	na	na	na	2.1	na	2.3	na
Goldman Sachs & Co.	4.4	na	na	na	4.8 H	na	na	3.7	3.7	4.3	4.2 L	na	na	na	na	na	2.4	2.2	2.7	2.3
ING	4.4	na	na	na	na	na	na	4.1	4.1	4.3	4.5	na	na	na	na	na	2.7	na	na	na
Wells Fargo	4.4	7.5	4.4	4.4	4.4	4.2	4.1	4.2	4.2	4.3	4.5	5.5 H	6.5	4.9	6.8	na	2.1	2.4	2.8	2.7
NatWest Markets	4.3	7.5	na	4.4	4.6	4.7 H	4.8 H	4.2	4.3 H	4.6 H	4.8 H	5.3	6.2	5.1 H	6.9	na	1.5	2.0	2.2	2.2
TS Lombard	4.0 L	7.1 L	4.0 L	4.0 L	3.9 L	4.0 L	4.1	4.3 H	4.3 H	4.4	4.5	5.3	6.1	4.4	6.2 L	115.0	3.0 H	3.0 H	3.0	3.0 H
December Consensus	**4.6**	**7.7**	**4.6**	**4.6**	**4.6**	**4.4**	**4.2**	**4.1**	**4.1**	**4.3**	**4.5**	**5.1**	**5.9**	**4.3**	**6.6**	**116.8**	**2.1**	**2.2**	**2.5**	**2.2**
Top 10 Avg.	4.7	7.8	4.8	4.7	4.7	4.5	4.4	4.2	4.3	4.4	4.6	5.3	6.1	4.5	6.8	117.9	2.6	2.7	2.9	2.6
Bottom 10 Avg.	4.4	7.6	4.5	4.5	4.4	4.3	4.1	3.9	3.9	4.1	4.4	5.0	5.7	4.1	6.4	115.7	1.5	1.8	2.1	1.9
Standard Deviation	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	1.5	0.5	0.4	0.3	0.3
November Consensus	4.6	7.8	4.7	4.6	4.5	4.3	4.1	3.8	3.8	4.0	4.3	5.0	5.8	4.2	6.4	115.3	1.9	2.1	2.4	2.1
Number of Forecasts Changed From A Month Ago:																				
Down	5	6	5	5	2	1	1	1	3	1	1	1	3	4	2	0	6	5	9	6
Same	28	22	18	12	15	13	8	5	5	5	7	7	5	5	2	6	14	15	10	11
Up	5	3	3	4	14	14	19	29	27	31	26	15	14	10	24	13	19	16	18	19
Diffusion Index	50%	45%	46%	48%	69%	73%	82%	90%	84%	91%	87%	80%	75%	66%	89%	84%	67%	65%	62%	68%

First Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	A. Fed's Adv Fgn Econ $ Index	B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
	Percent Per Annum -- Average For Quarter															Avg. For ---Qtr.---	(Q-Q % Change) (SAAR)			
	Short-Term							Intermediate-Term			Long-Term									
Scotiabank Group	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.7	2.9 H	3.4	3.1 H
Chan Economics	4.4 H	7.4	4.4	4.3	4.3	4.0	3.7	3.4 L	3.3 L	3.7 L	4.0 L	5.0	6.0	4.3	6.5	115.9	1.9	2.0	2.2	1.9
DePrince & Assoc.	4.4 H	7.5 H	4.4	4.4 H	4.4	4.2	4.0	4.2	4.3	4.4	4.5	5.3	6.0	4.4	6.7	117.1	1.9	2.4	2.5	2.3
J.P. Morgan Chase	4.4 H	na	na	na	na	na	na	4.1	4.2	4.4	4.7	na	na	na	na	na	1.8	2.2	2.6	2.3
MacroPolicy Perspectives	4.4 H	7.5 H	4.3	4.1	4.1	4.0	3.2 L	3.7	3.8	4.0	4.5	4.9	5.6 L	na	6.4	na	2.0	2.7	2.6	2.3
Nomura Securities, Inc.	4.4 H	7.5 H	na	na	na	na	na	4.1	4.3	4.5	na	na	na	na	na	na	2.1	1.9	3.1	2.7
Roberts Capital Advisors	4.4 H	7.5 H	4.5	4.4 H	4.2	4.2	4.2	4.1	4.2	4.4	4.6	5.1	5.9	4.5	6.7	116.0	2.3	2.1	2.4	2.3
Swiss Re	4.4 H	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.2	na	na	na
The Lonski Group	4.4 H	7.5 H	4.3	4.4 H	4.4	4.3	4.1	4.0	4.2	4.4	4.5	5.3	5.9	4.3	6.7	121.4 H	1.7	2.3	2.4	1.8 L
Action Economics	4.3	7.4	4.8 H	4.2	4.2	4.1	3.9	4.0	4.1	4.3	4.4	5.0	5.7	4.2	7.2 H	117.6	2.3	2.1	2.5	1.9
BMO Capital Markets	4.3	7.4	4.3	4.3	4.3	4.2	4.1	4.1	4.1	4.3	4.5	5.2	6.0	4.4	6.7	120.8	2.0	2.0	2.6	2.4
Chmura Economics & Analytics	4.3	7.4	4.3	4.3	4.3	4.2	4.2	4.1	4.1	4.3	4.4	5.1	6.5 H	na	6.4	na	0.2 L	2.3	2.6	2.3
Comerica Bank	4.3	7.5 H	4.3	na	4.2	4.1	3.9	4.1	4.2	4.4	4.8	5.3	6.0	na	6.8	na	3.0 H	2.3	2.9	2.7
KPMG	4.3	7.5 H	4.3	4.2	4.3	4.2	4.0	3.7	3.8	4.1	4.4	4.9	5.8	na	6.3	na	1.9	2.2	2.0	2.0
MacroFin Analytics & Rutgers Bus School	4.3	7.3	4.3	4.2	4.3	4.2	4.2	4.1	4.3	4.2	4.4	5.2	5.6 L	4.4	6.5	118.8	2.0	2.0	2.2	2.1
Moody's Analytics	4.3	7.5 H	4.3	4.3	4.1	4.1	4.1	4.1	4.1	4.2	4.6	5.4	6.1	4.1	6.2 L	na	1.8	2.0	2.3	2.1
Oxford Economics	4.3	7.5 H	4.3	na	4.3	4.1	4.0	3.9	4.1	4.3	4.5	4.6 L	na	na	6.7	119.4	2.4	2.8	3.2	2.9
Regions Financial Corporation	4.3	7.5 H	4.3	4.3	4.3	4.4 H	4.1	4.0	4.2	4.4	4.7	5.4	6.1	4.5	6.7	118.6	2.0	2.2	2.4	2.2
S&P Global Market Intelligence	4.3	7.5 H	4.3	na	4.2	4.1	4.0	3.7	3.7	4.0	4.3	na	na	na	6.2 L	na	2.0	2.2	2.0	2.0
Santander Capital Markets	4.3	7.5 H	4.3	4.2	4.2	4.0	3.8	4.0	4.1	4.2	4.4	5.0	5.7	4.1	6.5	119.0	1.8	2.8	3.2	2.8
Societe Generale	4.3	7.5 H	4.3	na	4.2	4.0	4.0	4.0	4.2	4.3	4.5	na	na	na	na	na	1.8	1.9	2.6	2.3
EY-Parthenon	4.2	na	na	na	4.2	na	na	na	na	4.0	na	na	na	na	na	na	1.7	2.4	2.4	2.4
Fannie Mae	4.2	7.3	na	na	4.3	4.3	4.3 H	4.3	4.3	4.4	4.6	na	na	na	6.7	na	2.2	2.2	1.9	1.9
GLC Financial Economics	4.2	7.4	4.5	4.1	4.1	3.9	3.7	3.6	3.6	3.9	4.2	4.9	5.8	4.1	6.2 L	114.9	1.8	2.2	2.4	2.2
PNC Financial Services Corp.	4.2	7.3	4.2	na	3.8 L	3.7 L	3.6	3.8	4.1	4.2	4.5	na	5.7	4.2	6.3	116.7	1.7	1.8 L	2.2	2.2
The Northern Trust Company	4.2	7.3	4.1	4.2	4.1	4.1	4.1	4.2	4.3	4.4	4.7	5.2	6.0	4.4	6.7	120.0	1.4	2.3	2.6	2.4
Via Nova Investment Mgt.	4.2	7.5 H	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.2	4.7	5.3	5.7	4.2	6.6	115.0	2.5	2.1	2.0	2.1
Bank of America	4.1	na	na	na	na	na	na	4.0	4.2	4.3	4.5	na	na	na	na	na	2.5	2.4	2.6	2.4
Barclays	4.1	na	na	na	na	na	na	4.0	4.1	4.3	4.5	na	na	na	na	na	2.0	2.4	2.5	2.2
Daiwa Capital Markets America	4.1	7.3	4.1	na	4.0	na	na	3.8	3.8	3.9	4.3	na	na	na	6.2 L	113.5 L	1.7	2.3	2.3	2.2
Economist Intelligence Unit	4.1	7.4	na	na	na	na	na	na	na	4.3	na	na	na	na	na	na	2.4	na	2.0	na
ING	4.1	na	na	na	na	na	na	4.0	4.1	4.3	4.6	na	na	na	na	na	1.5	na	na	na
Loomis, Sayles & Company	4.1	7.3	4.1	4.1	4.1	3.9	3.9	4.0	4.0	4.0	4.3	4.8	5.6 L	4.0	6.3	118.3	2.0	2.2	2.2	1.8 L
Naroff Economics LLC	4.1	7.1	4.2	4.4 H	4.1	4.2	4.0	4.0	4.1	4.3	4.5	na	na	3.9 L	6.4	117.5	3.0 H	2.4	3.6 H	2.3
Wells Fargo	4.1	7.3	4.2	4.1	4.1	4.0	3.9	4.0	4.1	4.2	4.4	5.4	6.4	4.8 H	6.7	na	2.4	2.8	3.2	2.5
Georgia State University	4.0	7.1	na	na	3.9	3.8	3.7	3.8	3.9	4.2	4.5	5.1	5.9	na	6.3	na	2.6	2.1	1.7 L	2.0
TS Lombard	4.0	7.1	4.0 L	4.0	3.9	4.0	4.3 H	4.5 H	4.7 H	4.8 H	4.9 H	5.6 H	6.5 H	4.8 H	6.6	120.0	2.5	2.5	2.5	2.5
Goldman Sachs & Co.	3.9	na	na	na	4.6 H	na	na	3.6	3.7	4.3	4.2	na	na	na	na	na	2.4	2.6	2.9	2.7
NatWest Markets	3.8 L	7.0 L	na	3.9 L	4.1	4.2	4.3 H	4.0	4.2	4.5	4.8	5.2	6.1	4.1	6.7	na	1.0	2.0	3.3	2.5
December Consensus	**4.2**	**7.4**	**4.3**	**4.2**	**4.2**	**4.1**	**4.0**	**4.0**	**4.1**	**4.3**	**4.5**	**5.1**	**5.9**	**4.3**	**6.5**	**117.8**	**2.0**	**2.3**	**2.5**	**2.3**
Top 10 Avg.	4.4	7.5	4.4	4.3	4.4	4.2	4.2	4.2	4.3	4.5	4.7	5.3	6.2	4.5	6.8	119.4	2.6	2.6	3.1	2.7
Bottom 10 Avg.	4.0	7.2	4.2	4.1	4.0	3.9	3.7	3.7	3.8	4.0	4.3	4.9	5.7	4.1	6.3	116.3	1.4	2.0	2.0	2.0
Standard Deviation	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	2.2	0.5	0.3	0.5	0.3
November Consensus	4.1	7.3	4.2	4.2	4.1	3.9	3.8	3.7	3.7	3.9	4.2	4.9	5.8	4.2	6.2	115.4	1.8	2.2	2.4	2.2
Number of Forecasts Changed From A Month Ago:																				
Down	3	2	4	1	1	2	2	0	0	0	0	1	0	2	0	1	9	8	7	5
Same	19	18	13	10	12	8	7	5	6	3	4	6	7	6	4	4	14	14	11	12
Up	16	11	9	10	18	18	19	30	29	34	30	16	15	11	24	13	16	14	19	19
Diffusion Index	67%	65%	60%	71%	77%	79%	80%	93%	91%	96%	94%	83%	84%	74%	93%	83%	59%	58%	66%	69%

Second Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For Qtr. A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR) B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
Scotiabank Group	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.9	2.1	2.5	1.9
MacroPolicy Perspectives	4.3 H	7.5 H	4.3	3.6 L	3.6	3.5	3.1	3.4	3.6	4.0	4.5	4.9	5.6	na	6.2	na	1.5	2.2	2.1	1.8
The Lonski Group	4.3 H	7.5 H	4.3	4.3 H	4.2	4.1	4.0	3.9	3.9	3.9	4.1	4.8	5.4 L	3.8 L	6.2	122.3 H	1.8	2.2	2.4	1.6 L
DePrince & Assoc.	4.2	7.3	4.2	4.2	4.2	4.0	3.8	4.1	4.3	4.4	4.5	5.4	6.2	4.6	6.6	116.3	2.0	2.4	2.5	2.3
Roberts Capital Advisors	4.2	7.2	4.2	4.2	3.9	4.1	4.1	4.1	4.2	4.4	4.6	5.1	5.9	4.5	6.7	116.0	2.3	2.2	2.5	2.4
Chan Economics	4.1	7.1	4.1	4.0	4.0	3.7	3.4	3.1 L	3.0 L	3.4 L	3.7 L	4.7	5.7	4.0	6.2	115.7	1.6	2.0	2.2	1.9
Fannie Mae	4.1	7.2	na	na	4.3 H	4.3 H	4.3	4.3	4.3	4.4	4.6	na	na	na	6.6	na	1.9	2.4	2.7	2.3
J.P. Morgan Chase	4.1	na	na	na	na	na	na	3.9	4.0	4.3	4.6	na	na	na	na	na	2.0	2.3	2.1	1.9
KPMG	4.1	7.3	4.1	4.0	4.0	3.9	3.7	3.5	3.6	3.9	4.2	4.8	5.8	na	6.3	na	1.7	2.5	2.8	2.4
Nomura Securities, Inc.	4.1	7.3	na	na	na	na	na	4.1	4.3	4.6	na	na	na	na	na	na	1.8	1.6 L	2.3	2.2
Oxford Economics	4.1	7.2	4.1	na	4.0	3.8	3.7	3.7	4.1	4.3	4.5	4.5 L	na	na	6.6	118.9	2.5	2.2	2.6	2.3
S&P Global Market Intelligence	4.1	7.2	4.0	na	3.9	3.8	3.7	3.5	3.5	3.8	4.2	na	na	na	5.9 L	na	1.8	2.5	2.7	2.4
Swiss Re	4.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.6	na	na	na
Action Economics	4.0	7.2	4.6 H	4.0	4.0	3.8	3.6	3.7	3.9	4.1	4.3	4.9	5.5	4.0	7.0 H	118.9	2.3	2.4	2.6	2.1
BMO Capital Markets	4.0	7.2	4.1	4.0	4.1	4.0	3.9	3.9	4.0	4.2	4.4	5.1	5.9	4.3	6.6	119.6	2.0	2.0	2.2	2.1
Chmura Economics & Analytics	4.0	7.1	4.0	3.9	3.9	4.1	4.1	3.9	3.9	4.2	4.3	5.1	6.4	na	6.2	na	1.7	2.3	2.5	2.2
Comerica Bank	4.0	7.2	4.1	na	3.9	3.9	3.7	3.9	4.1	4.4	4.8	5.3	6.1	na	6.7	na	3.2 H	2.7 H	3.0 H	2.8 H
EY-Parthenon	4.0	na	na	na	3.9	na	na	na	na	3.9	na	na	na	na	na	na	1.8	2.0	2.4	2.1
MacroFin Analytics & Rutgers Bus School	4.0	7.1	4.0	4.0	4.0	3.9	4.0	4.0	4.2	4.2	4.4	5.2	5.6	4.4	6.4	118.6	2.0	2.1	2.1	2.1
Moody's Analytics	4.0	7.2	4.0	4.0	3.9	3.9	4.0	4.0	4.1	4.2	4.6	5.6	6.4	4.2	6.1	na	2.1	2.2	2.6	2.2
Santander Capital Markets	4.0	7.2	4.1	4.0	4.0	3.8	3.7	3.8	3.9	4.0	4.3	5.0	5.8	3.9	6.3	119.0	1.8	2.5	2.5	2.1
Societe Generale	4.0	7.2	4.0	na	3.9	3.8	3.5	3.4	3.8	4.1	4.3	na	na	na	na	na	1.8	1.9	2.6	2.3
TS Lombard	4.0	7.1	4.0	4.0	3.9	4.0	4.4 H	4.8 H	4.9 H	5.0 H	5.1 H	5.9 H	6.7 H	5.0	6.8	120.0	2.0	2.5	2.5	2.5
Bank of America	3.9	na	na	na	na	na	na	4.0	4.2	4.3	4.5	na	na	na	na	na	2.3	2.4	2.8	2.4
Barclays	3.9	na	na	na	na	na	na	3.9	4.0	4.3	4.5	na	na	na	na	na	2.0	2.4	2.5	2.3
Economist Intelligence Unit	3.9	7.1	na	na	na	na	na	na	na	4.2	na	na	na	na	na	na	2.2	na	1.9	na
GLC Financial Economics	3.9	7.1	3.9	3.8	3.8	3.6	3.5	3.4	3.5	3.9	4.2	4.9	5.8	4.1	6.1	114.7	1.9	2.1	2.3	2.1
ING	3.9	na	na	na	na	na	na	3.9	4.3	4.8	5.1 H	na	na	na	na	na	1.2	na	na	na
Regions Financial Corporation	3.9	7.1	3.9	4.0	4.0	4.1	4.0	3.9	4.1	4.4	4.7	5.4	6.2	4.5	6.7	118.8	1.7	2.3	2.4	2.1
Wells Fargo	3.9	7.0	3.9	3.9	3.9	3.8	3.7	3.9	3.9	4.1	4.3	5.3	6.3	4.7	6.5	na	1.5	2.3	2.7	2.5
Daiwa Capital Markets America	3.8	6.9	3.7	na	3.6	na	na	3.6	3.6	3.7	4.2	na	na	na	6.0	113.0 L	1.8	2.3	2.2	2.1
NatWest Markets	3.8	7.0	na	3.9	4.1	4.2	4.3	4.0	4.2	4.5	4.8	5.3	6.2	5.1 H	6.9	na	1.5	1.9	2.7	2.8 H
The Northern Trust Company	3.8	7.0	3.8	3.9	3.7	3.8	3.9	4.0	4.3	4.4	4.7	5.3	6.3	4.5	6.7	121.0	1.0 L	2.3	2.6	2.4
Via Nova Investment Mgt.	3.8	7.0	3.8	3.8	3.7	3.8	3.7	3.8	3.8	3.9	4.4	5.0	5.4 L	3.9	6.3	114.0	2.5	2.0	2.0	2.1
PNC Financial Services Corp.	3.7	6.8	3.7	na	3.3 L	3.3	3.4	3.5	3.9	4.1	4.4	na	5.7	4.2	6.1	116.5	1.9	1.7	2.2	2.2
Goldman Sachs & Co.	3.6	na	na	na	4.3 H	na	na	3.6	3.7	4.3	4.2	na	na	na	na	na	2.4	2.6	2.7	2.7
Loomis, Sayles & Company	3.6	6.8	3.6	3.6 L	3.6	3.4	3.6	3.9	3.9	4.0	4.3	4.8	5.6	4.0	6.2	118.3	2.0	2.3	2.6	2.1
Naroff Economics LLC	3.4	6.4 L	3.4 L	3.8	3.7	3.8	3.9	3.9	4.0	4.2	4.5	na	na	3.9	6.1	117.0	3.2 H	2.3	2.2	2.2
Georgia State University	3.3 L	6.5	na	na	3.3 L	3.2 L	3.0 L	3.3	3.6	4.0	4.3	5.0	5.9	na	6.2	na	2.0	2.4	1.5 L	2.3
December Consensus	**3.9**	**7.1**	**4.0**	**3.9**	**3.9**	**3.8**	**3.8**	**3.8**	**4.0**	**4.2**	**4.4**	**5.1**	**5.9**	**4.3**	**6.4**	**117.7**	**2.0**	**2.2**	**2.4**	**2.2**
Top 10 Avg.	4.2	7.3	4.2	4.1	4.1	4.1	4.1	4.1	4.3	4.5	4.8	5.4	6.3	4.6	6.7	119.5	2.5	2.5	2.7	2.5
Bottom 10 Avg.	3.7	6.9	3.8	3.8	3.6	3.6	3.5	3.4	3.6	3.8	4.2	4.8	5.6	4.0	6.1	116.0	1.5	1.9	2.1	2.0
Standard Deviation	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	2.5	0.4	0.2	0.3	0.3
November Consensus	3.8	6.9	3.9	3.8	3.7	3.7	3.6	3.5	3.6	3.9	4.2	4.9	5.8	4.2	6.1	115.2	1.9	2.1	2.3	2.1
Number of Forecasts Changed From A Month Ago:																				
Down	3	2	3	2	0	1	2	1	0	0	2	2	1	2	1	1	10	6	5	3
Same	14	14	11	7	13	11	8	8	8	6	5	6	8	7	5	4	13	12	13	13
Up	21	15	12	12	18	16	18	26	27	31	27	15	13	10	22	13	16	18	19	20
Diffusion Index	74%	71%	67%	74%	79%	77%	79%	86%	89%	92%	87%	78%	77%	71%	88%	83%	58%	67%	69%	74%

Third Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: Short-Term: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	Intermediate-Term: 8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	Long-Term: 11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For Qtr. A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR) B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
Scotiabank Group	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.7	1.9	0.4 L	0.3 L
TS Lombard	4.3 H	7.4 H	4.3 H	4.3 H	4.2	4.3	4.6 H	5.0 H	5.2 H	5.3 H	5.4 H	6.1 H	7.0 H	5.3 H	7.1 H	115.0	2.5	3.0	3.0	3.0
Fannie Mae	4.1	7.2	na	na	4.4 H	4.4 H	4.3	4.3	4.3	4.5	4.6	na	na	na	6.5	na	2.1	2.2	1.7	1.8
MacroPolicy Perspectives	4.1	7.3	4.1	3.2 L	3.1	3.0 L	3.1	3.2	3.6	3.9	4.5	4.9	5.6	na	6.0	na	1.5	3.5 H	3.8	3.1
Nomura Securities, Inc.	4.1	7.3	na	na	na	na	na	4.1	4.3	4.6	na	na	na	na	na	na	1.5	1.6 L	4.5 H	4.7 H
Swiss Re	4.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	na	na	na
DePrince & Assoc.	4.0	7.1	4.0	4.1	4.0	3.8	3.7	3.9	4.2	4.3	4.5	5.5	6.3	4.6	6.5	115.9	2.1	2.2	2.3	2.1
Bank of America	3.9	na	na	na	na	na	na	4.0	4.2	4.3	4.6	na	na	na	na	na	2.2	2.6	2.5	2.7
Barclays	3.9	na	na	na	na	na	na	3.8	4.0	4.3	4.5	na	na	na	na	na	1.5	2.6	2.2	2.4
J.P. Morgan Chase	3.9	na	na	na	na	na	na	3.7	3.9	4.1	4.5	na	na	na	na	na	2.3	2.4	2.7	2.5
KPMG	3.9	7.0	3.8	3.7	3.8	3.8	3.6	3.5	3.5	3.8	4.2	4.7	5.9	na	6.2	na	1.9	2.4	1.8	1.9
Roberts Capital Advisors	3.9	7.0	4.0	3.9	3.7	3.9	4.0	4.1	4.3	4.5	4.7	5.2	6.0	4.6	6.8	115.0	2.2	2.3	2.5	2.4
Action Economics	3.8	6.9	4.3 H	3.7	3.7	3.6	3.3	3.5	3.7	4.0	4.1	4.7	5.4	3.9	6.9	118.6	2.3	2.1	2.6	2.1
BMO Capital Markets	3.8	6.9	3.8	3.8	3.8	3.8	3.8	3.7	3.9	4.0	4.2	5.0	5.9	4.2	6.5	118.2	2.0	2.0	2.2	2.0
Chan Economics	3.8	6.8	3.8	3.7	3.7	3.4	3.1	2.8 L	2.7 L	3.1 L	3.4 L	4.4 L	5.4	3.7 L	5.9	115.4	1.5	1.9	2.1	1.8
Comerica Bank	3.8	7.0	3.8	na	3.8	3.8	3.7	3.8	4.0	4.4	4.8	5.4	6.2	na	6.6	na	3.0 H	2.8	3.0	2.8
Moody's Analytics	3.8	7.0	3.8	3.7	3.6	3.7	3.9	3.9	4.1	4.2	4.7	5.7	6.6	4.3	6.0	na	2.3	2.2	2.4	2.2
NatWest Markets	3.8	7.0	na	3.9	4.1	4.2	4.3	4.1	4.3	4.6	4.9	5.6	6.5	5.2	7.0	na	1.5	1.7	2.8	3.1
Oxford Economics	3.8	7.0	3.9	na	3.8	3.6	3.5	3.5	4.0	4.3	4.4	4.5	na	na	6.6	118.4	2.6	1.7	2.2	1.9
Regions Financial Corporation	3.8	7.0	3.9	3.9	3.8	3.9	3.9	3.8	4.0	4.5	4.8	5.5	6.3	4.6	6.6	118.4	1.8	2.4	2.2	2.3
Santander Capital Markets	3.8	7.0	3.8	3.8	3.7	3.7	3.6	3.7	3.8	3.9	4.2	4.9	5.7	3.9	6.1	118.5	2.0	2.4	2.4	2.1
Societe Generale	3.8	7.0	3.8	na	3.7	3.5	3.3	3.2	3.5	4.1	4.3	na	na	na	na	na	1.6	1.9	2.6	2.3
EY-Parthenon	3.7	na	na	na	3.7	na	na	na	na	3.8	na	na	na	na	na	na	1.8	1.9	2.1	1.9
GLC Financial Economics	3.7	6.9	3.5	3.6	3.5	3.5	3.3	3.3	3.6	3.8	4.2	4.9	5.8	4.2	6.0	114.4	2.2	2.1	2.3	2.1
MacroFin Analytics & Rutgers Bus School	3.7	6.8	3.7	3.7	3.6	3.6	3.8	3.9	4.1	4.1	4.3	5.1	5.5	4.3	6.4	118.4	1.8	2.2	2.3	2.2
S&P Global Market Intelligence	3.7	6.8	3.6	na	3.5	3.6	3.5	3.3	3.4	3.7	4.1	na	na	na	5.7 L	na	2.0	2.3	1.8	1.9
Economist Intelligence Unit	3.6	6.6	na	na	na	na	na	na	na	4.1	na	na	na	na	na	na	1.9	na	2.3	na
ING	3.6	na	na	na	na	na	na	3.9	4.3	5.0	5.4 H	na	na	na	na	na	1.6	na	na	na
The Northern Trust Company	3.6	6.7	3.5	3.7	3.5	3.6	3.7	3.8	4.2	4.4	4.7	5.3	6.4	4.6	6.7	119.0	1.8	2.3	2.7	2.4
Wells Fargo	3.6	6.8	3.7	3.6	3.7	3.7	3.7	3.8	3.8	3.9	4.2	5.1	6.1	4.5	6.3	na	0.7 L	2.4	2.7	2.6
Chmura Economics & Analytics	3.5	6.7	3.5	3.5	3.5	3.6	3.7	3.8	3.8	4.1	4.2	4.9	6.1	na	6.0	na	2.4	2.1	2.2	2.1
Daiwa Capital Markets America	3.5	6.6	3.5	na	3.4	na	na	3.5	3.5	3.7	4.1	na	na	na	5.9	112.5 L	1.9	2.2	2.2	2.1
The Lonski Group	3.5	6.6	3.4	3.5	3.4	3.3	3.5	3.7	3.7	3.7	3.9	4.7	5.3 L	3.7 L	6.0	122.5 H	1.8	2.0	2.3	2.4
Via Nova Investment Mgt.	3.5	6.8	3.5	3.5	3.4	3.5	3.4	3.7	3.7	3.8	4.3	4.9	5.3 L	3.8	6.1	113.0	2.5	2.0	2.0	2.0
Goldman Sachs & Co.	3.4	na	na	na	4.0	na	na	3.6	3.7	4.3	4.2	na	na	na	na	na	2.4	2.2	2.5	2.4
PNC Financial Services Corp.	3.4	6.5	3.4	na	3.2	3.2	3.2	3.3	3.7	4.0	4.4	na	5.7	4.3	5.9	116.2	2.2	1.7	2.1	2.1
Loomis, Sayles & Company	3.3	6.5	3.3	3.3	3.3	3.3	3.4	3.7	3.7	4.0	4.3	4.8	5.6	4.0	6.1	118.3	1.8	2.4	2.2	1.9
Georgia State University	3.1	6.3	na	na	3.0 L	3.1	3.0 L	3.1	3.5	4.0	4.3	5.2	6.0	na	6.2	na	1.6	2.5	1.8	1.8
Naroff Economics LLC	2.9 L	5.9 L	2.9 L	3.4	3.1	3.3	3.5	3.9	4.0	4.2	4.4	na	na	3.9	5.9	116.5	2.4	2.3	2.6	2.5
December Consensus	**3.7**	**6.9**	**3.7**	**3.7**	**3.6**	**3.6**	**3.6**	**3.7**	**3.9**	**4.1**	**4.4**	**5.1**	**5.9**	**4.3**	**6.3**	**116.9**	**2.0**	**2.2**	**2.4**	**2.3**
Top 10 Avg.	4.0	7.1	4.0	3.9	4.0	4.0	4.0	4.1	4.3	4.6	4.9	5.5	6.4	4.6	6.7	118.7	2.5	2.7	3.0	2.9
Bottom 10 Avg.	3.4	6.5	3.4	3.5	3.3	3.3	3.3	3.3	3.5	3.7	4.1	4.7	5.5	4.0	5.9	115.2	1.5	1.8	1.8	1.7
Standard Deviation	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	2.5	0.4	0.4	0.6	0.6
November Consensus	3.5	6.7	3.5	3.5	3.5	3.5	3.4	3.4	3.6	3.8	4.2	4.9	5.8	4.2	6.0	114.6	2.0	2.1	2.3	2.1
Number of Forecasts Changed From A Month Ago:																				
Down	1	3	3	1	1	2	3	1	1	0	1	1	2	2	0	1	10	12	9	8
Same	15	13	10	7	11	10	8	8	7	7	5	7	7	6	6	4	14	13	13	11
Up	22	15	13	13	19	16	17	26	27	30	28	15	13	11	22	13	15	11	14	16
Diffusion Index	78%	69%	69%	79%	79%	75%	75%	86%	87%	91%	90%	80%	75%	74%	89%	83%	56%	49%	57%	61%

Fourth Quarter 2025

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	A. Fed's Adv Fgn Econ $ Index	B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
	Percent Per Annum -- Average For Quarter															Avg. For ---Qtr.---	(Q-Q % Change) (SAAR)			
	Short-Term							Intermediate-Term			Long-Term									
Scotiabank Group	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	0.8 L	1.3 L	2.0
TS Lombard	4.3 H	7.4 H	4.3 H	4.3 H	4.2	4.3	4.6 H	5.0 H	5.4 H	5.5 H	5.6 H	6.4 H	7.2 H	5.5 H	7.3 H	110.0 L	2.5	3.0	3.0	3.0
Nomura Securities, Inc.	4.1	7.3	na	na	na	na	na	4.0	4.2	4.6	na	na	na	na	na	na	1.6	2.2	3.2	3.0
Bank of America	3.9	na	na	na	na	na	na	4.0	4.2	4.3	4.6	na	na	na	na	na	2.2	2.5	2.1	2.6
Barclays	3.9	na	na	na	na	na	na	3.8	4.0	4.3	4.5	na	na	na	na	na	1.5	3.1	3.1	3.0
DePrince & Assoc.	3.9	7.0	3.9	4.0	3.9	3.7	3.6	3.8	4.2	4.3	4.4	5.5	6.4	4.7	6.4	115.7	2.2	2.2	2.3	2.1
Fannie Mae	3.9	7.0	na	na	4.4 H	4.4 H	4.3	4.3	4.3	4.5	4.6	na	na	na	6.4	na	2.1	2.3	1.7	1.8
Swiss Re	3.9	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.2	na	na	na
Comerica Bank	3.8	7.0	3.8	na	3.8	3.8	3.8	3.8	4.0	4.4	4.7	5.4	6.2	na	6.5	na	2.8 H	2.8	2.9	2.7
J.P. Morgan Chase	3.8	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.0	2.1	2.4	2.2
MacroPolicy Perspectives	3.8	7.0	3.8	3.1	3.0	2.9 L	2.9	2.9	3.6	3.9	4.5	4.9	5.6	na	5.9	na	1.2 L	4.5 H	4.5 H	4.1 H
NatWest Markets	3.8	7.0	na	3.9	4.1	4.2	4.3	4.1	4.3	4.7	5.0	5.6	6.5	5.2	7.0	na	1.7	2.0	4.0	2.7
Regions Financial Corporation	3.8	7.0	3.8	3.8	3.8	3.9	3.9	3.7	4.0	4.6	4.9	5.6	6.4	4.7	6.6	118.2	1.7	2.2	2.4	2.2
ING	3.6	na	na	na	na	na	na	3.9	4.3	5.5 H	5.4	na	na	na	na	na	1.7	na	na	na
Oxford Economics	3.6	6.8	3.6	na	3.6	3.4	3.3	3.4	3.9	4.2	4.4	4.4	na	na	6.5	117.9	2.7	1.8	2.1	1.8
Roberts Capital Advisors	3.6	6.7	3.7	3.6	3.5	3.7	3.8	4.1	4.3	4.5	4.7	5.2	6.0	4.6	6.8	115.0	2.1	2.3	2.5	2.4
Wells Fargo	3.6	6.8	3.7	3.6	3.7	3.7	3.7	3.8	3.9	4.0	4.4	5.2	6.2	4.6	6.3	na	1.3	2.4	2.6	2.7
Action Economics	3.5	6.7	4.1	3.5	3.5	3.3	3.1	3.3	3.5	3.8	3.9	4.6	5.2	3.7	6.7	118.6	2.3	2.0	2.4	2.1
BMO Capital Markets	3.5	6.7	3.6	3.5	3.5	3.5	3.6	3.6	3.7	3.9	4.1	5.0	5.8	4.2	6.4	117.1	2.1	2.1	2.4	2.2
Chan Economics	3.5	6.5	3.5	3.4	3.4	3.1	2.8 L	2.5 L	2.4 L	2.8 L	3.1 L	4.1 L	5.1 L	3.4 L	5.6	115.0	1.3	1.9	2.1	1.8
EY-Parthenon	3.5	na	na	na	3.5	na	na	na	na	3.7	na	na	na	na	na	na	1.9	1.9	1.9	2.0
KPMG	3.5	6.6	3.4	3.3	3.4	3.5	3.5	3.3	3.6	4.0	4.3	4.8	6.0	na	6.2	na	2.0	2.5	1.8	1.9
Moody's Analytics	3.5	6.7	3.5	3.5	3.4	3.5	3.7	3.8	4.0	4.2	4.6	5.7	6.6	4.3	5.9	na	2.1	2.1	2.3	2.1
Santander Capital Markets	3.5	6.7	3.6	3.5	3.5	3.5	3.5	3.6	3.7	3.8	4.1	4.8	5.6	3.8	6.0	118.0	2.2	2.4	2.5	2.1
Societe Generale	3.5	6.7	3.5	na	3.4	3.3	3.2	3.2	3.5	4.1	4.3	na	na	na	na	na	1.6	1.9	2.6	2.3
Via Nova Investment Mgt.	3.5	6.8	3.5	3.5	3.4	3.5	3.4	3.7	3.7	3.8	4.3	4.9	5.3	3.8	6.1	112.0	2.0	2.0	2.0	2.0
Daiwa Capital Markets America	3.4	6.5	3.4	na	3.3	na	na	3.3	3.4	3.6	4.0	na	na	na	5.8	112.0	2.1	2.2	2.1	2.0
Economist Intelligence Unit	3.4	6.4	na	na	na	na	na	na	na	4.0	na	na	na	na	na	na	2.3	na	2.6	na
GLC Financial Economics	3.4	6.6	3.3	3.4	3.3	3.3	3.3	3.3	3.6	3.8	4.2	4.9	5.8	4.2	5.9	114.1	2.2	2.1	2.3	2.1
Goldman Sachs & Co.	3.4	na	na	na	3.9	na	na	3.6	3.7	4.3	4.2	na	na	na	na	na	2.4	1.5	2.1	1.8
PNC Financial Services Corp.	3.4	6.5	3.4	na	3.2	3.2	3.2	3.2	3.6	3.9	4.4	na	5.8	4.4	5.8	116.2	2.3	1.8	2.2	2.1
MacroFin Analytics & Rutgers Bus School	3.3	6.6	3.3	3.3	3.2	3.2	3.6	3.8	4.0	4.1	4.2	5.1	5.5	4.2	6.4	118.2	1.8	2.3	2.3	2.2
The Northern Trust Company	3.3	6.4	3.2	3.4	3.3	3.4	3.5	3.7	4.2	4.4	4.7	5.4	6.4	4.6	6.7	116.0	1.7	2.4	2.7	2.5
Loomis, Sayles & Company	3.2	6.4	3.2	3.2	3.2	3.3	3.3	3.5	3.5	4.0	4.3	4.8	5.6	4.0	6.0	118.3	2.2	2.5	2.2	1.9
The Lonski Group	3.2	6.3	3.1	3.2	3.1	3.0	3.2	3.4	3.4	3.5	3.7	4.4	5.1 L	3.4 L	5.8	122.8 H	1.6	2.1	2.1	2.5
Chmura Economics & Analytics	3.1	6.3	3.1	3.1	3.1	3.2	3.4	3.4	3.5	3.7	4.1	4.8	5.9	na	5.8	na	2.7	2.2	2.1	2.0
Georgia State University	3.1	6.3	na	na	2.9 L	3.2	3.3	3.3	3.8	4.3	4.5	5.6	6.5	na	6.3	na	1.6	2.7	2.4	1.7 L
S&P Global Market Intelligence	3.1	6.3	3.1	na	3.0	3.2	3.3	3.2	3.3	3.7	4.0	na	na	na	5.5 L	na	2.3	2.4	1.8	1.9
Naroff Economics LLC	2.9 L	5.9 L	2.9 L	3.0 L	3.1	3.2	3.4	3.6	4.0	4.3	4.6	na	na	4.0	5.9	116.0	2.0	2.5	2.3	2.4
December Consensus	**3.6**	**6.7**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.6**	**3.8**	**4.1**	**4.4**	**5.1**	**5.9**	**4.3**	**6.2**	**116.2**	**2.0**	**2.3**	**2.4**	**2.3**
Top 10 Avg.	3.9	7.0	3.8	3.7	3.9	3.9	3.9	4.1	4.3	4.7	4.9	5.6	6.4	4.7	6.7	118.1	2.5	2.9	3.1	2.9
Bottom 10 Avg.	3.2	6.3	3.2	3.2	3.1	3.2	3.2	3.2	3.4	3.6	3.9	4.7	5.5	3.9	5.8	114.2	1.5	1.8	1.9	1.9
Standard Deviation	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.4	3.0	0.4	0.6	0.6	0.5
November Consensus	3.3	6.5	3.4	3.3	3.3	3.3	3.3	3.4	3.6	3.8	4.2	4.9	5.8	4.2	5.9	114.2	2.1	2.1	2.3	2.1
Number of Forecasts Changed From A Month Ago:																				
Down	2	2	3	1	2	3	2	1	0	0	1	1	0	1	0	1	15	7	9	10
Same	14	13	10	8	11	10	11	10	10	7	6	4	8	9	6	6	12	12	13	11
Up	22	16	13	12	18	15	15	22	23	28	25	18	14	9	22	11	12	17	15	15
Diffusion Index	76%	73%	69%	76%	76%	71%	73%	82%	85%	90%	88%	87%	82%	71%	89%	78%	46%	64%	58%	57%

First Quarter 2026

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter: Short-Term: 1 Federal Funds Rate	2 Prime Bank Rate	3 SOFR Rate	4 Com. Paper 1-Mo.	5 Treas. Bills 3-Mo.	6 Treas. Bills 6-Mo.	7 Treas. Bills 1-Yr.	Intermediate-Term: 8 Treas. Notes 2-Yr.	9 Treas. Notes 5-Yr.	10 Treas. Notes 10-Yr.	Long-Term: 11 Treas. Bond 30-Yr.	12 Aaa Corp. Bond	13 Baa Corp. Bond	14 State & Local Bonds	15 Home Mtg. Rate	Avg. For ---Qtr.--- A. Fed's Adv Fgn Econ $ Index	(Q-Q % Change) (SAAR): B. Real GDP	C. GDP Price Index	D. Cons. Price Index	E. PCE Price Index
TS Lombard	4.8 H	7.9 H	4.8 H	4.8 H	4.7 H	4.8 H	4.9 H	5.0 H	5.4 H	5.5 H	5.6 H	6.4 H	7.2 H	5.5 H	7.3 H	110.0 L	2.5	3.3 H	3.3 H	3.3 H
Bank of America	3.9	na	na	na	na	na	na	4.0	4.2	4.3	4.7	na	na	na	na	na	2.1	2.4	2.4	2.4
Barclays	3.9	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.5	3.0	3.3 H	3.0
DePrince & Assoc.	3.9	7.0	3.8	3.9	3.8	3.7	3.5	3.8	4.1	4.3	4.4	5.6	6.4	4.7	6.3	115.7	2.2	2.3	2.3	2.2
Fannie Mae	3.9	7.0	na	na	4.3	4.3	4.2	4.2	4.3	4.5	4.6	na	na	na	6.4	na	2.3	2.7	2.6	2.2
Nomura Securities, Inc.	3.9	7.0	na	na	na	na	na	3.9	4.2	4.5	na	na	na	na	na	na	1.7	1.9	3.1	2.7
Swiss Re	3.9	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.5	na	na	na
Comerica Bank	3.8	7.0	3.8	na	3.8	3.8	3.8	3.8	4.0	4.3	4.7	5.5	6.2	na	6.3	na	2.6	2.8	2.8	2.7
J.P. Morgan Chase	3.8	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.0	2.5	2.9	2.6
NatWest Markets	3.8	7.0	na	3.9	4.1	4.2	4.3	4.1	4.3	4.7	5.0	5.6	6.5	5.2	7.0	na	2.0	2.4	2.7	3.2
ING	3.6	na	na	na	na	na	na	3.9	4.3	5.5 H	5.4	na	na	na	na	na	1.8	na	na	na
MacroPolicy Perspectives	3.6	6.8	3.6	3.1	3.0	2.9 L	2.9	2.7	3.6	3.9	4.5	4.9	5.6	na	5.9	na	na	na	na	na
Regions Financial Corporation	3.6	6.8	3.6	3.7	3.6	3.7	3.8	3.7	4.0	4.7	5.1	5.7	6.5	4.8	6.7	117.9	1.9	2.1	2.1	2.0
Wells Fargo	3.6	6.8	3.7	3.6	3.7	3.7	3.7	3.8	3.9	4.1	4.4	5.3	6.3	4.7	6.3	na	2.8 H	2.5	2.8	2.6
Chan Economics	3.5	6.5	3.5	3.4	3.4	3.1	2.8 L	2.5 L	2.4 L	2.8 L	3.1 L	4.1 L	5.1	3.4	5.6	115.0	1.5	1.9	2.1	1.8 L
Oxford Economics	3.5	6.6	3.5	na	3.4	3.3	3.2	3.4	3.8	4.2	4.4	4.4	na	na	6.5	117.5	2.8 H	2.1	2.5	2.2
Via Nova Investment Mgt.	3.5	6.8	3.5	3.5	3.4	3.5	3.4	3.7	3.7	3.8	4.3	4.9	5.4	3.6	6.1	112.0	2.0	2.0	2.0 L	2.0
BMO Capital Markets	3.4	6.5	3.4	3.4	3.3	3.4	3.4	3.5	3.7	3.9	4.1	4.9	5.9	4.1	6.4	116.3	2.0	2.0	2.2	2.0
Economist Intelligence Unit	3.4	6.5	na	na	na	na	na	na	na	4.2	na	na	na	na	na	na	2.1	na	2.5	na
GLC Financial Economics	3.4	6.5	3.4	3.4	3.3	3.4	3.3	3.2	3.6	3.8	4.2	4.9	5.8	4.1	5.9	113.9	2.2	2.2	2.4	2.2
Goldman Sachs & Co.	3.4	na	na	na	3.6	na	na	3.6	3.7	4.3	4.2	na	na	na	na	na	2.2	1.7 L	2.2	1.9
KPMG	3.4	6.6	3.3	3.2	3.2	3.3	3.3	3.4	3.6	3.9	4.3	4.8	6.1	na	6.2	na	1.5	2.8	2.8	2.4
PNC Financial Services Corp.	3.4	6.5	3.4	na	3.2	3.2	3.2	3.2	3.5	3.9	4.3	na	5.8	4.4	5.7	116.1	2.3	1.8	2.3	2.2
Roberts Capital Advisors	3.4	6.5	3.5	3.4	3.4	3.6	3.7	4.1	4.3	4.5	4.7	5.2	6.0	4.6	6.8	115.0	2.2	2.3	2.5	2.4
Action Economics	3.3	6.4	3.9	3.2	3.2	3.1	3.0	3.1	3.4	3.7	3.8	4.4	5.1	3.5	6.6	118.8	na	na	na	na
Daiwa Capital Markets America	3.3	6.4	3.2	na	3.2	na	na	3.2	3.2	3.4	3.9	na	na	na	5.6	112.0	1.8	2.2	2.1	2.0
Moody's Analytics	3.3	6.5	3.3	3.3	3.2	3.3	3.5	3.7	3.9	4.2	4.6	5.7	6.6	4.2	5.9	na	1.9	2.1	2.4	2.1
Santander Capital Markets	3.3	6.5	3.4	3.3	3.3	3.3	3.4	3.5	3.6	3.7	4.0	4.7	5.6	3.7	5.8	117.0	2.4	2.5	2.7	2.4
Societe Generale	3.3	6.5	3.3	na	3.2	3.1	3.1	3.2	3.6	4.2	4.4	na	na	na	na	na	1.7	1.9	2.6	2.3
EY-Parthenon	3.2	na	na	na	3.3	na	na	na	na	3.7	na	na	na	na	na	na	1.7	2.1	2.2	2.1
MacroFin Analytics & Rutgers Bus School	3.2	6.3	3.2	3.2	3.1	3.2	3.4	3.7	3.9	4.0	4.2	5.0	5.5	4.1	6.3	118.0	1.9	2.4	2.4	2.3
Chmura Economics & Analytics	3.1	6.3	3.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7	4.1	4.8	5.9	na	5.8	na	2.8 H	2.0	2.0 L	2.1
Georgia State University	3.1	6.3	na	na	2.9	3.2	3.5	3.7	4.1	4.5	4.7	6.0	6.9	na	6.8	na	1.4 L	2.9	3.0	2.1
Loomis, Sayles & Company	3.1	6.3	3.1	3.1	3.1	3.2	3.3	3.5	3.5	3.9	4.2	4.7	5.5	3.9	5.9	118.3	2.0	2.2	2.3	2.0
The Northern Trust Company	3.1	6.3	3.1	3.2	3.2	3.4	3.5	3.7	4.2	4.4	4.7	5.4	6.4	4.6	6.7	115.0	1.8	2.6	2.7	2.5
The Lonski Group	3.0	6.1	2.9	2.9 L	3.0	3.1	3.2	3.3	3.3	3.3	3.5	4.3	5.0 L	3.3 L	5.6	123.9 H	1.8	2.2	2.4	2.6
Naroff Economics LLC	2.9	5.9	3.0	3.0	3.0	3.1	3.3	3.5	4.0	4.4	4.7	na	na	4.1	6.0	116.5	1.6	2.5	2.6	2.5
S&P Global Market Intelligence	2.7 L	5.8 L	2.6 L	na	2.6 L	2.9 L	3.0	3.1	3.3	3.6	3.9	na	na	na	5.4 L	na	2.2	2.8	2.7	2.3
December Consensus	**3.5**	**6.6**	**3.4**	**3.4**	**3.4**	**3.4**	**3.5**	**3.6**	**3.8**	**4.1**	**4.4**	**5.1**	**6.0**	**4.2**	**6.2**	**116.1**	**2.0**	**2.3**	**2.5**	**2.3**
Top 10 Avg.	4.0	7.0	3.8	3.7	3.8	3.9	3.9	4.1	4.3	4.7	4.9	5.6	6.5	4.7	6.7	118.0	2.5	2.8	2.9	2.8
Bottom 10 Avg.	3.1	6.2	3.1	3.1	3.0	3.1	3.1	3.1	3.3	3.6	3.9	4.6	5.4	3.8	5.7	114.1	1.6	1.9	2.2	2.0
Standard Deviation	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	3.1	0.4	0.4	0.3	0.4
November Consensus	3.2	6.4	3.3	3.3	3.2	3.3	3.3	3.3	3.6	3.8	4.2	4.9	5.8	4.1	5.9	114.0	2.1	2.2	2.4	2.2
Number of Forecasts Changed From A Month Ago:																				
Down	2	2	1	1	2	3	2	0	0	0	1	1	0	2	1	1	11	5	8	8
Same	16	14	11	10	13	11	11	11	10	7	8	5	8	8	5	6	15	14	11	10
Up	20	15	14	10	16	14	15	21	22	27	22	17	14	9	22	11	10	14	15	15
Diffusion Index	74%	71%	75%	71%	73%	70%	73%	83%	84%	90%	84%	85%	82%	68%	88%	78%	49%	64%	60%	61%

International Interest Rate And Foreign Exchange Rate Forecasts

United States

Blue Chip Forecasters	Fed Fund Target Rate			10 Yr. Gov't Bond Yield %			Fed's AFE $ Index		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	4.38	4.13	3.88	4.30	4.25	4.25	--	--	--
BMO Capital Markets	4.38	4.13	3.63	4.28	4.16	3.92	120.8	119.6	117.1
ING Financial Markets	4.38	3.88	3.68	4.25	4.75	5.50	112.7	112.5	111.8
Moody's Analytics	4.64	4.33	3.83	4.15	4.18	4.22	--	--	--
Northern Trust	4.13	3.88	3.13	4.40	4.40	4.40	119.0	121.0	116.0
Oxford Economics	4.33	4.08	3.63	4.33	4.31	4.24	119.4	118.9	117.9
Economist Intelligence Unit	4.38	4.13	3.63	4.28	4.04	3.63	--	--	--
TS Lombard	4.00	4.00	4.25	4.75	5.00	5.50	--	--	--
Wells Fargo	4.13	3.88	3.63	4.20	4.05	3.90	--	--	--
December Consensus	**4.31**	**4.05**	**3.70**	**4.33**	**4.35**	**4.40**	**118.0**	**118.0**	**115.7**
High	4.64	4.33	4.25	4.75	5.00	5.50	120.8	121.0	117.9
Low	4.00	3.88	3.13	4.15	4.04	3.63	112.7	112.5	111.8
Last Months Avg.	4.29	3.98	3.56	4.04	4.04	4.06	92.8	92.1	91.3

Japan

Blue Chip Forecasters	Policy-Rate Balance Rate			10 Yr. Gov't Bond Yield %			Yen per US$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.50	0.50	0.75	1.10	1.15	1.25	158.0	155.0	149.0
BMO Capital Markets	0.50	0.75	1.25	1.07	1.09	1.14	151.0	150.0	146.0
ING Financial Markets	0.50	0.75	1.00	1.25	1.25	1.75	155.0	157.0	160.0
Moody's Analytics	0.25	0.44	0.67	1.06	1.19	1.35	149.0	146.8	142.1
Nomura Securities	--	--	--	--	--	--	150.0	145.0	140.0
Northern Trust	0.50	0.50	0.75	1.10	1.20	1.30	156.0	150.0	145.0
Oxford Economics	0.50	0.75	0.75	1.25	1.34	1.47	156.9	155.8	152.6
S&P Global Market Intelligence	--	--	--	--	--	--	148.4	143.1	132.9
Economist Intelligence Unit	0.25	0.33	0.33	1.10	1.10	1.10	150.0	153.0	158.0
Scotiabank	--	--	--	--	--	--	145.0	145.0	140.0
TS Lombard	0.25	0.35	0.35	1.00	1.10	1.25	145.0	145.0	145.0
Wells Fargo	0.50	0.75	0.75	1.20	1.30	1.25	--	--	--
December Consensus	**0.42**	**0.57**	**0.73**	**1.13**	**1.19**	**1.32**	**151.3**	**149.6**	**146.4**
High	0.50	0.75	1.25	1.25	1.34	1.75	158.0	157.0	160.0
Low	0.25	0.33	0.33	1.00	1.09	1.10	145.0	143.1	132.9
Last Months Avg.	0.35	0.51	0.68	1.02	1.13	1.21	144.3	142.3	137.6

United Kingdom

Blue Chip Forecasters	Official Bank Rate			10 Yr. Gilt Yields %			US$ per Pound Sterling		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	4.50	4.00	3.50	4.50	4.55	4.55	1.27	1.28	1.30
BMO Capital Markets	4.50	4.25	4.00	4.41	4.35	4.22	1.25	1.26	1.27
ING Financial Markets	4.25	3.75	3.25	4.10	4.00	4.25	1.25	1.25	1.24
Moody's Analytics	4.85	4.60	4.10	4.50	4.49	4.46	1.25	1.24	1.26
Nomura Securities	--	--	--	--	--	--	1.29	1.28	1.28
Northern Trust	4.50	4.25	3.75	4.20	4.10	4.00	1.25	1.23	1.27
Oxford Economics	4.60	4.35	3.85	4.45	4.39	4.29	1.26	1.26	1.27
S&P Global Market Intelligence	--	--	--	--	--	--	1.29	1.30	1.30
Economist Intelligence Unit	4.75	4.25	3.50	3.90	3.90	3.80	1.32	1.27	1.28
Scotiabank	4.25	3.75	3.25	--	--	--	1.29	1.29	1.31
TS Lombard	4.75	4.25	4.25	4.25	4.50	4.75	1.30	1.25	1.25
Wells Fargo	4.50	4.25	4.00	4.25	4.15	4.10	--	--	--
December Consensus	**4.55**	**4.17**	**3.75**	**4.28**	**4.27**	**4.27**	**1.27**	**1.26**	**1.28**
High	4.85	4.60	4.25	4.50	4.55	4.75	1.32	1.30	1.31
Low	4.25	3.75	3.25	3.90	3.90	3.80	1.25	1.23	1.24
Last Months Avg.	4.62	4.20	3.67	4.00	3.96	3.90	1.31	1.30	1.31

Switzerland

Blue Chip Forecasters	SNB Policy Rate			10 Yr. Gov't Bond Yield %			CHF per US$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.25	0.00	0.00	--	--	--	0.88	0.88	0.90
BMO Capital Markets	1.00	1.00	1.00	--	--	--	0.87	0.86	0.85
ING Financial Markets	0.50	0.50	0.50	0.40	0.50	0.70	0.89	0.88	0.88
Moody's Analytics	0.75	0.50	0.50	0.56	0.60	0.69	0.87	0.86	0.84
Nomura Securities	--	--	--	--	--	--	0.91	0.95	0.95
Northern Trust	0.50	0.25	0.25	0.20	0.10	0.10	0.90	0.91	0.88
Oxford Economics	0.75	0.75	0.75	0.55	0.65	0.86	0.90	0.90	0.90
S&P Global Market Intelligence	--	--	--	--	--	--	0.88	0.89	0.89
Economist Intelligence Unit	1.00	0.75	0.75	-0.10	-0.10	-0.10	0.91	0.89	0.88
Scotiabank	--	--	--	--	--	--	0.91	0.91	0.89
TS Lombard	1.00	1.00	1.25	0.40	0.40	0.50	0.90	0.90	0.90
Wells Fargo	0.50	0.50	0.50	--	--	--	--	--	--
December Consensus	**0.69**	**0.58**	**0.61**	**0.34**	**0.36**	**0.46**	**0.89**	**0.89**	**0.89**
High	1.00	1.00	1.25	0.56	0.65	0.86	0.91	0.95	0.95
Low	0.25	0.00	0.00	-0.10	-0.10	-0.10	0.87	0.86	0.84
Last Months Avg.	0.83	0.75	0.78	0.42	0.49	0.61	0.87	0.87	0.86

Canada

Blue Chip Forecasters	O/N MMkt Financing Rate			10 Yr. Gov't Bond Yield %			C$ per US$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	3.00	2.75	2.50	--	--	--	1.42	1.43	1.43
BMO Capital Markets	3.25	2.75	2.50	3.16	3.04	2.84	1.39	1.38	1.35
ING Financial Markets	3.25	3.00	3.00	3.00	3.25	4.00	1.37	1.37	1.38
Moody's Analytics	4.00	3.69	3.08	3.27	3.33	3.54	1.35	1.34	1.31
Nomura Securities	--	--	--	--	--	--	1.39	1.40	1.40
Northern Trust	3.00	2.75	2.50	3.50	3.50	3.50	1.41	1.37	1.35
Oxford Economics	3.00	2.50	2.25	3.36	3.32	3.40	1.40	1.39	1.38
S&P Global Market Intelligence	--	--	--	--	--	--	1.41	1.42	1.41
Economist Intelligence Unit	3.75	3.50	3.50	2.74	2.24	1.98	1.39	1.38	1.30
Scotiabank	--	--	--	--	--	--	1.34	1.32	1.30
TS Lombard	3.75	3.75	4.00	3.25	3.50	4.25	1.35	1.35	1.35
Wells Fargo	3.00	2.75	2.50	3.05	2.95	2.90	--	--	--
December Consensus	**3.33**	**3.05**	**2.87**	**3.17**	**3.14**	**3.30**	**1.38**	**1.38**	**1.36**
High	4.00	3.75	4.00	3.50	3.50	4.25	1.42	1.43	1.43
Low	3.00	2.50	2.25	2.74	2.24	1.98	1.34	1.32	1.30
Last Months Avg.	3.48	3.09	3.00	3.11	3.11	3.27	1.37	1.36	1.33

International Interest Rate And Foreign Exchange Rate Forecasts

Australia

Blue Chip Forecasters	Official Cash Rate			10 Yr. Gov't Bond Yield %			US$ per A$		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	4.35	4.10	3.60	--	--	--	0.63	0.63	0.63
BMO Capital Markets	4.10	3.85	3.60	--	--	--	0.64	0.64	0.65
ING Financial Markets	4.10	3.85	3.35	4.20	4.25	4.75	0.65	0.64	0.63
Moody's Analytics	4.35	4.18	3.77	4.20	4.15	4.11	0.67	0.69	0.73
Nomura Securities	--	--	--	--	--	--	0.66	0.65	0.67
Northern Trust	4.10	3.85	3.60	4.40	4.30	4.20	0.65	0.65	0.67
Oxford Economics	4.35	4.23	3.73	4.31	4.21	4.18	0.67	0.67	0.69
S&P Global Market Intelligence	--	--	--	--	--	--	0.66	0.66	0.67
Economist Intelligence Unit	4.35	4.35	4.00	3.90	3.70	3.40	0.70	0.69	0.68
Scotiabank	--	--	--	--	--	--	0.70	0.70	0.72
TS Lombard	4.35	4.35	4.55	4.50	4.25	5.25	0.65	0.65	0.65
Wells Fargo	4.10	3.85	3.60	--	--	--	--	--	--
December Consensus	**4.24**	**4.07**	**3.76**	**4.25**	**4.14**	**4.32**	**0.66**	**0.66**	**0.67**
High	4.35	4.35	4.55	4.50	4.30	5.25	0.70	0.70	0.73
Low	4.10	3.85	3.35	3.90	3.70	3.40	0.63	0.63	0.63
Last Months Avg.	4.32	4.15	3.84	4.18	4.08	4.20	0.68	0.69	0.70

Euro area

Blue Chip Forecasters	Main Refinancing Rate			US$ per Euro		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	2.65	2.15	1.65	1.04	1.04	1.04
BMO Capital Markets	3.15	2.90	2.40	1.01	1.02	1.05
ING Financial Markets	2.25	1.75	1.75	1.04	1.04	1.02
Moody's Analytics	3.43	2.98	2.40	1.08	1.10	1.13
Nomura Securities	--	--	--	1.05	1.03	1.03
Northern Trust	2.90	2.40	2.15	1.05	1.02	1.09
Oxford Economics	2.89	2.36	1.90	1.05	1.05	1.06
S&P Global Market Intelligence	--	--	--	1.08	1.08	1.09
Economist Intelligence Unit	3.15	2.65	3.15	1.09	1.03	1.03
Scotiabank	2.65	2.40	2.15	1.11	1.11	1.15
TS Lombard	3.25	3.00	3.00	1.10	1.05	1.05
Wells Fargo	2.50	2.25	2.00	--	--	--
December Consensus	**2.88**	**2.48**	**2.26**	**1.06**	**1.05**	**1.07**
High	3.43	3.00	3.15	1.11	1.11	1.15
Low	2.25	1.75	1.65	1.01	1.02	1.02
Last Months Avg.	3.07	2.63	2.34	1.10	1.10	1.11

Blue Chip Forecasters	10 Yr. Gov't Bond Yields %											
	Germany			France			Italy			Spain		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	2.20	2.15	2.00	--	--	--	--	--	--	--	--	--
BMO Capital Markets	2.32	2.27	2.16	--	--	--	--	--	--	--	--	--
ING Financial Markets	2.30	2.40	2.70	3.00	3.10	3.40	3.60	3.70	4.00	3.05	3.15	3.45
Moody's Analytics	2.39	2.38	2.38	3.04	2.94	2.83	3.69	3.65	3.65	3.22	3.16	3.09
Northern Trust	2.30	2.20	2.20	3.00	2.90	2.90	3.50	3.40	3.40	3.00	2.90	2.90
Oxford Economics	2.41	2.43	2.45	3.24	3.33	3.33	3.71	3.78	3.90	3.16	3.21	3.27
Economist Intelligence Unit	2.50	2.40	2.40	3.00	2.90	2.80	3.50	3.50	3.50	3.00	3.10	3.40
TS Lombard	2.25	2.50	3.00	3.00	3.25	3.75	3.45	3.70	4.40	3.00	3.25	3.75
Wells Fargo	2.20	2.10	2.05	--	--	--	--	--	--	--	--	--
December Consensus	**2.32**	**2.31**	**2.37**	**3.05**	**3.07**	**3.17**	**3.58**	**3.62**	**3.81**	**3.07**	**3.13**	**3.31**
High	2.50	2.50	3.00	3.24	3.33	3.75	3.71	3.78	4.40	3.22	3.25	3.75
Low	2.20	2.10	2.00	3.00	2.90	2.80	3.45	3.40	3.40	3.00	2.90	2.90
Last Months Avg.	2.27	2.27	2.30	2.98	3.00	3.07	3.53	3.59	3.78	3.02	3.08	3.25

	Consensus Forecasts 10-year Bond Yields vs U.S. Yield			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-3.35	-3.20	-3.16	-3.08
United Kingdom	0.01	-0.04	-0.08	-0.13
Switzerland	-4.05	-3.99	-3.99	-3.94
Canada	-1.15	-1.16	-1.21	-1.09
Australia	0.21	-0.08	-0.21	-0.08
Germany	-2.09	-2.01	-2.03	-2.02
France	-1.34	-1.28	-1.28	-1.23
Italy	-0.88	-0.75	-0.73	-0.59
Spain	-1.34	-1.26	-1.22	-1.09

	Consensus Forecasts Policy Rates vs U.S. Target Rate			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-4.38	-3.89	-4.62	-2.97
United Kingdom	0.13	0.24	0.12	0.05
Switzerland	-3.63	-3.61	-3.47	-3.09
Canada	-0.88	-0.97	-1.00	-0.83
Australia	-0.28	-0.07	0.02	0.06
Euro area	-1.23	-1.42	-1.56	-1.44

Special Questions:

1. What is your estimate of the long-term neutral fed funds rate?

Consensus	3.08%	Top 10	3.48%	Bot 10	2.69%	Median	3.13%

2. a. Will the US presidential election outcome slow the pace of FFR reductions going forward? Yes 79% No 21%

   b. Will it slow the pace at which the ECB lowers its policy interest rate going forward? Yes 16% No 84%

   c. Will it slow the pace at which the BoE lowers its policy interest rate going forward? Yes 16% No 84%

   d. Will it slow the pace of BoJ rate increases going forward? Yes 16% No 84%

3. Has the US election outcome changed your forecast of global (ex US) economic growth for 2025?

Yes, it has lowered my forecast	46%	Yes, it has raised my forecast	21%	No change	32%

4. a. What is the probability of a recession occurring in the US over the next 12 months?

Consensus	27%	Top 10	37%	Bot 10	18%	Median	25%

   b. Has it changed since the US election? Yes, increased 23% Yes, decreased 23% No change 53%

5. a. What is the probability that US inflation readings will turn up meaningfully over the next 6 months?

Consensus	36%	Top 10	55%	Bot 10	21%	Median	32%

   b. Has it changed since the US election? Yes, increased 63% Yes, decreased 0% No change 37%

Viewpoints:

A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

Overseas Consequences of the U.S. Election: How will U.S. trading partners react to trade risks?

In sport, play is limited by time or innings. Lineups are set, rules are fixed and boundaries are defined. Winners are determined objectively. Commerce and politics operate differently. Players come and go, the rules are changeable and the clock never stops. It is much harder to identify victors in these arenas. The lineup in Washington will be changing next year. Other players around the globe will be challenged to adapt their tactics to the new roster, and the new rules they will try to enforce. Following is a look at how selected countries and regions may fare under a second Trump administration.

Europe. The European continent is extremely vulnerable to Trump's agenda, owing to close commercial and national security linkages with the United States. The most immediate economic worry will be tariffs, as the incoming president seeks to close the €155 billion trade deficit with the eurozone; he has threatened a blanket 10% to 20% levy on all imports. Germany, Italy and Ireland are among the most vulnerable due to their high export volumes to America. Germany's struggling auto sector will be top of the list.

The implications for the U.K. economy will also be significant. America is Britain's most important bilateral trade, security and defense partner. Industries like pharmaceuticals, medical goods, automotive and liquor would be particularly exposed to new U.S tariffs. Trump's trade agenda, if implemented to the fullest, will likely deliver a hit of anywhere between 0.6% to 1.1% to real gross domestic product (GDP) across the European continent, according to Goldman Sachs.

The trade deficit is not the only elephant in the room. European nations will come under increased pressure to decouple from China. The incoming president could impose counter-measures against European digital services taxes and states that have implemented the Organization for Economic Co-operation and Development's global minimum tax, as it is seen to disadvantage American corporations.

The President-elect also wants all the European states to meet the defense spending targets required of North Atlantic Treaty Organization (NATO), threatening withdrawal of U.S troops and weapons. Out of the 32 NATO allies, seven European states are unlikely to meet the 2% of GDP spending target in 2024, including Italy and Spain.

Asia Pacific. China is bracing for an unstable and unpredictable path ahead, at a time when its economy is struggling to return to pre-pandemic levels of growth. During Trump's first term in office, goods from China faced tariffs of as much as 25%. Proposed tariffs as high as 60% on Chinese imports, along with more technology controls, would decimate Chinese trade with the U.S. Escalating trade disputes will significantly hurt corporate confidence and capital expenditures. Seven years of trade tensions have allowed mainland businesses to diversify, and America has also reduced its dependence on Chinese products. However, shrinking external and weak domestic demand will further exacerbate deflationary pressures.

The looming trade war could set in motion the steady decline of China's decades-old manufacturing and export growth model. Global supply chains will come under scrutiny as the Trump administration will also likely target Chinese goods being re-routed to the United States through other markets. Beijing could retaliate by targeting U.S. farm products, blacklisting American corporations and restricting access to essential materials like rare earth metals. However, in order to offset tariff costs, Chinese policymakers will have to weaken the renminbi, increase export tax rebates and implement more stimulus. An unprecedented scale of currency depreciation will be required to mitigate the higher levies. According to Morgan Stanley, factoring in tariffs already in place since 2018, the renminbi would need to fall by 50% against the dollar to keep U.S. import prices stable.

The Australian economy will not be immune from repercussions from the U.S. election, as it shares close commercial ties with both China and the United States. About 97% of Australian imports into the U.S. are currently tariff-free, thanks to a free trade deal signed in 2004. Beyond the shock of potential new tariffs, Australia could be collateral damage of a renewed U.S.-China trade war. Weaker demand for Chinese goods would diminish demand for Australian input commodities like iron ore. If all of Trump's policies are implemented, Australia's economic growth would be between 0.8% and 1.5% lower than it would otherwise have been, according to an analysis by KPMG.

North America. Few nations are as closely tied with the U.S. as Canada and Mexico, with supply chains deeply integrated and continental trade flows exceeding a trillion dollars annually. Trump's promise of universal 10% tariffs raises worries across this network.

Canada exports 75% of its goods to the U.S., with energy, autos and other heavy manufacturing industries among the top export products. These industries rely on its southern neighbor for raw inputs and as a market for finished products. Any retaliatory tariffs from Canada are only going to compound the pain of these businesses, in the form of higher input costs. Increased American oil production and weaker demand from China would weigh on the Canadian energy industry.

The Trump administration could spell even bigger trouble for Mexico, not only because of the large trade surplus it runs with the U.S. The President-elect has warned to implement "whatever tariffs are required — 100%, 200%, 1,000%" to prevent imports of Chinese cars via Mexico and a blanket 25% tariff on all Mexican goods due to the flow of migrants through the country.

His administration is also likely to insist on modifications to the United States-Mexico-Canada Agreement, the deal he inked during his first term, when it comes up for review in 2026.

As much as the President-elect would like to believe that the U.S. will emerge a winner from trade disputes, past trade conflicts have not worked to any nation's benefit. Losing the least may have to count as a win.

Vaibhav Tandon (Northern Trust)

Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2026 through 2030 and averages for the five-year periods 2026-2030 and 2031-2035. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year					Five-Year Averages	
		2026	2027	2028	2029	2030	2026-2030	2031-2035
1. Federal Funds Rate	**CONSENSUS**	**3.4**	**3.3**	**3.3**	**3.2**	**3.2**	**3.3**	**3.2**
	Top 10 Average	3.7	3.7	3.6	3.7	3.7	3.7	3.6
	Bottom 10 Average	3.0	2.9	2.9	2.9	2.8	2.9	2.9
2. Prime Rate	**CONSENSUS**	**6.5**	**6.4**	**6.4**	**6.4**	**6.3**	**6.4**	**6.3**
	Top 10 Average	6.8	6.8	6.7	6.8	6.7	6.7	6.7
	Bottom 10 Average	6.2	6.1	6.1	6.0	5.9	6.1	5.9
3. SOFR	**CONSENSUS**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**
	Top 10 Average	3.6	3.6	3.6	3.6	3.6	3.6	3.6
	Bottom 10 Average	3.1	3.0	3.0	2.9	2.9	3.0	2.9
4. Commercial Paper, 1-Mo	**CONSENSUS**	**3.4**	**3.4**	**3.4**	**3.4**	**3.3**	**3.4**	**3.3**
	Top 10 Average	3.6	3.6	3.6	3.6	3.6	3.6	3.6
	Bottom 10 Average	3.2	3.1	3.1	3.0	3.0	3.1	3.0
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**3.3**	**3.3**	**3.2**	**3.2**	**3.2**	**3.3**	**3.2**
	Top 10 Average	3.6	3.6	3.5	3.6	3.6	3.6	3.5
	Bottom 10 Average	3.1	3.0	2.9	2.9	2.8	2.9	2.8
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**3.4**	**3.3**	**3.3**	**3.2**	**3.2**	**3.3**	**3.2**
	Top 10 Average	3.6	3.6	3.6	3.6	3.6	3.6	3.6
	Bottom 10 Average	3.1	3.0	3.0	2.9	2.8	3.0	2.9
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**3.4**	**3.4**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**
	Top 10 Average	3.7	3.7	3.6	3.6	3.6	3.6	3.6
	Bottom 10 Average	3.2	3.1	3.0	3.0	2.9	3.0	2.9
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**3.6**	**3.6**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**
	Top 10 Average	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	Bottom 10 Average	3.3	3.2	3.1	3.1	3.0	3.1	3.0
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**3.8**	**3.8**	**3.8**	**3.8**	**3.7**	**3.8**	**3.8**
	Top 10 Average	4.2	4.3	4.3	4.3	4.3	4.3	4.3
	Bottom 10 Average	3.4	3.4	3.3	3.3	3.2	3.3	3.2
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**4.0**	**4.1**	**4.0**	**4.0**	**3.9**	**4.0**	**4.0**
	Top 10 Average	4.5	4.6	4.5	4.5	4.5	4.5	4.5
	Bottom 10 Average	3.6	3.5	3.4	3.4	3.3	3.5	3.4
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**4.3**	**4.4**	**4.3**	**4.3**	**4.2**	**4.3**	**4.2**
	Top 10 Average	4.7	4.8	4.8	4.8	4.8	4.8	4.7
	Bottom 10 Average	3.9	3.9	3.8	3.8	3.7	3.8	3.8
12. Corporate Aaa Bond Yield	**CONSENSUS**	**5.1**	**5.2**	**5.2**	**5.1**	**5.1**	**5.2**	**5.1**
	Top 10 Average	5.5	5.7	5.6	5.6	5.6	5.6	5.5
	Bottom 10 Average	4.8	4.8	4.7	4.7	4.6	4.7	4.6
13. Corporate Baa Bond Yield	**CONSENSUS**	**6.0**	**6.1**	**6.0**	**6.0**	**6.0**	**6.0**	**5.9**
	Top 10 Average	6.4	6.6	6.5	6.5	6.4	6.5	6.4
	Bottom 10 Average	5.7	5.7	5.6	5.6	5.5	5.6	5.5
14. State & Local Bonds Yield	**CONSENSUS**	**4.1**	**4.3**	**4.2**	**4.2**	**4.3**	**4.2**	**4.1**
	Top 10 Average	4.5	4.6	4.6	4.6	4.6	4.6	4.6
	Bottom 10 Average	3.8	3.9	3.9	3.9	3.9	3.9	3.6
15. Home Mortgage Rate	**CONSENSUS**	**6.2**	**6.1**	**6.0**	**6.0**	**5.9**	**6.0**	**5.9**
	Top 10 Average	6.6	6.6	6.5	6.4	6.4	6.5	6.4
	Bottom 10 Average	5.7	5.7	5.6	5.5	5.4	5.6	5.4
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**115.5**	**115.0**	**114.5**	**113.9**	**113.2**	**114.4**	**112.6**
	Top 10 Average	117.0	116.3	115.8	115.3	114.8	115.8	114.6
	Bottom 10 Average	113.9	113.6	113.1	112.5	111.8	113.0	110.9
		Year-Over-Year, % Change					Five-Year Averages	
		2026	2027	2028	2029	2030	2026-2030	2031-2035
B. Real GDP	**CONSENSUS**	**1.9**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**1.9**
	Top 10 Average	2.2	2.3	2.3	2.2	2.2	2.2	2.2
	Bottom 10 Average	1.7	1.7	1.8	1.7	1.7	1.7	1.7
C. GDP Chained Price Index	**CONSENSUS**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.1**
	Top 10 Average	2.4	2.3	2.3	2.3	2.3	2.3	2.3
	Bottom 10 Average	2.1	2.0	2.0	2.0	2.0	2.0	2.0
D. Consumer Price Index	**CONSENSUS**	**2.4**	**2.3**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**
	Top 10 Average	2.6	2.5	2.4	2.5	2.4	2.5	2.4
	Bottom 10 Average	2.1	2.0	2.0	2.0	2.0	2.0	2.0
E. PCE Price Index	**CONSENSUS**	**2.2**	**2.2**	**2.1**	**2.1**	**2.1**	**2.2**	**2.1**
	Top 10 Average	2.5	2.3	2.3	2.3	2.3	2.3	2.3
	Bottom 10 Average	2.0	2.0	1.9	2.0	2.0	2.0	2.0

Databank:

2024 Historical Data

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	-1.1	0.7	0.5	-0.2	0.2	-0.3	1.2	-0.1	0.8	0.4	....	....
Auto & Light Truck Sales (b)	15.00	15.68	15.73	16.07	15.89	15.03	15.85	15.33	15.77	16.04	....	....
Personal Income (a, current $)	1.4	0.4	0.6	0.4	0.5	0.3	0.3	0.2	0.3	....	....	....
Personal Consumption (a, current $)	0.1	0.5	0.7	0.3	0.5	0.3	0.6	0.3	0.5	....	....	....
Consumer Credit (e)	3.7	2.6	-0.6	0.4	2.3	0.8	6.5	1.8	1.4	....	....	....
Consumer Sentiment (U. of Mich.)	79.0	76.9	79.4	77.2	69.1	68.2	66.4	67.9	70.1	70.5	71.8	....
Household Employment (c)	-31	-184	498	25	-408	116	67	168	430	-368	....	....
Nonfarm Payroll Employment (c)	256	236	310	108	216	118	144	78	223	12	....	....
Unemployment Rate (%)	3.7	3.9	3.8	3.9	4.0	4.1	4.3	4.2	4.1	4.1	....	....
Average Hourly Earnings (All, cur. $)	34.51	34.56	34.69	34.75	34.88	34.99	35.07	35.22	35.33	35.46	....	....
Average Workweek (All, hrs.)	34.2	34.3	34.4	34.3	34.3	34.3	34.2	34.3	34.3	34.3	....	....
Industrial Production (d)	-1.2	-0.1	-0.3	-0.8	0.0	0.9	-0.5	0.0	-0.7	-0.3	....	....
Capacity Utilization (%)	77.2	78.1	77.8	77.7	78.1	78.2	77.6	77.9	77.4	77.1	....	....
ISM Manufacturing Index (g)	49.1	47.8	50.3	49.2	48.7	48.5	46.8	47.2	47.2	46.5	....	....
ISM Nonmanufacturing Index (g)	53.4	52.6	51.4	49.4	53.8	48.8	51.4	51.5	54.9	56.0	....	....
Housing Starts (b)	1.376	1.546	1.299	1.377	1.315	1.329	1.262	1.379	1.353	1.311	....	....
Housing Permits (b)	1.508	1.563	1.485	1.440	1.399	1.454	1.406	1.470	1.425	1.419	....	....
New Home Sales (1-family, c)	664	643	683	736	672	672	707	690	738	610	....	....
Construction Expenditures (a)	1.0	0.5	0.1	1.3	0.2	-1.1	0.0	0.1	0.1	....	....	....
Consumer Price Index (nsa, d)	3.1	3.2	3.5	3.4	3.3	3.0	2.9	2.5	2.4	2.6	....	....
CPI ex. Food and Energy (nsa, d)	3.9	3.8	3.8	3.6	3.4	3.3	3.2	3.2	3.3	3.3	....	....
PCE Chain Price Index (d)	2.6	2.6	2.8	2.7	2.6	2.4	2.5	2.3	2.1	....	....	....
Core PCE Chain Price Index (d)	3.1	2.9	3.0	2.9	2.7	2.6	2.7	2.7	2.7	....	....	....
Producer Price Index (nsa, d)	1.0	1.6	2.0	2.3	2.5	2.9	2.4	2.0	1.9	2.4	....	....
Durable Goods Orders (a)	-3.8	1.2	0.8	0.2	0.1	-6.9	9.8	-0.9	-0.7	....	....	....
Leading Economic Indicators (a)	-0.5	0.0	-0.2	-0.7	-0.4	-0.3	-0.5	-0.3	-0.3	-0.4	....	....
Balance of Trade & Services (f)	-66.4	-68.9	-68.0	-74.9	-75.3	-73.0	-78.9	-70.8	-84.4	....	....	....
Federal Funds Rate (%)	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.13	4.83	....	....
3-Mo. Treasury Bill Rate (%)	5.45	5.44	5.47	5.44	5.46	5.51	5.43	5.30	4.92	4.72	....	....
10-Year Treasury Note Yield (%)	4.06	4.21	4.21	4.54	4.48	4.31	4.25	3.87	3.72	4.10	....	....

2023 Historical Data

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	4.1	-1.1	-1.1	0.7	0.4	0.3	0.3	0.8	0.8	-0.4	0.3	0.4
Auto & Light Truck Sales (b)	15.16	14.92	15.15	15.92	15.39	15.89	15.80	15.37	15.69	15.34	15.46	15.92
Personal Income (a, current $)	0.6	0.6	0.5	0.4	0.5	0.3	0.2	0.4	0.4	0.3	0.4	0.4
Personal Consumption (a, current $)	1.9	0.3	-0.1	0.7	0.2	0.4	0.6	0.3	0.6	0.2	0.4	0.7
Consumer Credit (e)	4.5	2.9	4.7	3.3	1.3	5.8	3.1	-4.3	2.3	2.0	4.1	1.6
Consumer Sentiment (U. of Mich.)	64.9	66.9	62.0	63.7	59.0	64.2	71.5	69.4	67.8	63.8	61.3	69.7
Household Employment (c)	852	149	523	138	-255	297	205	291	50	-270	586	-683
Nonfarm Payroll Employment (c)	482	287	146	278	303	240	184	210	246	165	182	290
Unemployment Rate (%)	3.4	3.6	3.5	3.4	3.7	3.6	3.5	3.8	3.8	3.8	3.7	3.7
Average Hourly Earnings (All, cur. $)	33.07	33.15	33.31	33.44	33.54	33.70	33.84	33.91	34.01	34.10	34.23	34.34
Average Workweek (All, hrs.)	34.6	34.5	34.4	34.3	34.4	34.4	34.3	34.4	34.4	34.3	34.4	34.4
Industrial Production (d)	1.5	0.9	0.1	0.3	0.0	-0.4	0.0	-0.1	-0.2	-0.8	-0.2	0.8
Capacity Utilization (%)	79.8	79.6	79.4	79.6	79.2	78.6	79.0	78.9	78.9	78.3	78.4	78.1
ISM Manufacturing Index (g)	47.4	47.7	46.5	47.0	46.6	46.4	46.5	47.6	48.6	46.9	46.6	47.1
ISM Nonmanufacturing Index (g)	54.7	55.0	51.2	52.3	51.0	53.6	52.8	54.1	53.4	51.9	52.5	50.5
Housing Starts (b)	1.361	1.404	1.342	1.368	1.583	1.415	1.473	1.305	1.363	1.365	1.510	1.568
Housing Permits (b)	1.443	1.620	1.493	1.470	1.532	1.493	1.501	1.578	1.515	1.534	1.508	1.530
New Home Sales (1-family, c)	639	625	644	687	741	666	700	652	694	673	611	654
Construction Expenditures (a)	0.5	0.7	1.0	1.3	1.1	0.6	0.2	1.0	0.4	0.8	0.9	0.5
Consumer Price Index (nsa, d)	6.4	6.0	5.0	4.9	4.0	3.0	3.2	3.7	3.7	3.2	3.1	3.4
CPI ex. Food and Energy (nsa, d)	5.6	5.5	5.6	5.5	5.3	4.8	4.7	4.3	4.1	4.0	4.0	3.9
PCE Chain Price Index (d)	5.5	5.2	4.4	4.5	4.0	3.3	3.4	3.4	3.4	3.0	2.7	2.7
Core PCE Chain Price Index (d)	4.9	4.9	4.8	4.8	4.7	4.4	4.3	3.8	3.7	3.4	3.2	3.0
Producer Price Index (nsa, d)	5.7	4.7	2.7	2.3	1.1	0.3	1.1	1.9	1.8	1.1	0.8	1.1
Durable Goods Orders (a)	0.8	-2.3	2.3	2.2	0.2	2.6	-3.1	-0.2	2.0	-4.1	7.7	-4.4
Leading Economic Indicators (a)	-0.5	-0.6	-1.2	-0.7	-0.7	-0.7	-0.3	-0.4	-0.8	-0.9	-0.5	-0.2
Balance of Trade & Services (f)	-70.0	-70.5	-60.3	-72.8	-66.1	-64.8	-64.6	-59.6	-62.2	-64.3	-64.8	-64.9
Federal Funds Rate (%)	4.33	4.57	4.65	4.83	5.06	5.08	5.12	5.33	5.33	5.33	5.33	5.33
3-Mo. Treasury Bill Rate (%)	4.69	4.79	4.86	5.07	5.31	5.42	5.49	5.56	5.56	5.60	5.52	5.44
10-Year Treasury Note Yield (%)	3.53	3.75	3.66	3.46	3.57	3.75	3.90	4.17	4.38	4.80	4.50	4.02

(a) month-over-month % change; (b) millions, saar; (c) month-over-month change, thousands; (d) year-over-year % change; (e) annualized % change; (f) $ billions; (g) level. Most series are subject to frequent government revisions. Use with care.

Calendar of Upcoming Economic Data Releases

Monday	Tuesday	Wednesday	Thursday	Friday
November 25 Chicago Fed National Activity Index (Oct) Texas Manufacturing Outlook Survey (Nov)	**26** Final Building Permits (Oct) FHFA & Case-Shiller HPI (Sep) New Residential Sales (Oct) Consumer Confidence (Nov) H.6 Money Stock (Oct) Philly Fed Nonmfg Bus (Nov) Richmond Fed Mfg & Service Sector Surveys (Nov) Texas Service Sector (Nov) Steel Imports (Oct)	**27** GDP & Corp Profits (Q3,2nd Est) Adv Durable Goods (Oct) Adv Trade & Inventories (Oct) Personal Income (Oct) Slctd NIPA Tables (Q3,2nd Est) Dallas Fed Trim Mean PCE(Oct) Pending Home Sales (Oct) Mortgage Applications EIA Crude Oil Stocks Weekly Jobless Claims	**28** **THANKSGIVING DAY** **ALL MARKETS CLOSED**	**29** Underlying NIPA Tables (Q3, 2nd Estimate) Strike Report (Nov) Agricultural Prices (Oct)
December 2 Construction (Oct) ISM Manufacturing (Nov) S&P Global Mfg PMI (Nov) NABE Outlook (Q4)	**3** JOLTS (Oct)	**4** ADP Employment Report (Nov) ISM Services PMI (Nov) S&P Global Services PMI (Nov) Manufacturers' Shipments, Inventories & Orders (Oct) BEA Auto & Truck Sales (Nov) Mortgage Applications EIA Crude Oil Stocks	**5** International Trade (Oct) Challenger Employment Report (Nov) Public Debt (Nov) Interest on public debt (Nov) Weekly Jobless Claims	**6** Employment Situation (Nov) Consumer Sentiment (Dec, Preliminary) Consumer Credit (Oct) Baker Hughes International Rig Count (Nov)
9 Wholesale Trade (Oct) Treasury Auction Allotments (Nov)	**10** Productivity & Costs (Q3) QFR (Q3) Manpower Survey (Q1) NFIB (Nov) Kansas City Fed Labor Market Conditions Indicators (Nov)	**11** CPI & Real Earnings (Nov) Transportation Services (Oct) Cleveland Fed Median CPI (Nov) Monthly Treasury (Nov) Kansas City Fin Stress (Nov) OPEC Crude Oil Spot Prices (Nov) Mortgage Applications EIA Crude Oil Stocks	**12** Producer Prices (Nov) QSS (Q3) Financial Accounts (Q3) Weekly Jobless Claims	**13** Import & Export Prices (Nov) Housing Affordability (Oct)
16 Empire State Mfg Survey (Dec)	**17** Advance Retail Sales (Nov) IP & Capacity Utilization (Nov) MTIS (Oct) ECEC (Q3) Business Leaders Survey (Dec) Home Builders (Dec) FOMC Meeting	**18** New Residential Construction (Nov) International Transactions (Q3) FOMC Meeting Mortgage Applications EIA Crude Oil Stocks	**19** GDP (Q3, 3rd Estimate) Existing Home Sales (Nov) S&P Global Flash PMIs (Dec) Philadelphia Fed Mfg Business Outlook Survey (Dec) Kansas City Fed Manufacturing Survey (Dec) TIC Data (Oct) Composite Indexes (Nov) Weekly Jobless Claims	**20** Dallas Fed Trimmed-Mean PCE (Nov) Personal Income (Nov) Underlying NIPA Tables (Q3, 3rd Estimate) Consumer Sentiment (Dec,Final) Livingston Survey (Dec)
23 Treasury Auction (Dec) Chicago Fed National Activity Index (Nov) Steel Imports for Consumption (Nov, Preliminary)	**24** Adv Durable Goods (Nov) New Residential Sales (Nov) H.6 Money Stock (Nov) Final Building Permits (Nov) Philadelphia Fed Nonmfg Bus Outlook Survey (Dec) Richmond Fed Mfg & Service Sector Surveys (Dec)	**25** **CHRISTMAS DAY** **ALL MARKETS CLOSED**	**26** Weekly Jobless Claims Mortgage Applications EIA Crude Oil Stocks	**27** Advance Trade & Inventories (Nov) International Investment Position (Q3)
30 Dallas Fed Banking Conditions Survey (Dec) Texas Manufacturing Outlook Survey (Dec) CEW (Q2) Pending Home Sales (Nov)	**31** FHFA HPI (Oct) Case-Shiller HPI (Oct) Agricultural Prices (Nov) Texas Service Sector Outlook Survey (Dec) Consumer Confidence (Dec) FRB Philadelphia Coincident Economic Activity Index (Nov)	**January 1** **NEW YEAR'S DAY** **ALL MARKETS CLOSED**	**2** Construction (Nov) Challenger Employment Report (Dec) Weekly Jobless Claims Mortgage Applications EIA Crude Oil Stocks	**3** ISM Manufacturing (Dec) S&P Global Mfg PMI (Dec) Strike Report (Dec)

BLUE CHIP FORECASTERS

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22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Title Page

	Name of Respondent	Addr Line 1	Addr Line 2	City	State	Zip
Sewer Utilities						
Annual Report of						
Respondent	Kentucky-American Water Company	2300 Richmond Road		Lexington	KY	40502

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Principal Payment and Interest Information

	Amount	Yes/No
Amount of Principal Payment During Calendar Year		
Is Principal Current?		Y
Is Interest Current?		Y

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Services Performed by Independent CPA

	Yes/No	A/C/R
Are your financial statements examined by a Certified Public Accountant?		
Enter Y for Yes or N for No	Y	
If yes, which service is performed?		
Enter an X on each appropriate line		
Audit		X
Compilation		
Review		
Please enclose a copy of the accountant's report with annual report.		

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Additional Information Required

Case Num	Date	Explain
		None

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

General Information 1. (Ref Page: 1)

Exact name of utility making this report.
(Use the words "The", "Company" or "Incorporated" only when part of the corporate name.)
Kentucky-American Water Company

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

General Information 2 - 3 (Ref Page: 1)

	Name	Address	City	State	Phone
Give the location,including street and number, and TELEPHONE NUMBER of the principal office in KY.					
principal office in KY	Kentucky-American Water Company	2300 Richmond Road	Lexington	KY	(859) 269-2386
Name,title, address and telphone number with area code of the person to be contacted concerning this report					
	Dominic DeGrazia	2300 Richmond Road	Lexington	KY	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

General Information 4 (Ref Page: 1)

	List
Name of State under the laws of which respondent is incorporated and the date of incorporation.	Incorporated as Lexington Hydraulic & Manufacturing Company by Acts of General Assembly of the Commonwealth of Ky. Chap 22, Approved 2-27-1882.

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

General Information 5. (Ref Page: 1)

	Date
Date sewer utility began operations	see note

Note:
Date Sewer Utility Began Operations:

1973 Rockwell Village
1989 Owenton
2014 City of Millersburg
2016 Ridgewood
2019 N. Middletown

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

General Information 6. (Ref Page: 1)

City or Town	Community or Subdivision	County
		Clark
		Owen
		Bourbon
		Franklin

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

General Information 7. (Ref Page: 1)

	Count
Number of Full-time employees	2
Number of Part-time employees	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Principal Officers (Ref Page: 1)

	Title	Last Name	First Name	Bus. Address	Salary or Fee
	President	Burton	Robert	2300 Richmond Road, Lexington KY 40502	$0.00
	VP, Operations	Lewis	William A.	2300 Richmond Road, Lexington KY 40502	$0.00
	Finance & Treasurer	Broaddus	Rebecca	2300 Richmond Road, Lexington KY 40502	$0.00
	VP, General Counsel&Secretary	Pippen	David L.	2300 Richmond Road, Lexington KY 40502	$0.00
	Assistant Secretary	Van Over	Molly	2300 Richmond Road, Lexington KY 40502	$0.00
	Assistant Secretary	Haney	Shannon	300 N. Water Works Dr, Belleville, IL 62223	$0.00
	Assistant Treasurer	Furia	Nicholas	1 Water Street, Camden, NJ 08102	$0.00
	Assistant Comptroller	Cuillo	Melissa	1 Water Street, Camden, NJ 08102	$0.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Balance Sheet - Assets and Other Debts (Ref Page: 2)

	Balance First of Yr	Balance End of Yr
UTILITY PLANT		
Utility Plant (101-109)	$979,658,445.00	$1,067,334,674.00
less: Accum. Prov. for Depr., Depletion and Amortization (110)	$225,500,772.00	$236,595,009.00
Net Utility Plant	$754,157,673.00	$830,739,665.00
OTHER PROPERTY AND INVESTMENTS		
Non-Utility Property (121)	$249,738.00	$306,144.00
less: Accum. Prov for Depr. and Amort. of Non-Utility Property (122)		
Net non-Utility Property	$249,738.00	$306,144.00
Other Investments (124)		
Special Funds (125)		
Total Other Property and Investments	$249,738.00	$306,144.00
CURRENT AND ACCRUED ASSETS		
Cash and Working Funds (131)	$571,783.00	$441,530.00
Temporary Cash Investments (132)		
Notes Receivable (141)		
Customer Accounts Receivable (142)	$7,175,525.00	$7,831,289.00
Other Accounts Receivable (143)	$1,440,731.00	$1,760,143.00
Accum. Prov. For Uncollectible Accts - CR (144)	$589,946.00	$514,570.00
Notes Receivable from Assoc. Companies (145)		
Accounts Receivable from Assoc Companies (146)	$5,913,673.00	$519,981.00
Materials and Supplies (150)	$5,815,622.00	$4,308,187.00
Prepayments (166)	$241,748.00	$270,450.00
Other Current and Accrued Assets (170)	$5,162,167.00	$6,830,692.00
Total Current and Accrued Assets	$25,731,303.00	$21,447,702.00
DEFERRED DEBITS		
Unamortized Debt Expense (181)	$2,534,367.00	$2,477,168.00
Extraordinary Property Losses (182)		
Other Deferred Debits (183)	$18,629,901.00	$20,812,166.00
Total Deferred Debits	$21,164,268.00	$23,289,334.00
TOTAL ASSETS AND OTHER DEBITS	$801,302,982.00	$875,782,845.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Balance Sheet - Liabilities and Other Credits (Ref Page: 3)

	Balance First of Yr.	Balance End of Yr.
EQUITY CAPITAL		
Common Capital Stock (201)	$36,568,776.00	$36,568,776.00
Preferred Capital Stock (204)	$2,250,000.00	$2,250,000.00
Other Paid-In Capital (207)	$138,685,407.00	$166,179,077.00
Discount on Capital Stock (213)		
Capital Stock Expense (214)		
Appropriated Retained Earnings (215)		
Unappropriated Retained Earnings (216)	$111,645,642.00	$119,389,042.00
Non-Corporate Proprietorship (218)		
Total Equity Capital	$289,149,825.00	$324,386,895.00
LONG-TERM DEBT		
Bonds (221)	$256,572,840.00	$284,417,797.00
Advances From Associated Companies (223)		
Other Long-Term Debt (224)		
Total Long-Term Debt	$256,572,840.00	$284,417,797.00
CURRENT AND ACCRUED LIABILITIES		
Notes Payable (231)		
Accounts Payable (232)	$13,806,994.00	$12,791,765.00
Notes Payable to Associated Companies (233)	$23,100,951.00	$10,388,870.00
Accounts Payable to Associated Companies (234)	$707,206.00	$7,360,980.00
Customer Deposits (235)		
Taxes Accrued (236)	$12,278,888.00	$14,248,605.00
Interest Accrued (237)	$2,220,122.00	$2,714,788.00
Other Current and Accrued Liabilities (238)	$5,084,162.00	$6,247,369.00
Total Current and Accrued Liabilities	$57,198,323.00	$53,752,377.00
DEFERRED CREDITS		
Advances for Construction (252)	$13,741,762.00	$17,346,406.00
Other Deferred Credits (253)	$30,380,029.00	$32,550,332.00
Accum. Deferred Investment Tax Credits (255)		
Total Deferred Credits	$44,121,791.00	$49,896,738.00
Operating Reserves (261-265)	$2,384,721.00	$4,007,568.00
Contributions in Aid of Construction (271)	$81,152,704.00	$80,593,696.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Balance Sheet - Liabilities and Other Credits (Ref Page: 3)

	Balance First of Yr.	Balance End of Yr.
ACUMULATED DEFERRED INCOME TAXES		
Accum. Def. Income Taxes-Accel. Amort (281)		
Accum. Def. INcome Taxes-Lib. Depr. (282)		
Accum. Def. Income Taxes-Other (283)	$70,722,778.00	$78,727,774.00
Total Accum. Deferred Income Taxes	$70,722,778.00	$78,727,774.00
TOTAL LIABILITIES AND OTHER CREDITS	$801,302,982.00	$875,782,845.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Summary of Utility Plant (Ref Page: 4)

	Amount
UTILITY PLANT	
In Service:	
Plant in Service Classified (from pg 5 line 40) (101)	$16,787,388.00
Completed Construction Not Classified (102)	
Utility Plant in Process of Reclassificiation (103)	
Utility Plant Purchased or Sold (106)	
Total In Service	$16,787,388.00
Utility Plant Leased to Others (104)	
Property Held for Future Use (105)	
Construction Work in Progress (107)	$519,949.00
Utility Plant Acquisition Adjustments (108)	$44,298.00
Other Utility Plant Adjustments (109)	
Total Utility Plant (to pg 2 line 4)	$17,351,635.00
Less:	
Accumulated Provision for Depreciation and Amort. of Utility Plant (to pg 2 line 6) (110)	$4,715,706.00
Net Utility Plant (to pg 2 line 7)	$12,635,929.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Accum. Prov. for Depreciation and Amortization of Utility Plant (Ref Page: 4)

Item	Amount
Balance Beginning of Year	$4,316,405.00
Accruals for Year:	
Depreciation	$583,932.00
Amortization	
Other Accounts (detail)	
Total Accruals for Year	$583,932.00
Credit Adjustments (describe)	
	$0.00
Total Credits for Year	$0.00
Net Charges for Plant Retired:	
Book Cost of Plant Retired (same as pg 5 line 40)	$108,907.00
Add: Cost of Removal	$64,445.00
Less: Salvage	
Net Charges for Plant Retired	$173,352.00
Debit Adjustments (describe)	
depreciation adjustment	($11,279.00)
Total Debit Adjustments for Year	($11,279.00)
Balance End of Year	$4,715,706.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Utility Plant In Service (Ref Page: 5)

	Depr Rate	Balance Beg of Year	Additions	Retirements	ReClass (Debit-Credit)	Balance End of Year
INTANGIBLE PLANT						
Organization (301)						
Franchises and Consents (302)						
Misc. Intangible Plant (303)						
Total Intangible Plant						
LAND AND STRUCTURES						
Land and Land Rights (310)		$39,244.00	$0.00	$0.00	$0.00	$39,244.00
Structures and Improvements (311)		$7,344,865.00	$182,182.00	$64,542.00	$0.00	$7,462,505.00
Total Land and Structures		$7,384,109.00	$182,182.00	$64,542.00	$0.00	$7,501,749.00
COLLECTION PLANT						
Collection Sewers - Force (352.1)		$1,034,583.00	$9,468.00	$2,787.00	$0.00	$1,041,264.00
Collection Sewers - Gravity (352.2)		$2,918,152.00	$115,116.00	$9.00	$0.00	$3,033,259.00
Other Collection Plant Facilities (353)						
Services to Customers (354)		$329,814.00	$2,030.00	$0.00	$0.00	$331,844.00
Flow Measuring Devices (355)		$16,514.00	$0.00	$0.00	$0.00	$16,514.00
Total Collection Plant		$4,299,063.00	$126,614.00	$2,796.00	$0.00	$4,422,881.00
PUMPING PLANT						
Receiving Wells and Pump Pits (362)						
Pumping Equipment - Electric (363A)		$592,114.00	$12,245.00	$5,492.00	$0.00	$598,867.00
Pumping Equipment- Diesel (363B)						
Pumping Equipment - Other (363C)		$5,914.00	$0.00	$0.00	$0.00	$5,914.00
Total Pumping Plant (364)		$598,028.00	$12,245.00	$5,492.00	$0.00	$604,781.00
TREATMENT AND DISPOSAL PLANT						

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Utility Plant In Service (Ref Page: 5)

	Depr Rate	Balance Beg of Year	Additions	Retirements	ReClass (Debit-Credit)	Balance End of Year
Oxidation Lagoon (372)						
Treatment and Disposal Equipment (373)		$1,899,298.00	$252,379.00	$33,325.00	$0.00	$2,118,352.00
Plant Sewers (374)		$3,885.00	$0.00	$0.00	$0.00	$3,885.00
Outfall Sewer Lines (375)						
Other Treatment and Disposal Plant Equip. (376)						
Total Treatment and Disposal Plant (371)		$1,903,183.00	$252,379.00	$33,325.00	$0.00	$2,122,237.00
GENERAL PLANT (372)						
Office Furniture and Equipment (391)		$56,710.00	$927.00	$0.00	$0.00	$57,637.00
Transportation Equipment (392)			$78,814.00	$0.00	$0.00	$78,814.00
Stores Equipment (393A)		$11,451.00	$0.00	$0.00	$0.00	$11,451.00
Tools, Shop and Garage Equipment (393B)		$0.00	$40,700.00	$0.00	$0.00	$40,700.00
Laboratory Equipment (393C)		$13,589.00	$6,189.00	$2,752.00	$0.00	$17,026.00
Power Operated Equipment (393D)		$113,823.00	$103,368.00	$0.00	$0.00	$217,191.00
Communication Equipment (393E)		$855,963.00	$265,529.00	$0.00	$0.00	$1,121,492.00
Other Tangible Property (393F)		$502,979.00	$88,450.00	$0.00	$0.00	$591,429.00
Total General Plant		$1,554,515.00	$583,977.00	$2,752.00	$0.00	$2,135,740.00
TOTAL SEWER PLANT IN SERVICE		$15,738,898.00	$1,157,397.00	$108,907.00	$0.00	$16,787,388.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Capital Stock (Ref Page: 6)

	Class and Series (a)	No. of Shares Auth. (b)	Par Val per Share of Par	Stated Val Per Share of	Outstanding Shares (e)	Outstanding Amount (f)
	Common Stock	2,000,000	$0.00	23.3310	1,567,391	$36,568,776.00
	Preferred	85,000	$100.00	0.0000	22,500	$2,250,000.00
Total		2,085,000	$100.00	23.3310	1,589,891	$38,818,776.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Long-Term Debt (Ref Page: 6)

	Class and Series	Orig. Issue Amt	Date of Issue (b)	Date of Maturity (c)	Outstanding Balance	Interest Rate (e)	Interest Amt (f)
List each Original Issue Amount Class and Series of Obligation							
	7.15% Series General Mortgage Bond	$0.00		2/1/2027	$7,500,000.00	7.1500	$536,250.00
	6.99% Series General Mortgage Bond	$0.00		6/1/2028	$9,000,000.00	6.9900	$629,100.00
	4.00% Series Notes Payable to Affiliate	$0.00		10/15/2037	$7,859,000.00	4.0000	$314,360.00
	6.593% Series Notes Payable to Affiliate	$0.00		10/15/2037	$47,000,000.00	6.5930	$3,098,710.00
	4.45% Series Notes Payable to Affiliate	$0.00		6/1/2032	$10,000,000.00	4.4500	$445,000.00
	Bond Discount on 4.45% series	$0.00			($23,343.00)	0.0000	$3,147.00
	5.05% Series - Notes Payable to Affiliate	$0.00		10/15/2037	$20,000,000.00	5.0500	$1,010,000.00
	4.00% Series Notes Payable to Affiliate	$0.00		12/1/2046	$5,000,000.00	4.0000	$200,000.00
	Bond Discount on 4.00% series	$0.00			($30,351.00)	0.0000	$1,385.00
	3.75% Series Notes Payable to Affiliate	$0.00		9/1/2047	$5,000,000.00	3.7500	$187,500.00
	Bond Discount on 3.75% series	$0.00			($11,595.00)	0.0000	$512.00
	4.15% Series Notes Payable to Affiliate	$0.00		6/1/2049	$16,000,000.00	4.1500	$664,000.00
	Bond Discount on 4.15% series	$0.00			($68,961.00)	0.0000	$2,824.00
	2.45% Series Notes Payable to Affiliate	$0.00		10/1/2029	$45,390,000.00	2.4500	$1,112,055.00
	2.45% Series Notes Payable to Affiliate	$0.00		10/1/2029	$26,000,000.00	2.4500	$637,000.00
	3.25% Series Notes Payable to Affiliate	$0.00		6/1/2051	$13,000,000.00	3.2500	$422,500.00
	Bond Discount on 3.25% series	$0.00			($32,801.00)	0.0000	$1,242.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Long-Term Debt (Ref Page: 6)

	Class and Series	Orig. Issue Amt	Date of Issue (b)	Date of Maturity (c)	Outstanding Balance	Interest Rate (e)	Interest Amt (f)
	3.625% Series Notes Payable to Affiliate	$0.00		6/15/2026	$19,000,000.00	3.6250	$688,750.00
	3.875% Series Notes Payable to Affiliate	$0.00		9/1/2028	$26,000,000.00	3.8750	$1,007,500.00
	5.15% Series Notes Payable to Affiliate	$0.00		3/1/2034	$14,000,000.00	5.1500	$452,628.00
	Bond Discount on 5.15% series	$0.00			($40,820.00)	0.0000	$2,782.00
	5.45% Series Notes Payable to Affiliate	$0.00		3/1/2054	$14,000,000.00	5.4500	$478,994.00
	Bond Discount on 5.45% Series	$0.00			($123,332.00)	0.0000	$2,643.00
Total		$0.00			$284,417,797.00	0.0000	$11,898,882.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Notes Payable (Ref Page: 6)

	Name of Payee (a)	Date Of Note (b)	Date of Maturity (c)	Interest Rate (d)	Balance End of Year (e)
(Include Notes Payable to Associated Companies Under This Heading)					
	American Water Capital Corporation			0.0000	$10,388,870.00
Total				0.0000	$10,388,870.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Interest Accrued (Ref Page: 6)

	Description of Obligation (a)	Int. Accr. Balance First of Yr	Int. Accr. During Yr (c)	Int. Paid During Yr (d)	Int. Accr. Balance End of Yr
	Long-Term Debt	$2,220,122.00	$11,884,347.00	$11,389,681.00	$2,714,788.00
	Amortization of Bond Discount	$0.00	$14,535.00	$0.00	$0.00
	Bank Debit	$0.00	$214,291.00	$214,291.00	$0.00
	Other Interest Expense	$0.00	$132,415.00	$132,415.00	$0.00
Total		$2,220,122.00	$12,245,588.00	$11,736,387.00	$2,714,788.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Other Current and Accrued Liabilities (Ref Page: 7)

	Description	Amount
	Accrued Vacation Payable	$99,505.00
	Accrued Power	$514,939.00
	Accrued Legal	$15,626.00
	Accrued Wages	$342,405.00
	Accrued Waste Disposal	$236,492.00
	Accrued Retiree Medical Reimb	$43,800.00
	Accrued DCP Contribution	$14,358.00
	Accrued Bank Fees	$16,312.00
	Accrued Employer 401K Match	$10,267.00
	Accrued Incentive Plan	$910,533.00
	Miscellaneous Deposits Payable	$135,000.00
	Accrued Paving	$8,696.00
	Accrued Litigation	$100,000.00
	Unclaimed Customer Credits	$41,071.00
	Unclaimed A/P Checks	$54,108.00
	Withheld Payroll	$11,153.00
	Operating Lease - Current Portion	$10,165.00
	Unbilled Stock E	$109,965.00
	Unbilled Stock C	$142,288.00
	Accrued Unbilled Items	$849,307.00
	CFO - Mgmt Contracts	$13,599.00
	Kentucky River Authority Withdrawal Fees	($451,094.00)
	Accrued Preferred Dividend Requirements	$15,881.00
	A/R Customer Refunds	$820,236.00
	Cash Clearing	$1,021,052.00
	Tax Collections Payable	$1,161,705.00
Total (must agree with pg 3 Acct 238)		$6,247,369.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Statement of Retained Earnings For the Year (Ref Page: 7)

Item (a)	This Year (b)	Last Year (c)
UNAPPROPRIATED RETAINED EARNINGS (216)		
Balance Beginning of Year	$111,645,642.00	$105,383,410.00
Balance Transferred From Income (435)	($382,862.00)	($467,796.00)
Appropriations of Retained Earnings (436)		
Balance Transferred From Income - Water Utility	$23,348,639.00	$19,706,692.00
Dividends Declared-Preferred Stock (437)	($190,575.00)	($190,575.00)
Dividends Declared-Common Stock (438)	($15,031,802.00)	($12,786,089.00)
Adjustments to Retained Earnings (439)		
Balance End of Year	$119,389,042.00	$111,645,642.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Statement of Income for the Year (Ref Page: 8)

Description	Number Customers (b)	Amount (c)
OPERATING REVENUES		
Flat Rate Revenues-General Customers:		
Residential Revenues (521.1)	85	$61,405.00
Commercial Revenues (521.2)		
Industrial Revenues (521.3)		
Revenues From Public Authorities (521.4)		
Total (521)	85	$61,405.00
Measured Revenues - General Customers: (483)		
Residential Revenues (522.1)	1,124	$764,896.00
Commercial Revenues (522.2)	128	$269,199.00
Industrial Revenues (522.3)	1	$1,227.00
Revenues From Public Authorities (522.4)	27	$62,276.00
Total (522)	1,280	$1,097,598.00
Revenues From Public Authorities (523)		
Revenues From Other Systems (524)		
Miscellaneous Sewage Revenues (526)		
Total Sewage Service Revenues (521-526)	1,365	$1,159,003.00
OTHER OPERATING REVENUES		
Customers Forfeited Discounts (532)		$11,262.00
Miscellaneous Operating Revenues (536)		$11,191.00
Total Other Operating Revenues		$22,453.00
Total Operating Revenues		$1,181,456.00
OPERATING EXPENSES		
Total Sewer Operation and Maint. Expenses (from pg 9)		$1,042,073.00
Depreciation Expense (403)		$583,932.00
Amortization Expense (from pg 10) (404-407)		($48,782.00)
Taxes Other Than Income taxes (from pg 10) (408.1)		$13,497.00
Total Income Taxes-Utility Operations (from pg 10)		
Total Sewage Operating Expenses		$1,590,720.00
Net Operating Income		($409,264.00)

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Statement of Income for the Year (Ref Page: 8)

Description	Number Customers (b)	Amount (c)
OTHER INCOME		
Income from NonUtility Operations (417)		
Interest and dividend Income (419)		
Miscellaneous Nonoperating Income (421)		$26,402.00
Other Accounts (Specify Acct. No & Title)		
Total Other Income		$26,402.00
OTHER DEDUCTIONS		
Interest on Long-Term Debt (427)		
Amortization of Debt Discount and Expense (428)		
Interest on Debt to Associated Companies (430)		
Other Interest Expense (431)		
Taxes Other than Income Taxes 408.2 (from pg 10)		
Total Income Taxes-Nonutility Operations (from pg 10)		
Other Accounts (Specify Acct. No. and Title)		
Total Other Deductions		
Net Income		($382,862.00)

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Operation and Maintenance Expenses (Ref Page: 9)

	Amount (b)
OPERATION EXPENSES	
Supervision and Engineering (700) :	
Owner/Manager-Management Fee (700-A)	
Other Expenses (700-B)	
Labor and Expenses (701):	
Collection System-Labor, Materials and Expenses (701-A)	
Pumping System-Labor, Materials and Expenses (701-B)	$85,485.00
Treatment System (701-C) :	
Sludge Hauling	$35,807.00
Utility Service - Water Cost	
Other-Labor, Materials and Expense	$106,671.00
Rents (702)	
Fuel and Power Purchased for Pumping and Treatment (703)	$167,688.00
Chemicals (704)	$58,438.00
Miscellaneous Supplies and Expenses (705):	
Collection System (705-A)	
Pumping System (705-B)	
Treatment an Disposal (705-C)	$419,422.00
Total Operation Expenses	$873,511.00
MAINTENANCE EXPENSES	
Supervision and Engineering (710) :	
Routine Maintenance Service Fee (710-A)	
Internal Supervision and Engineering (710-B)	
Maintenance of Structures and Improvements (711)	
Maintenance of Collection Sewer system (712)	
Maintenance of Pumping System (713)	
Maintenance of Treatment and Disposal Plant (714)	$70,014.00
Maintenance of Other Plant Facilities (715)	
Total Maintenance Expenses	$70,014.00
CUSTOMER ACCOUNTS EXPENSES	
Supervision (901)	
Meter Reading Expenses and Flat Rate Inspections (902)	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Operation and Maintenance Expenses (Ref Page: 9)

	Amount (b)
Customer Records and Collection Expenses (903):	
Agency Collection Fee (903-A)	
Internal Labor, Materials and Expenses (903-B)	
Uncollectible Accounts (904)	
Miscellaneous Customer Accounts Expenses (905)	
Total Customer Accounts Expenses	
ADMINISTRATIVE AND GENERAL EXPENSES	
Administrative and General Salaries (920)	
Office Supplies and Other Expenses (921)	
Outside Services Employed (923)	
Insurance Expenses (924)	$946.00
Employee Pensions and Benefits (926)	$64,855.00
Regulatory Commission Expense (928)	
Transportation Expenses (929)	$26,825.00
Miscellaneous General Expenses (930)	$5,922.00
Rents (931)	
Maintenance of General Plant (932)	
Total Administrative and General Expenses	$98,548.00
TOTAL SEWER OPERATION AND MAINTENANCE EXPENSES (to pg 8)	$1,042,073.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Taxes Other Than Income Taxes (Ref Page: 10)

Item (a)	Amount (b)
Payroll Taxes	$13,497.00
Property Taxes	
Utility Regulatory Commission Assessment	
Other (specify)	
Total (Same as Page 8 line 27 plus 44)	$13,497.00

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Operating and Non-Operating Income Taxes (Ref Page: 10)

	Amount (b)
Income Taxes-Federal (409.1)	
Income Taxes - State (409.1)	
Income Taxes - Other (409.1)	
Provisions for Deferred Income Taxes (410.1)	
Income Taxes Deferred in Prior Years - Credit (411.1)	
Investment Tax Credits - Net (412.0)	
Total Income Taxes - Util. Operating Income (to pg 8 line 28)	
Income Taxes - Federal (409.2)	
Income Taxes - State (409.2)	
Income Taxes - Other (409.2)	
Provisions for Deferred Income (410.2)	
Income Taxes Deferred in Prior Years - Credit (411.2)	
Investment Tax Credits - Net (412.4)	
Total Inc. Taxes - Nonutil. Op. Income (to pg 8 line 45)	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Amortization Expense (Ref Page: 10)

	Amount (b)
Amortization of Limited - Term Utility Plant (404)	
Amortization of Other Utility Plant (405)	($58,626.00)
Amortization of Utility Plant Acquisition Adjustments (406)	$9,844.00
Amortization of Property Losses (407)	
Amortization of Rate Case Expense	
Total Amortization Expense (to pg 8 line 26)	($48,782.00)

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Plant Valuation 1 - 3 (Ref Page: 11)

	Description	Percentage
What method of valuation was used with reference to Sewer Utility Plant in Service Appearing on page two line four: Original Cost, Estimated Cost, Origainal Cost Study?	Original Cost	
What percentage of Sewer Utility Plant in Service was recovered, by the developer of hte subdivision, through the sale of lots?		
If less than one-hundred percent of the utility plant was recovered, please designate what portion (collection lines, treatement plant, etc.) of the plant that represents non-contributed plant	N/A	0.0000

Note:

Information reported for Sewer Plant Statistics is for five operating units: Rockwell Village, Owenton, Millersburg, Ridgewood and North Middletown

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Plant Valuation 4. (Ref Page: 11)

	Last Name	First Name	Date
By whom were the books of account audited? What was the date of the last audit?			
	PricewaterhouseCoopers, L		12/31/2024
If unaudited in the past twelve months, when and by whom is the next audit anticipated?			
	n/a		

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Physical Data of Sewer Plant (Ref Page: 11)

Date of Construction of original Plant	See Note
Type of treatment process	See Note
Date and additional GPD Capacity of subsequent additions to plant	n/a
Population for which plant is designed including population equivalent of industrial waste load	Not known

Note:
Date of Construction of Original Plant:

Rockwell Village 1973

Owenton 1989

Millersburg 1978

Ridgewood 1971

North Middletown 1979

Type of Treatment Process:

Rockwell - Aeration Clarifier
Owenton - Facultative Lagoon
Millersburg - Extended Aeration
Ridgewood - Extended Aeration
North Middletown - Extended Aeration

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Treatment Plant Operating Statistics (Ref Page: 11)

		Total	Cost
Total gallons received during the year		0	
Total gallons received on maximum day		0	
Maximum G.P.D. Capacity of the sewage treatment plant		0	
Routine maintenance service fee			
Cost per month			$0.00
Contract Expires	0		
Sludge hauling			
Cost per load			$0.00
Average number of gallons per load		0	
Number of loads this year		0	

Note:
See Attached File Ref Page 11 Treatment Plant Operating Statistics for all responses for this page

Amounts reported above as -0- is due to field not allowing text as a valid input.

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Customer Statistics End of Year (Ref Page: 12)

	Type	Num of Customers	Bi-Month or Month Billing	Number of bills
Residential				
Single Family		1,209	monthly	1,209
Apartments/Condominiums				
Commercial		128	monthly	128
Industrial		1	monthly	1
Other				
	OPA	27	monthly	27
Total		1,365		1,365

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Industrial Customers Served (Ref Page: 12)

Name	Type of Industry	Gallons	Pretreatment of Wastes
Rockwell Village Freedom Metals		0	None

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Pumping Stations (Ref Page: 12)

Location	Size of Motor	Type of Motor	Gals per Day
Rockwell - Rockwell Road	5 hp	Century 3-phase	86,400
Owenton - Madison St.	30 hp	Hydromatic 3-Phase	864,000
Owenton - Gratz Rd.	20 hp	Hydromatic 3-Phase	691,200
Owenton - Main St.	10 hp	Hydromatic 3-Phase	576,000
Owenton - Middle School	10 hp	Hydromatic 3-Phase	561,000
Owenton - Sunset Dr.	5 hp	Hydromatic 3-Phase	288,000
Owenton - Old High School	5 hp	Hydromatic 3-Phase	230,400
Owenton - Randell St.	3 hp	Hydromatic 3-Phase	288,000
Owenton - Owenton Manor	3 hp	Hydromatic 3-Phase	331,200
Owenton - High School	3 hp	Hydromatic 3-Phase	230,400
Owenton - Car Wash	2 hp	Myers 3- phase	92,160
Owenton - Dairy Queen	2 hp	Myers single phase	92,160
Owenton - Duke Rd.	2 hp	Myers single phase	92,160
Owenton - Smith House	2 hp	Myers single phase	92,160
Owenton - Owen Industrial Park	5 hp	Myers single phase	230,000
Millersburg - 8th Street	2 hp	Submersible Grinder	36,000
Millersburg - 10th Street	2 hp	Submersible Grinder	36,000
Millersburg - Butler St	2 hp	Submersible Grinder	28,000
Millersburg - Clark Hill	2 hp	Submersible Grinder	36,000
Ridgewood - True Farm	2 hp	Myers Single	92,600

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Mains (Feet) (Ref Page: 12)

Kind of Pipe	Diameter	Num of Feet	additions	removed	Feet End of Year
Rockwell Vit. Clay	8"	2,500	0	0	2,500
Owenton - Vit. Clay	8"	26,400	0	0	26,400
Owenton - Vit. Clay	6"	52,800	0	0	52,800
Owenton - Vit. Clay	4"	36,960	0	0	36,960
Owenton - Cast Iron	6"	3,500	0	0	3,500
Owenton - Cast Iron	4"	2,100	0	0	2,100
Owenton - PVC	6"	12,060	0	0	12,060
Owenton - PVC	4"	1,500	0	0	1,500
Owenton - PVC	2"	1,100	0	0	1,100
Millersburg - VCP	8"	34,400	0	0	34,400
Millersburg - VCP	8"	5,000	0	0	5,000
Millersburg - PVC (force main)	2"	1,400	0	0	1,400
Millersburg - PVC (force main)	1.5"	1,000	0	0	1,000
Ridgewood - Vit Clay	4"	3,082	0	0	3,082
Ridgewood - PVC	2"	2,700	0	0	2,700
Ridgewood - PVC	3"	2,600	0	0	2,600
Ridgewood - PVC	4"	10,677	0	0	10,677
Ridgewood - PVC	8"	3,942	0	0	3,942
Ridgewood - Cast Iron	8"	3,546	0	0	3,546
North Middletown -Vit Clay	8"	7,658	0	0	7,658
North Middletown - PVC	8"	7,314	0	0	7,314

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Sewer Plant Statistics - Service Laterals and Stubs (Ref Page: 12)

	Count
Number of service laterals owned by the utility at end of year	
Number of stubs as of end of year	
Number of service laterals owned by others	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

CheckList

Item	Value 1	Value 2	Agree	Explain
Balance Sheet (ref pg 2) Line Utility Plant (101-109) agrees with Sched Summary of Utility Plant (ref. pg 4) Total Utility Plant	1067334674.00	17351635.00	NO	Difference of $1,049,349,424 represents Water Utility Plant in Service, $677,913 represents Water Utility Plant Acquisition Adjustments $44,298 represents Sewer Utility Plant Acquisition Adjustments(net of amortization)
Balance Sheet (ref pg 2) Line Less: Acct 110 agrees with Sched Summary of Utility Plant (ref pg 4) Line Total Utility Plant	236595009.00	4715706.00	NO	Difference of $231,879,303 is Water Utility
Balance Sheet (ref pg 2) Line Net Utility Plant agrees with Summary of Utility Plant (ref pg 4) Line Net Utility Plant	830739665.00	12635929.00	NO	Difference of $818,103,736 is Water Utility
Summary of Utility Plant (ref pg 4) Plant in Service Classified (Acct 101) agrees with Sched Sewer Plant in Service (ref pg 5) Total Sewer Plant in Service	16787388.00	16787388.00	OK	
Accum. Prov for Deprec. and Amort (Ref pg 4) Balance End of Year agrees with Sched Summary of Utility Plant (ref pg 4) Accumulated Prov. for Depr. and Amort.	4715706.00	4715706.00	OK	
Balance Sheet (ref pg 3) Sum of Common Capital Stock (201) and Preferred Capital Stock (204) agrees with Schedule Capital Stock (ref pg 6)	38818776.00	38818776.00	OK	
Balance Sheeet (ref pg 3) Unappropriated Retained Earnings (216) agrees with Sched Statement of Retained Earnings (ref pg 7) Balance End of Year	119389042.00	119389042.00	OK	
Balance Sheet (ref pg 3) Total Long Term Debt (224) agrees with Sched Long Term Debt (ref pg 6) Total col d	284417797.00	284417797.00	OK	
Balance Sheet (ref pg 3) The sum of Notes Payable (231) and (233) agrees with Sched Notes Payable (ref pg 6) Total Col e	10388870.00	10388870.00	OK	
Balance Sheet (ref pg 3) Interest Accrued (237) agrees with Sched Interest Accrued (ref pg 6) Total Col e	2714788.00	2714788.00	OK	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

CheckList

Item	Value 1	Value 2	Agree	Explain
Balance Sheet (ref pg 3) Current and Accrued Liabilities (238) agrees with Sched Other Current and Accrued Liabilities (ref pg 7) Total	6247369.00	6247369.00	OK	
Balance Sheet (ref pg 3) Total Liabilities and Other Credits agrees with Balance Sheet (ref pg 2) Total Assets and Other Debits	875782845.00	875782845.00	OK	
Accum Prov. for Depreciation and Amortization (ref. pg 4) Depreciation agrees with Sched Statement of Income for the Year (ref pg 8) Depreciation Expense (403)	583932.00	583932.00	OK	
Sched Long Term Debt (ref pg 6) Total Interest Amount agrees with Sched Statement of Income (ref pg 8) Interest on Long Term Debt (427)	11898882.00	0	NO	Interest accrued during the year is reported by Water Utility
Interest Accrued (ref pg 6) Total Interest Accrued agrees with Sched Statement of Income (ref pg 8) Other Interest Expense (431)	12245588.00	0	NO	Interest accrued during the year is reported by Water Utility
Statement of Income for the Year (ref pg 8) Total Sewer Operation and Maint. Expenses agrees with Sched Sewer Operation and Maintenance Expenses (ref pg 9) Total Sewer Operation and Maint. Exp	1042073.00	1042073.00	OK	
Statement of Income for the Year (ref pg 8) Total Income taxes - Utility Operations agrees with Sched Operating and Non-Operating Income Taxes (ref pg 10) Total Income Taxes - Util Operating Income	0	0	OK	
Statement of Income for the Year (ref pg 8) Amortization Expense agrees with Sched Amortization Expense (ref pg 10) Total Amortization Expense	-48782.00	-48782.00	OK	
Statement of Income for the Year (ref pg 8) The sum of lines Taxes Other than Income Taxes 408.1 and 408.2 agrees with Taxes Other Than Income (ref pg 10)	13497.00	13497.00	OK	
Statement of Income for the Year (ref pg 8) Total Income Taxes - Nonutility Operations agrees with Sched Operating and Non-Operating Income Taxes Total Inc. Taxes - Nonutil. Op Income	0	0	OK	

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

CheckList

Item	Value 1	Value 2	Agree	Explain
Schedule Sewer Plant Statistics (ref pg 11 and 12) have been completed				

22215800 Kentucky-American Water Company 01/01/2024 - 12/31/2024

Upload supporting documents

Document	Description	Supports
SD_22215800_2024_1.pdf	Treatment Plant Operating Statistics	Sewer Plant Statistics - Treatment Plant Operating Statist

Utility ID: 22215800

OATH

Commonwealth of Kentucky)
) ss:
County of Fayette)

Robert Burton
(Name of Officer) makes oath and says

that he/she is President of
(Official title of officer)

Kentucky-American Water Company
(Exact legal title or name of respondent)

that it is his/her duty to have supervision over the books of account of the respondent and to control the manner in which such books are kept; that he/she knows that such books have, during the period covered by the foregoing report, been kept in good faith in accordance with the accounting and other orders of the Public Service Commission of Kentucky, effective during the said period; that he/she has carefully examined the said report and to have the best of his/her knowledge and belief the entries contained in the said report have, so far as they relate to matters of account, been accurately taken from the said books of account and are in exact accordance therewith; that he/she believes that all other statements of fact contained in the said report are true; and that the said report is a correct and complete statement of the business and affairs of the above-named respondent during the period of time from and including

January 1, 2024 , to and including December 31, 2024

(Signature of Officer)

subscribed and sworn to before me, a Notary Public , in and for the State and County named in the above this 27th day of March, 2025

(Apply Seal Here)

My Commission expires 7/25/28

Shara Miller
(Signature of officer authorized to administer oath)

[Persons making willful false statements in this report may be punished by fine or imprisonment under KRS 523.040 and 523.100.]

Original Sheet No. 1
WN U-3

Washington Water Service Company | For Commission's Receipt Stamp

Washington Water Service Company

Unified Business Identifier (UBI) Number 601964120
www.wawater.com

NAMING RATES FOR

Water Service

At

Clallam, Jefferson, King, Kitsap, Mason, Pierce, San Juan, and Thurston Counties

Washington

And

CONTAINING RULES AND REGULATIONS

GOVERNING SERVICE

BY AUTH. OR ORDER OF WASH. UTILITIES & TRANSPORTATION COMM. DOCKET NO. UW-210560

Issued Date: July 15, 2021 Effective Date: February 15, 2022

Issued by: Washington Water Service Company

By: Matthew Brown Title: General Manager

Address: 14519 Peacock Hill NW, Gig Harbor, WA 98332

Telephone Number: (877)-408-4060 Fax Number: (253)-857-4001

Original Sheet No. 2
WN U-3

Washington Water Service Company

For Commission's Receipt Stamp

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LEGEND OF SYMBOLS

Legend of symbols This section will identify all symbols used in the tariff to identify changes resulting from the filing of the specific sheet change. The list will include the required symbols and their meanings, and any other utility-specific symbol with its meaning, consistent with the requirements identified in WAC 480-80.

(a) Locate the symbols on the right hand side of the changed text directly across from the change;

(b) Must use the following list of symbols to signify change:

(c) May use additional symbols for other purposes when it has identified the symbols in its tariff as provided for in WAC 480-80.

Tariff symbols Each time a tariff sheet(s) is revised, a utility must code all changes with the tariff symbol that best reflects the purpose and effect of the change.

D – discontinued rate, service, regulation, or condition;

N – new rate, service, regulation, condition, or sheet;

I – a rate increase;

R – a rate reduction;

C – changed condition or regulation;

K – that material has been transferred **to** another sheet in the tariff. (A footnote is required on the tariff sheet to identify the material's new sheet number);

M – that material has been transferred **from** another sheet in the tariff. (A footnote is required on the tariff sheet to identify the material's former sheet number);

T – a change in text for clarification;

O – no change. (This symbol is discretionary unless specifically requested by the commission).

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By: Matthew Brown Title: General Manager

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WATER SERVICE
RULES AND REGULATIONS

Rule 1 – Adoption of Rules of Regulatory Authorities

The rules pertaining to water service prescribed by the Washington Utilities and Transportation Commission (Commission) described in Revised Code of Washington (RCW) Title 80 and Washington Administrative Code (WAC) Title 480 are thereby adopted and made a part of this tariff. See generally and without limitation, Chapter 80.28 RCW and Chapter 480-110 WAC.

Rule 2 – Schedules and Conditions

The schedules and conditions specified in this tariff for water service are subject to change according to the public service laws of the State of Washington. The amount of water furnished is subject to the Washington State Department of Health (DOH) required standards of quantity and quality. The water resources and water rights are subject to the Washington State Department of Ecology (DOE) required standards of issued permits and certificates for ground water withdrawal. All schedules for water service apply to customers receiving water service from the Utility.

Rule 3 – Application and Agreement for Service

Each prospective customer desiring water service is required to sign the Utility's standard form of application before service is supplied. *The application shall state fully and truly all the purposes for which water may be required. The application is contingent upon approval by the Utility.*

An application for service is notice that the prospective customer desires water service from the Utility and represents agreement to comply with the Utility's rules and regulations on file with the Commission and in effect at the time service is furnished. In the absence of a signed application for water service, the delivery of water by the Utility through a standard connection and the taking thereof by the customer will constitute an agreement by and between the Utility and the customer for the delivery and acceptance of service under the applicable rate schedule(s) and these rules and regulations. For new customers, a survey will be required as part of the application prior to accepting the applicant as a customer.
See WAC 480-110-325.

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WATER SERVICE
RULES AND REGULATIONS

Rule 4 – Definition of Service

Service will be supplied as described in these rules and under the applicable rate schedule(s). Service will be supplied only to those who secure their source of water exclusively from the Utility, unless otherwise provided under written contract. Water service will be used only for the purpose specified in the service agreement and applicable rate schedule(s). A customer will not sell or permit others to use such service, unless authorized to do so under written contract with the Utility.

The customer will not increase demand or use of service as stated in the application for service without giving prior notice of such increase and receiving approval from the Utility. In the event of such increase, the customer is required to pay the Utility's regularly published rates for the increased service from the date of connection and use of the service.

Whenever the customer wants to permanently discontinue the use of water through any fixtures mentioned in the original application, the customer must cause the fixture to be removed and the branch pipe or service supplying the same to be capped or plugged, and must notify the Utility in writing before any reduction in charge will be made. See WAC 480-110-365.

Rule 5 – Disconnection Visit Charge

When a Utility employee is dispatched to disconnect service, that employee must accept payment of a delinquent account and disconnect visit charge if specified in **Schedule X**. If amount owing is tendered in cash, Utility employee will not be required to dispense change for excess of the amount due and owing. Any excess payment will be credited to the customer's account. The Utility will restore service when the cause of discontinuance has been removed and payments of all proper charges due from the customer have been made.

Rule 6 – Reconnection Visit Charge

A reconnection visit charge, as specified in **Schedule X,** will apply for reconnection of the customer's service to the Utility's distribution system. Such charge applies where service has been discontinued: (i) for non-payment; (ii) at the request of the customer; (iii) for cross connection control (no proof of backflow assembly; (iv) for backflow assembly testing (annual testing report is not provided); (v) refusal to make proper repairs; or (vi) similar cause. No charge will be made for reconnection of service if the shut-off was made for the convenience of the Utility.

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WATER SERVICE
RULES AND REGULATIONS

Rule 7 - Installation of Service Pipes and Meters

The Utility will construct service connections of a proper size from its distribution mains to the customer's property. The Utility reserves the right to refuse to construct a service connection to any property if the applicant's pipes are not properly constructed and protected.

'Utility Meter Installation' – The Utility may meter any flat rate service at its discretion. The Utility's metered service rates will become effective after the customer has received thirty (30) days' written notice. All meters so placed will be installed and maintained by the Utility without direct retrofit cost to the customer.

See, WAC 480-110-415 and WAC 480-110-445.

Rule 8 – Distribution Main Extension

'Utility Allowance' – Where elevation and construction conditions allow and one or more bona fide prospective permanent customer(s) request a main extension, the Utility will construct and pay for the same, if the Utility has sufficient capacity available to meet DOH standards of quantity and quality.

'Customer Prorate Share' – The cost of main extension in excess of the estimated customer(s) revenue for three (3) years (Utility allowance) must be paid by the prospective customer(s) in advance.

'Construction Contract' – No main extension will be considered as coming under this rule where the total cost of the main extension is greater than the estimated customer(s) revenue for six (6) years. Water main extensions and/or fire hydrants will be installed after contracts have been approved by the Commission pursuant to WAC's for special contracts for water utilities and distribution extensions.

See, WAC 480-110-435.

Rule 9 – Responsibility for, and Maintenance of, Services

'Point of Delivery' – The point at which water will be delivered to and received by the customer will be on the property line of the customer's property at a point designated by the Utility.

The Utility will install its meter or other connection device at the Point of Delivery, except, at its option, the Utility may install its meter at some other agreed upon point on the property of the customer, provided that in such event the property line will nevertheless be deemed the Point of Delivery.

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WATER SERVICE
RULES AND REGULATIONS

Rule 9 – Responsibility for, and Maintenance of, Services (cont'd)
The customer will assume all responsibility after Point of Delivery for water supplied by the Utility. The Utility will be exempt from all liability for loss or damage caused by leakage or escape of water furnished by the Utility after water has passed the Point of Delivery. If the customer has an Approved Backflow Prevention Assembly installed, the assembly must be tested annually by a certified Backflow Assembly Tester specialist.

All service pipes and fixtures on the customer's side of the Point of Delivery shall be provided and must be maintained and protected from freezing at the customer's expense. Where there are leaking or defective pipes or fixtures, the water may be turned off at the option of the Utility until the leaking or defective pipes or fixtures are properly repaired. The Utility may require any service to be equipped with freeze prevention devices to be used during cold weather conditions instead of permitting water to run continuously from faucets. See, WAC-480-110-445.

Rule 10 – Access to Premises
The Utility's regularly authorized agents or employees will have access to the premises of the customer at reasonable hours for meter reading, maintenance, testing, inspection, installation, connection, disconnection, repair or removal of the Utility's property. See, WAC 480-110-305.

Rule 11
Reserved

Rule 12 – Interruption to Service
The Utility will make a diligent effort to render uninterrupted service and supply of water. In cases where shut-off is necessary for repair, reconstruction, damage prevention or similar cause, the Utility will give advance notice to its customers of such scheduled shut-off. However, the Utility will not be responsible for any damage that may result from any cessation of services such as above outlined, nor for failure to give notice of shut-off when circumstances are such that it is impossible to give notice as stated above. See, WAC 480-110-365.

Rule 13 – Bills
All bills shall be paid monthly in arrears and are due and payable upon receipt and are considered delinquent no less than fifteen (15) days after the date mailed. Bills will be deemed received upon personal delivery to the customer or three (3) days following the deposit of the bill in the United States mail to the customer's last known address. Where the meter has not been read, a minimum bill will be rendered and adjusted when the next succeeding meter reading is available.

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WATER SERVICE
RULES AND REGULATIONS

Rule 13 – Bills (cont'd)
A customer may elect to receive an electronic billing in lieu of a paper bill that is mailed to the customer. If the customer makes this election, all bills shall be due and payable upon receipt and are considered delinquent no less than fifteen (15) days from the date of electronic mail. Bills will be deemed received upon sending of the electronic mail. In order to elect electronic billing, the customer must have enrolled in the Utility's auto-pay service. See, WAC 480-110-375.

Rule 14
Reserved

Rule 15 – Deposits
The Utility may require a deposit in situations when a customer is unable to establish or maintain credit with the Utility, or where a customer's service has been disconnected for nonpayment of amounts owed to the Utility as defined by Commission rules. The deposit will not be more than an average two-twelfths (2/12) of estimated annual billing (for customers billed monthly).

When the Utility collects customer deposits, interest must be paid for each calendar year, at the rate for the one-year Treasury Constant Maturity calculated by the U.S. Treasury and published in the Federal Reserve's Statistical Release H.15 on January 15 of that year. Interest is computed from the date of deposit to the date of refund or when applied directly to the customer's account.

The Utility must refund deposits plus accrued interest when there has been satisfactory payment, as defined by Commission rules or upon termination of service, less any amounts due to the Utility by the customer. In addition, the Utility will comply with all provisions of the Commission's deposit rules pursuant to WACs for establishing credit and deposits for water utilities. See, WAC 480-110-335.

Rule 16 – Responsibility for Delinquent Accounts
The Utility will not refuse or discontinue service to an applicant or customer who is not in arrears to the Utility even though there are unpaid charges due from the premises occupied by the applicant or a customer, due to the unpaid bill of a prior tenant unless there is evidence of intent to defraud.

The Utility may not permanently deny service to an applicant because of a prior obligation to the Utility. See, WAC 480-110-345.

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WATER SERVICE
RULES AND REGULATIONS

Rule 17 – Discontinuance of Service

The Utility reserves the right to discontinue service to its customers for:

1. Unpaid bills, as provided for in this tariff.
2. Water uses for purposes or properties other than those specified in the customer's application for service.
3. Willful waste of water through improper or defective piping, equipment, or otherwise.
4. Piping or equipment that does not meet the Utility's standards or fails to comply with other applicable codes and regulations.
5. Tampering with the Utility's property.
6. Vacating the premises.
7. Nonpayment of any proper charges, including deposit, as provided in this tariff.
8. Refusing to allow access as required in Commission rules.
9. Violating rules, service agreements, or effective tariffs, including violation of outdoor watering instructions given to customers in order to curtail water use during time of shortage.
10. Use of equipment that detrimentally affects the Utility's service to its other customers.
11. Service obtained by fraud.
12. Failure to comply with cross connection control requirements.

The right to discontinue service may be exercised whenever and as often as any of the foregoing situations occur, and neither delay nor omission by the Utility to enforce this rule any time will be deemed a waiver of its right to discontinue service.

The Utility shall not be liable for loss, damage, or claims that arise from or relate to the discontinuance of service as a result of any of the foregoing reasons described in the rule.

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WATER SERVICE
RULES AND REGULATIONS

Rule 17 – Discontinuance of Service (cont'd)
Discontinuance of service by a customer - Customer shall be required to give 24 hour notice to the Utility of their intention to discontinue service.

Required notice prior to disconnecting service: The Utility must serve a written disconnection notice on the customer, either by mail, or, at the Utility's option, by personal delivery of the notice to the customer's address, attached to the primary door.

A minimum of eight (8) business days' written notice will be given a customer before service is discontinued, except in the case of danger to life or property. Before disconnecting service, the Utility must in addition to the first (1st) notice as described above, provide a second (2nd) notice by one of the two options listed below.

a. Delivered notice - The Utility must deliver a second (2nd) notice to the customer and attach it to the customer's primary door. The notice must contain a deadline for compliance that is no less then twenty-four (24) hours after the of delivery that allows the customer until 5:00 p.m. of the following day to comply, or

b. Mailed notice - The Utility must mail a second (2nd) notice, which must include a deadline for compliance that is no less than three (3) business days after the date of mailing if mailed from within the state of Washington.

Disconnection notice will expire after ten (10) business days from the first day that the Utility may disconnect service, unless other mutually agreed upon arrangements have been made and confirmed in writing by the Utility. If mutually accepted arrangements are not kept, the Utility may disconnect service without further notice.

In addition to the foregoing, if a customer presents compelling evidence of financial difficulties acceptable to the Utility, in lieu of disconnection, the Utility will install a flow restrictor at the customer's agreement to such installation. The flow restrictor will be in place for a maximum of ninety (90) days to allow the customer the opportunity to bring the bill current. During that ninety (90) day period of time, the customer will be charged only the base rate as set out in **Schedule 2 or Schedule 2.1**. If the customer is not able to bring the bill current during that ninety (90) day period of time, then the Utility may initiate discontinuance of service pursuant to this rule and Commission rules. This opportunity will be offered to a customer no more than once each calendar year. See, WAC 480-110-355.

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WATER SERVICE
RULES AND REGULATIONS

Rule 17 – Discontinuance of Service (cont'd)

a. In accordance with Engrossed Substitute House Bill 1329 (ESHB 1329), Utility will not disconnect any residential customer (including residents of metered apartment buildings and mobile homes) for nonpayment when the National Weather Service has issued, or has announced it intends to issue a heat-related alert such as an excessive heat warning, a heat advisory, an excessive heat watch, or similar alert (all of which is as "alert") for the area in which the residential user's address is located for the duration of the alert. (T)

b. In the event the National Weather Service (NWS) issues or intends to issue a heat-related alert in the customer's area, and their water service has been disconnected due to non-payment, the customer may request reconnection by contacting the Utility at 253-851-4060. Upon receipt of such a request, the Utility will promptly make a reasonable attempt to restore the customer's water service and water service will remain active for the duration of the heat-related alert. (N) (N)

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WATER SERVICE
RULES AND REGULATIONS

Rule 18 – Sprinkling and Irrigation

Water used for sprinkling and irrigation must be paid for at the regular prescribed tariff rates for such service. The hours for such use will be as prescribed from time to time by the Utility. During peak use months (June through September), and at such other times when demand may be high, the Utility may prohibit or limit sprinkling and irrigation to preserve water for domestic consumption.

No person will use water for sprinkling or irrigation purposes during any fire in the area, and all sprinkling or irrigation must be stopped immediately when a fire alarm is sounded. Water use may resume three (3) hours after the fire has been extinguished.

Rule 19 – Rates

Rates for water service and supply are those published in the Utility's tariff on file with the Commission. Unless otherwise stated in this tariff, the rates apply to a single service, to one customer at one premise. Water service must be subscribed to on an annual basis. No proration or reduction in billing is allowed unless this tariff prescribes temporary or seasonal rates.

When conditions require that two or more consumers with separate housekeeping establishments occupy the same or separate dwellings (Accessory Dwelling Units) be supplied through a *non-metered service*, the consumers using water through a single connection are considered a single customer and will be charged the base charge as provided by the schedule of rates.

When conditions require that two or more consumers with separate housekeeping establishments occupy the same or separate dwellings (Accessory Dwelling Units) be supplied through *one metered service*, consumers using water will be considered a single customer and will be charged the base charge as provided by the schedule of rates for the size of meter installed. If the consumption as shown by the meter exceeds the allowance or usage blocks for the size of the meter, the excess consumption charge will be computed at the regular rates for one customer for the size of meter installed.
See, RCW 80.28.050, RCW 80.28.080, WAC 480-110-431, WAC 480-110-433.

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WATER SERVICE
RULES AND REGULATIONS

Rule 20 – Account Set-Up Charge

An account set-up charge as specified in **Schedule X** will be made for each new account or change of account responsibility on an existing service. Such charge will be included in the initial billing to the customer. This charge includes the Utility dispatching an employee to establish a base meter reading. An account set-up charge does not apply to installation of a new meter.

Rule 21 – Non-Sufficient Funds (NSF) Charge

An NSF check charge as specified in **Schedule X** will be made for handling customer checks that have been returned by the bank as NSF or account closed. This charge will be applied to the next billing to the customer.

Rule 22 - Water Availability Analysis Charge

Any prospective customer seeking a water availability letter (sometimes called Lender Letter) or certificate of water availability from the Utility must first pay the appropriate charge as specified in **Schedule X**. A Lender Letter simply states a prospective customer's property is within the Utility's service area and that the Utility can potentially provide water service to the property. The Utility is not required to provide service to applicants requesting a Lender Letter, nor are applicants required to receive service.

If a customer needs a more detailed analysis and cost projection as to what it would take to provide service to their property or project, they must pay the Water Availability Analysis Charge as specified in **Schedule X**. If the applicant's property consists of ≤ 2 Equivalent Residential Units (ERUs), the ≤ 2 ERUs charge applies; if the applicant's property consists of ≥ 3 ERUs, the ≥ 3 ERUs charge applies. An ERU is defined using the definition provided in DOH Publication 331-441. A letter and cost projection will be provided to the applicant outlining the costs and process for moving forward to obtain water service. If a contract to provide service is not entered into by both the applicant and the Utility, the cost projection expires in 30 days. Once a contractual agreement is made, and the applicant meets the requirements of that agreement, the Utility is obligated to provide service. Once the physical infrastructure has been installed to provide service to the property or project, the applicant is required to receive service, either as a ready-to-serve or active customer.

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WATER SERVICE
RULES AND REGULATIONS

Rule 23 – Cross Connection Control

The Utility's Cross Connection Control Program is designed to meet the requirements of WAC 246-290-490. The Cross Connection Control Program is a tool used for the protection of public health.

The program requires a cross connection control survey to be sent to customers no less often than every three years. The survey must be returned within 60 days. If the customer does not return the survey within 60 days, a second survey will be sent. If a completed survey is still not received within the following 30 days, the Utility will assume that a potential cross connection exists and the customer will be notified that an assembly is required for premise isolation.

Applicants for new service must complete a cross connection control survey as part of the application for service.

The surveys are reviewed by the Utility's Certified Cross Connection Control Specialist (CCS), or designated responsible person, to determine if a cross connection hazard exists and if so, the degree of health hazard that the existing or proposed cross connection presents. Each service identified as a health hazard and not installed with a backflow prevention assembly will receive a *Notice to Install a Backflow Assembly* indicating the need for a backflow assembly and the type of backflow assembly required to be installed. The customer will be given 90 days from the date of the *Notice to Install a Backflow Assembly* to have an approved assembly installed. Installation will be at the customer's expense.

If proof of installation is not received within 90 days from the date of the *Notice to Install a Backflow Assembly* the customer will be sent a *Disconnection Notice* indicating that water service will be disconnected 45 days from the date of the notice if the Utility does not receive proof that a backflow assembly has been installed. Water service will be reconnected when the Utility confirms a backflow assembly is installed. If service is disconnected, the Utility will charge the customer its current Reconnection Charge, listed on **Schedule X** of this Tariff.

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WATER SERVICE
RULES AND REGULATIONS

Rule 24 – Backflow Assembly Testing and Inspection

If the customer has an Approved Backflow Prevention Assembly installed the assembly must be tested annually by a certified Backflow Assembly Tester (BAT) specialist. The Utility will maintain a list of certified BAT specialists that are acceptable to the Utility and the customer may choose from any such BAT specialist on the Utility's list or the residential customer may elect the Utility to provide this service and charge the customer its current annual Backflow Assembly Testing & Report Fee listed on **Schedule X**. The Utility service for annual backflow assembly testing shall be subscribed to on an annual basis and is not subject to cancellation or reduction for partial periods.

The customer will provide a copy of the acceptable annual report from the BAT specialist. If the annual report is not provided within thirty (30) days of the anniversary date of the installation of the Approved Backflow Prevention Assembly, then the Utility will provide a notice of disconnection pursuant to WAC's for discontinuing of service for water utilities. If a copy of the annual report is not received by the date for disconnection as specified in the notice, the Utility will disconnect the customer's service as specified in **Rule 17** of this tariff.

If service is disconnected, the Utility will charge the customer its current Reconnection Visit Charge as specified in **Schedule X** of this tariff.

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WATER SERVICE
RULES AND REGULATIONS

Rule 25 – Limitations of Liability

The Utility's liability, if any, for its gross negligence, willful misconduct or violation of RCW Chapter 19.122 is not limited by this tariff. With respect to any other claim or suit, by a customer or by any other party, for damages associated with the installation, provision, termination, maintenance, repair or restoration of service, the Utility's liability, if any shall not exceed an amount equal to the proportionate part of the monthly recurring charge for the service for the period during which the service was affected.

THERE SHALL BE NO LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. THE UTILITY EXPRESSLY DISCLAIMS ALL WARRANTIES, STATED OR IMPLIED, EXCEPT THOSE SPECIFICALLY SET FORTH IN THIS TARIFF, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The charge for services rendered under this tariff are expressly based on the limitations of damages and disclaimer of warranties set forth above.

Rule 26 – Unauthorized Use of Service

Where service has been disconnected either through the request of the customer or through action of the Utility, and the service – which includes, but is not limited to, the saddle, curb stop, piping, meter setter, angle stop, check valve, meter – has been locked, authorized service cannot be restored without the Utility first reinitiating service.

In addition, the Utility will charge the customer receiving unauthorized service the tariff rate for all service that the Utility estimates was taken plus all of the Utility's costs resulting from the unauthorized use and all applicable fees for discontinuing of service.

See, RCW 80.28.240

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By: Matthew Brown Title: General Manager

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Washington Water Service Company

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WATER SERVICE
RULES AND REGULATIONS

Rule 27 – Damage and Repairs Charge

The Utility shall be responsible for maintaining meter boxes and their contents, along with fire hydrants and services on the street side of the Point of Delivery. However, if a customer or the customer's contractor, invitee or agent causes damage to the meter box, fire hydrant, pipes, mains or other equipment of the Utility's infrastructure, the customer will be responsible for paying for the damage and repairs at time and materials basis.

Rule 28 – Water Leak Procedures

When the Utility determines that a leak has occurred on the customer's property, the Utility will adjust the customer's bill; after the customer submits a bill from a plumber or other evidence that the leak has been repaired, the Utility must re-calculate the customer's bill for the *'relevant time period'*. The *'relevant time period'* for this adjustment will not exceed two (2) months for any given leak. The customer's bill will be adjusted by:

- Estimating the customer's *'projected normal usage'* during the relevant period(s) and billing this amount according to the usage rate shown on **Schedule 2 or Schedule 2.1**.
- Billing the *'excess usage'* during the relevant period using 50% the usage rate(s) shown on **Schedule 2 or Schedule 2.1**.
- Crediting the difference between the original bill for the relevant period and the sum of the bills described in Steps 1 and 2.

'Projected Normal Usage' – as an estimate of what the customer's water consumption would have been had there been no leak. This estimate will be based on the same period from the prior year.

'Excess Usage' – as the actual metered usage minus the projected normal usage.

Note: The credit described in this Rule is available to a customer only once every twenty-four calendar months.

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Washington Water Service Company

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WATER SERVICE
RULES AND REGULATIONS

Rule 29 - Meter Accuracy Testing

The Utility will perform a meter accuracy test and share the results with the customer when requested. The test will be at no charge to the customer, except when multiple tests are requested by the customer within a twelve-month period. After the first test, additional tests in a twelve month period shall be billed to a customer at a time and material basis. See, WAC 480-110-405.

Rule 30 - Compound Meter Procedures

'Compound Meter' – is a combination of a large meter and a small meter, with a special change-over valve to accurately measure an extremely broad range of flow rates.
When the Utility determines that a compound meter is needed to accurately measure flow rates, then a compound meter is billed as a single customer; this is done by applying the larger meter size to determine the monthly metered rate service per **Schedule 2 or Schedule 2.1** for base rate and usage blocks; the total billed usage amount is determined by combining the usage of both the large and small meters.

Rule 31 - Landlord Reversion Agreement

The Utility will automatically revert accounts into the landlord's name and responsibility, when tenants move out if the Landlord Reversion Authorization has been submitted to the Utility. The form is available for download at the Utility's website or a hard copy can be requested by the landlord. Reversion will remain on file with the Utility and can only be canceled with a 30-day written notification.

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WATER SERVICE
RULES AND REGULATIONS

Rule 32 - Water Use Efficiency

Water Use Efficiency rules require that water systems demonstrate good stewardship and efficient use of Washington State's water resources. To do so, each water system is required to set goals for reducing water loss and for effecting sustained reductions in customer consumption through conservation. Water systems are required to report their progress toward meeting these goals annually. Water systems report calendar year performance to the Washington State Department of Health, Office of Drinking Water, on or before July 1st of each year. These reports are accessible and available to the public at the Office of Drinking Water web site at http://www.doh.wa.gov/ehp/dw. Summary reporting is also provided by the Utility at http://www.wawater.com.

Washington Water Service Company has established and currently strives to achieve three goals for all of the Group A water systems (i.e., those serving 15 or more residences or routinely serving a population of 25 people or more per day) that it owns, as follows:

Distribution System Leakage Goal

The goal is to have no drinking water system exceed an annual Distribution System Leakage (DSL) rate of 10%.

Supply Side Goal

The companywide goal is to have no drinking water system needing to withdraw or divert from its source more than 0.40 acre-feet per year per residence or Equivalent Residential Unit (ERU) in order to produce and deliver the drinking water required at its customers' meters.

Customer (Demand Side) Conservation Goal

The companywide goal is to have no drinking water system exceed an annual metered customer consumption rate of 0.36 acre-feet per year per ERU. This is the equivalent to an average of approximately 1300 cubic feet per month or 320 gallons per day.

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Washington Water Service Company

For Commission's Receipt Stamp

WATER SERVICE
RULES AND REGULATIONS

Rule 33 – Construction Meters

Temporary water service maybe requested for customers engaged in construction and temporary activities within the Utility service area. Note that construction meters may also be referred to as hydrant meters. Monthly quantity rates and service charge listed on **Schedule 2 or Schedule 2.1** will apply to service furnished under this rule. The following conditions apply to this rule:

1. Where it is necessary to obtain a temporary or construction meter, the customer will be required to sign an agreement and deposit $2,400 for a construction meter with a Reduced Pressure (RP) or backflow prevention assembly (BPA).
2. If hardware is lost, stolen, damaged beyond repair, relocated without Utility approval, or not inspected and tested according to requirements set forth by the Department of Health, the customer will forfeit the entire deposit. The deposit less the cost of any repairs other than those due to normal depreciation will be returned to the customer after termination of the service for which the meter was obtained.
3. If Utility requires customer to call, fax, or email the meter reading, it is the customer's responsibility to do so by the 15th of each month. Customers that do not call, fax, or email the meter reading by the 15th of each month will be charged for 10,000 cubic feet of water use.
4. In the event of failure to provide a meter read for a period of:
    - Two months, meter may be removed and permit revoked (if utility is unable to contact customer).
    - Six months, the meter will be considered abandoned, and deposit forfeited.
5. Meter can only be used in locations approved by the local fire department and Utility; and meter cannot be relocated without utility approval.
6. Once water passes through meter it is no longer potable.
7. Water taken from a utility hydrant may not be transported out of the Utility's designated service area unless authorized by Washington Water in writing.
8. Meter must be inspected annually by Utility. Customer is responsible for arranging inspection appointment.
9. RP and BPA must be tested according to the requirements set forth by the Department of Health by a certified backflow specialist. Fee for testing is the responsibility of customer.
10. Utility will require customer to apply for a permanent service to obtain potable water to a premises. This rule gives customer no implied rights for obtaining building permits and permanent extensions to serve customers are to be made under Rule 8.

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Washington Water Service Company | For Commission's Receipt Stamp

WATER SERVICE
RULES AND REGULATIONS

Rule 33 – Construction Meters (cont'd)

11. Meter is not to be used for fire protection such as fire sprinkler or on-site fire hydrants. This rule does not imply that any fire protection standards required by local or state authorities are met.
12. It is the customer's duty to notify the local fire protection agency of any connection to a fire hydrant and to disclose the intended use of water.
13. Failure of a customer to use proper spanner wrenches on the Utility's fire hydrant operating nut, or any damage to the water distribution system by the customer, can result in the immediately termination of service and use of the meter. The costs for making repairs to the damaged facilities shall be borne by the customer.
14. Persons found using water from a Utility hydrant location without the use of proper metering equipment will receive a warning letter and citation. A second citation may result in the suspension of all hydrant use permits issued to that customer for a period of six months. Additionally, copies of the citations will be sent to the local law enforcement authorities and the fire department will be notified that all hydrant use permits have been revoked.

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For Commission's Receipt Stamp

WATER SERVICE
RULES AND REGULATIONS

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Washington Water Service Company — For Commission's Receipt Stamp

SERVICE AREA-LEGACY

Water System List: (29)

No.	System Name	County	Region	DOH WFI #
1	71ST AVE	PIERCE	NW	52976B
2	90TH ST CT	PIERCE	NW	64144N
3	ADCOCK (TALMO)	KITSAP	NW	03658C
4	ALLYN SHOPPING CENTER	MASON	NW	01695Q
5	ALPINE HILLS	THURSTON	SW	01826P
6	AMANDA	KITSAP	NW	010276
7	ANDREWS FIRST	THURSTON	SW	172419
8	ASPINWALL ESTATES	THURSTON	SW	01463N
9	BAR B ESTATES MANOR	MASON	NW	22751W
10	BELFAIR ACRE TRACT #1	MASON	NW	367917
11	BELFAIR ACRE TRACT #2	MASON	NW	36802J
12	BELVILL	PIERCE	NW	04896P
13	BELWOOD. PARK	THURSTON	SW	056404
14	BISCAY VILLA	THURSTON	SW	071646
15	BLACK LAKE ESTATES	THURSTON	SW	26071R
16	BLATTE	KITSAP	NW	029534
17	BLISS COCHRAN LARSON WEST	PIERCE	NW	52801U
18	BODE	KITSAP	NW	AA316G
19	BUCKLIN WS	KITSAP	NW	66936L
20	BURNHAM (SCL#3)	PIERCE	NW	81357L
21	BUTTERFIELD #2	PIERCE	NW	01016D
22	BUTTERFIELD #3	PIERCE	NW	01363J
23	BUTTERFIELD #4	PIERCE	NW	013642
24	BUTTERFIELD #5	PIERCE	NW	016290
25	BUTTERFIELD #6	PIERCE	NW	01862N
26	BUTTERFIELD #7	PIERCE	NW	03314W
27	CAMELOT/WESTERN SKIES	THURSTON	SW	108086
28	CASCADE HIGHLANDS NORTH	PIERCE	NW	55631J
29	CEDAR CREST	PIERCE	NW	11887T

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Washington Water Service Company

For Commission's Receipt Stamp

SERVICE AREA-LEGACY

Water System List: (32)

No.	System Name	County	Region	DOH WFI #
1	CEDAR GROVE	MASON	SW	11914K
2	CEDARBROOK	KITSAP	NW	14001T
3	CEDARWOOD/SOUTH UNION	THURSTON	SW	002533
4	CLASSIC HEIGHTS	THURSTON	SW	63381B
5	CLEAR CREEK ESTATES	KITSAP	NW	47431C
6	CLIFTON WATER WORKS	KITSAP	NW	138554
7	CLOISTER, THE	THURSTON	SW	27091B
8	COLE, BRUCE WS	PIERCE	NW	35363W
9	CREEKSIDE MEADOWS DIVISION	THURSTON	SW	04863C
10	CRESCENT PARK	THURSTON	SW	15999F
11	CRESCENT VALLEY #333	PIERCE	NW	37654N
12	CRISP	KITSAP	NW	07675L
13	CRISTALINA	KING	NW	03014
14	CRYSTAL SPRINGS	THURSTON	SW	30049R
15	CURRIES LANDING	MASON	SW	03463T
16	CUYAMACA VILLAGE	THURSTON	SW	17100L
17	DELPHI DAUBEL	THURSTON	SW	18650L
18	DELTA LONG LAKE	KITSAP	NW	10340E
19	DULLUM	KITSAP	NW	02845R
20	EAGLE ESTATES	THURSTON	SW	02348N
21	EVERGREEN SHORES	THURSTON	SW	24163J
22	FOREST PARK	THURSTON	SW	07167Q
23	FOSS ROAD	KITSAP	NW	63918X
24	FOUR CORNERS	PIERCE	NW	152961
25	FOXHALL	THURSTON	SW	109911
26	FRAGARIA WOODS #1	KITSAP	NW	04613U
27	FRAGARIA WOODS #2	KITSAP	NW	04614B
28	FREDDIE LANE	KITSAP	NW	39944X
29	GLENWOOD FARMS 1 EAST	KITSAP	NW	362419
30	GLENWOOD FARMS 2 WEST	KITSAP	NW	362332
31	GLENWOOD STATION	KITSAP	NW	00561P
32	GLENWOOD TALLMAN	KITSAP	NW	AD392P

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Washington Water Service Company — For Commission's Receipt Stamp

SERVICE AREA-LEGACY

Water System List: (30)

No.	System Name	County	Region	DOH WFI #
1	GOLDEN MEADOW	PIERCE	SW	AA608G
2	GREENWOOD	KITSAP	NW	01625X
3	GREENWOOD ESTATES	PIERCE	NW	29810X
4	GRENVILLE/SCHMITZ	KITSAP	NW	05086F
5	HARBOR HEIGHTS	KITSAP	NW	31001N
6	HENDERSON BOULEVARD	THURSTON	SW	08359U
7	HERITAGE ROW	THURSTON	SW	018868
8	HIDE A WAY HEIGHTS	KITSAP	NW	086766
9	HINTZVILLE ACRES	KITSAP	NW	10440K
10	HOLIDAY RANCHETTES	THURSTON	SW	33677F
11	HOLLY TIDES	PIERCE	NW	33695Y
12	HOMESTEAD ACRES	KITSAP	NW	33969M
13	HOPKINS #1	PIERCE	NW	AA260K
14	HOPKINS #2	PIERCE	NW	AA440J
15	HOPKINS #3	PIERCE	NW	AA498F
16	HOPKINS #4	PIERCE	NW	AA718E
17	HORIZONS WEST	KITSAP	NW	343754
18	HUCKLEBERRY	KITSAP	NW	01425N
19	IMHOFF	PIERCE	NW	05664P
20	INLET'S END	THURSTON	SW	06705V
21	ISRAEL PLACE/SAN ANGELO PK	THURSTON	SW	36274L
22	ITT	PIERCE	NW	03591N
23	JACKSON LAKE SOUTH	PIERCE	NW	572146
24	JASON LANE	KITSAP	NW	216250
25	JOHANSON	KITSAP	NW	36782F
26	KAREN PLACE	THURSTON	SW	02860P
27	KOPACHUCK	PIERCE	NW	43065E
28	LACAMAS FARMSTEADS	PIERCE	SW	021174
29	LAKE LAWRENCE	THURSTON	SW	22572N
30	LAKE MINTERWOOD	PIERCE	NW	552100

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Washington Water Service Company | For Commission's Receipt Stamp

SERVICE AREA-LEGACY

Water System List: (29)

No.	System Name	County	Region	DOH WFI #
1	LAKE TUCK	KING	NW	44965N
2	LAURISON	PIERCE	NW	011069
3	LEE	CLALLAM	NW	46658P
4	LIBBY ROAD EAST	THURSTON	SW	471249
5	LIDER	KITSAP	NW	25994X
6	LITTLE TREE	KITSAP	NW	022368
7	LOGANBERRY "A"	THURSTON	SW	05954U
8	LOGANBERRY "B"	THURSTON	SW	05957C
9	LONGBRANCH ESTATES #1	PIERCE	NW	AA771E
10	LONGBRANCH ESTATES #2	PIERCE	NW	AA772J
11	LONGBRANCH ESTATES #3	PIERCE	NW	AA7739
12	LONGBRANCH ESTATES #4	PIERCE	NW	AA774E
13	LONGBRANCH HIGHLANDS	PIERCE	NW	02075H
14	LONG LAKE VIEW	KITSAP	NW	48030D
15	LOOK OUT POINT	KITSAP	NW	00045L
16	M & M (TAGGART)	PIERCE	NW	57464Q
17	MACKEY	PIERCE	NW	AA208E
18	MADRONA POINT	PIERCE	NW	50075J
19	MAINLAND VIEW MANOR	KITSAP	NW	472480
20	MALAZZO	KITSAP	NW	017843
21	MASTRO	PIERCE	NW	11695R
22	MAY VOLT HILLS	KITSAP	NW	17690K
23	MCGRAW (TALMO)	PIERCE	NW	01621V
24	MCLAINS COVE	MASON	SW	527407
25	MINTER CREEK RAPIDS	KITSAP	NW	551750
26	MINTERBROOK	PIERCE	NW	54740B
27	MIRRORMONT SERVICES	KING	NW	552501
28	MOUNTAIN VIEW MEADOWS A	PIERCE	SW	AB470J
29	MOUNTAIN VIEW MEADOWS B	PIERCE	SW	AB471F

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Washington Water Service Company — For Commission's Receipt Stamp

SERVICE AREA-LEGACY

Water System List: (28)

No.	System Name	County	Region	DOH WFI #
1	MOUNTAIN VIEW MEADOWS C	PIERCE	SW	AB472C
2	MOUNTAIN VIEW MEADOWS D	PIERCE	SW	AB474H
3	NORDAL	PIERCE	NW	06839U
4	OLALLA	KITSAP	NW	63215F
5	ORCAS HIGHLANDS	SAN JUAN	NW	133014
6	OVERRA ROAD #1	KITSAP	NW	00587A
7	OVERRA ROAD #2	KITSAP	NW	01333R
8	PACIFIC VENTURES	KITSAP	NW	29921U
9	PALMER LAKE	PIERCE	NW	657451
10	PARKSHORE ESTATES	MASON	SW	66146U
11	PARKVIEW TERRACE	KITSAP	NW	66215N
12	PATROSA LANE	KITSAP	NW	01095Y
13	PEACOCK HILL	PIERCE	NW	66637Q
14	PEDERSON, HAROLD WELL	PIERCE	NW	66727L
15	PHELPS ROAD - KITSAP	KITSAP	NW	63210W
16	POINT EVANS	PIERCE	NW	68065U
17	QUISTORFF	PIERCE	NW	705505
18	RAFT ISLAND	PIERCE	NW	70760N
19	RAINFOREST GREENHOUSE	KITSAP	NW	054736
20	RAINIER MEADOWS (JANASZAK)	KITSAP	NW	04323P
21	RAINWOOD	THURSTON	SW	14730Y
22	RANCH ACRE	THURSTON	SW	285511
23	RED CEDAR ESTATES	THURSTON	SW	71610A
24	REGENCY PARK	KITSAP	NW	71727A
25	RICHARDSON	PIERCE	NW	AA131P
26	RIVER PARK	THURSTON	SW	727765
27	ROBINHOOD TERRACE	KITSAP	NW	036252
28	ROLLING FIRS/EVERGREEN TER	THURSTON	SW	73975Y

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SERVICE AREA-LEGACY

Water System List: (28)

No.	System Name	County	Region	DOH WFI #
1	RONDELAY MEADOWS	JEFFERSON/	NW	74130C
2	ROSARIO	SAN JUAN	NW	74270J
3	ROSEDALE COMMUNITY CLUB	PIERCE	NW	74364F
4	ROSEDALE EAST (ROSEWOOD)	PIERCE	NW	09490D
5	ROSEDALE/SMYTH	PIERCE	NW	05081W
6	ROSEDALE-26TH ST KPS	PIERCE	NW	03961D
7	ROYALWOOD	KITSAP	NW	74743Y
8	RYAN NELSON	KITSAP	NW	02244F
9	S & I	PIERCE	NW	751541
10	SALEWSKY	PIERCE	NW	644149
11	SCHAAK	PIERCE	NW	03317E
12	SCHICK DROHMAN	PIERCE	NW	76633P
13	SCHMID	KITSAP	NW	76658T
14	SEHMEL ROAD WS	PIERCE	NW	204815
15	SHEARWATER	KITSAP	NW	473843
16	SHORECREST	PIERCE	NW	78618W
17	SILVER SPRINGS ESTATES	KITSAP	NW	79275E
18	SIMMONS COURT	THURSTON	SW	31527X
19	SIVO ACRES	KITSAP	NW	239116
20	SKOOKUM RANCH	KITSAP	NW	08586A
21	SOUTH EAST YAKIMA	KITSAP	NW	013262
22	SOUTHWORTH VIEW TRACTS	KITSAP	NW	03687M
23	SPRUCE ROAD	KITSAP	NW	83424J
24	STRATTONWOOD	KITSAP	NW	84618N
25	STUHLER	KITSAP	NW	84683W
26	SUMMERHILL	THURSTON	SW	848980
27	SUNSHINE ACRES	CLALLAM	NW	862506
28	UNDERWOOD	PIERCE	NW	44231X

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First Revised Sheet No. 28
Cancelling Original Sheet No. 28
WN U-3
Washington Water Service Company

For Commission's Receipt Stamp

SERVICE AREA-LEGACY

Water System List: (10)

No.	System Name	County	Region	DOH WFI#
1	VERDAN ANDERSON HILL	KITSAP	NW	91470N
2	VOSS SOUTH	PIERCE	NW	01018E
3	WALDEN	KITSAP	NW	438871
4	WALTER WALKER WATER WORKS	KING	NW	202767
5	WELL'S	KITSAP	NW	17127Q
6	WEYER LANE	KITSAP	NW	59991Q
7	WICKS LAKE RANCHES	KITSAP	NW	967287
8	WINDDRIFT WELL	KITSAP	NW	010234
9	WOODLANDS PUD	SAN JUAN	NW	AC228E
10	ZEMPEL-KEES	PEIRCE	NW	149451

SERVICE AREA-STROH

Water System List: (1)

No.	System Name	DOH WFI#
1	STROH	846703

BY AUTH. OR ORDER OF WASH. UTILITIES & TRANSPORTATION COMM. DOCKET NO. UW-230631

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Issued by: Washington Water Service Company

By: Mathew Brown Title: General Manager

Secon Revision of Sheet No. 29
Canceling
First Revision of Sheet No. 29
WN U-3

Washington Water Service Company — For Commission's Receipt Stamp

SERVICE AREA-EAST PIERCE

Water System List: (26)

No.	System Name	DOH WFI #	
1	Artondale	03160V	
2	Bethel Greenacres	05980	(N)
3	Brookhaven	08760Y	
4	Blue Horizon	30321	
5	Cascade Highlands	45061H	
6	Driftwood Valley Camp WS	20003L	
7	Firwood	36176H	
8	Greebriar	29345M	
9	Henderson Bay	77147E	
11	Moore's 40 Acres	35336N	
12	Muck Creek Hill	50225H	
13	Nelson Ridge	06081Y	
14	Nisqually Park	59588K	
15	Olympic Mall	63479B	
16	Pine Lake Mobile Home Est	67397Y	
17	Purdy Acres East	700007	
18	Purdy Acres West	70001Q	
19	Riverview	72975W	
20	Rocky Bay	73620P	
21	Rosedale Heights	743716	
22	Ryanwood	19601W	
23	Shaw Cove	77960C	
24	Sherwood Ranchettes	23651U	
25	Southcreek 1	25707W	
26	Southcreek 2	42931P	
27	Southwood	82844H	
28	Ranch	353545	

Issued Date: 1-5-23 Effective Date: 2/10/23

BY AUTH. OF ORDER 01 OF THE WASH UTILITIES AND TRANS COMM. DOCKET UW-230019

Issued by: Washington Water Service Company

By: Mathew Brown Title: General Manager

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SUB Jul 21, 2023

Substitute First Revision of Sheet No. 30
Canceling Original Sheet No. 30
WN U-3

Washington Water Service Company | For Commission's Receipt Stamp

SCHEDULE NO. 1
NON-METERED RATE SERVICE - LEGACY

Available

Within the limits of all Washington Water Service Company Water Service Areas except the East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable

Applicable to domestic residential customers, where meters have not yet been installed.

Conditions

The charge for this service is not subject to cancelation or reduction for seasonal or temporary periods. This charge will be the monthly minimum bill for this class of service.

Monthly Rates	Rate	
Each permanent residence	$64.35	(I)

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Substitute First Revision of Sheet No. 30.1
Canceling Original Sheet No. 30.1
WN U-3

Washington Water Service Company | For Commission's Receipt Stamp

SCHEDULE NO. 1.1
NON-METERED RATE SERVICE - EAST PIERCE

Available

Within the limits of all Washington Water Service Company Water's East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable

Applicable to domestic residential customers, where meters have not yet been installed.

Conditions

The charge for this service is not subject to cancelation or reduction for seasonal or temporary periods. This charge will be the monthly minimum bill for this class of service.

Monthly Rates	Rate	
Each permanent residence	$41.91	(I)

First Revised Sheet No.30.2
Cancelling Original Sheet No. 30.2
WN U-3
Washington Water Service Company

For Commission's Receipt Stamp

SCHEDULE NO. 1.2 (T)
NON-METERED RATE SERVICE - STROH

Available

Within the limits of all Washington Water Service Company Water's Stroh Service Area and at Utilities option and capability to maintain Department of Health standards of quantity and quality.

Applicable

Applicable beginning July 17, 2023, to domestic residential customers, where meters have not yet been installed.

Conditions

The charge for this service is not subject to cancelation or reduction for seasonal or temporary periods. This charge will be the monthly minimum bill for this class of service.

Monthly Rates	Rate
Each permanent residence	$19.00

First Revised Sheet No. 31.3

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By: Mathew Brown Title: General Manager

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WN U-3

Washington Water Service Company — For Commission's Receipt Stamp

SCHEDULE NO. 2
METERED RATE SERVICE - LEGACY

Available
Within the limits of all Washington Water Service Company Water Service Areas except the East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applicable to customers served by the Utility on a metered basis.

Conditions
The charge for this service is not subject to cancelation or reduction for seasonal or temporary periods, unless seasonal rates apply per this tariff. This charge will be the monthly minimum bill for this class of service. For multiple unit residential customers served through one meter, see **Rule 19**. Usage rates for each block below are shown per 100 cubic foot of water. Billing for any block shall be calculated on a per 100 cubic foot amount used and based on the usage rate charge of that block.

Monthly Rates

Each connection or customer:

Each connection	Meter Size Factor	Base Rate	1st Block (cubic feet)	1st Usage Rate	2nd Block (cubic feet)	2nd Usage Rate	3rd Block (cubic feet)	3rd Usage Rate
3/4 -inch	1.00	$ 24.72	0-600	$ 3.53	601-2,200	$ 5.30	Over 2,200	$ 7.06
1-inch	1.67	$ 42.02	0-1,168	$ 3.53	1,169-4,449	$ 5.30	Over 4,449	$ 7.06
1 1/2 -inch	3.33	$ 81.58	0-2,335	$ 3.53	2,336-8,897	$ 5.30	Over 8,897	$ 7.06
2-inch	5.33	$ 131.02	0-3,736	$ 3.53	3,737-14,235	$ 5.30	Over 14,235	$ 7.06
3-inch	10.00	$ 247.20	0-7,005	$ 3.53	7,006-26,690	$ 5.30	Over 26,690	$ 7.06
4-inch	16.67	$ 412.82	0-11,675	$ 3.53	11,676-44,484	$ 5.30	Over 44,484	$ 7.06
6-inch	33.33	$ 823.18	0-23,350	$ 3.53	23,351-88,967	$ 5.30	Over 88,967	$ 7.06

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BY AUTH. OR ORDER OF WASH. UTILITIES & TRANSPORTATION COMM. DOCKET NO. UW-230236

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By: Matthew Brown Title: General Manager

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WN U-3

Washington Water Service Company — For Commission's Receipt Stamp

SCHEDULE NO. 2.1
METERED RATE SERVICE – EAST PIERCE

Available
Within the limits of Washington Water Service Company's East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applicable to customers served by the Utility on a metered basis. Water services to a residential connection defined as single family residences, multifamily residences consisting of four (4) each or fewer separate dwelling units, standalone mobile homes, or mobile homes in mobile home parks.

Conditions
The charge for this service is not subject to cancelation or reduction for seasonal or temporary periods, unless seasonal rates apply per this tariff. This charge will be the monthly minimum bill for this class of service. For multiple unit residential customers served through one meter, see **Rule 19**. Usage rates for each block below are shown per 100 cubic foot of water. Billing for any block shall be calculated on a per 100 cubic foot amount used and based on the usage rate charge of that block.

Each connection or customer: (T)

Each connection	Base Rate	1st Block (cubic feet)	1st Usage Rate	2nd Block (cubic feet)	2nd Usage Rate	3rd Block (cubic feet)	3rd Usage Rate
3/4-inch or smaller	$ 19.68	0-600	$ 1.66	601-2,200	$ 2.49	Over 2,200	$ 3.32
1-inch	$ 33.46	0-1,168	$ 1.66	1,169-4,449	$ 2.49	Over 4,449	$ 3.32
1 1/2 -inch	$ 64.94	0-2,335	$ 1.66	2,336-8,897	$ 2.49	Over 8,897	$ 3.32
2-inch	$ 104.30	0-3,736	$ 1.66	3,737-14,235	$ 2.49	Over 14,235	$ 3.32
3-inch	$ 196.80	0-7,005	$ 1.66	7,006-26,690	$ 2.49	Over 26,690	$ 3.32
4-inch	$ 328.66	0-11,675	$ 1.66	11,676-44,484	$ 2.49	Over 44,484	$ 3.32
6-inch	$ 655.34	0-23,350	$ 1.66	23,351-88,967	$ 2.49	Over 88,967	$ 3.32
8-inch	$ 655.34	0-23,350	$ 1.66	23,351-88,967	$ 2.49	Over 88,967	$ 3.32

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(continued)

Cancelling Original Sheet No. 31.3
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Washington Water Service Company

For Commission's Receipt Stamp

SCHEDULE NO. 2.2 (T)
METERED RATE SERVICE – STROH

Available
Within the limits of Washington Water Service Company's Stroh Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applicable beginning July 17, 2023, to customers served by the Utility on a metered basis. Water services to a residential connection is defined as single family residences, multifamily residences consisting of four (4) each or fewer separate dwelling units, standalone mobile homes, or mobile homes in mobile home parks.

Conditions
The charge for this service is not subject to cancellation or reduction for seasonal or temporary periods, unless seasonal rates apply per this tariff. This charge will be the monthly minimum bill for this class of service. For multiple unit residential customers served through one meter, see **Rule 19**. Usage rates for the block below is shown per 100 cubic foot of water. Billing for the block shall be calculated on a per 100 cubic foot amount used and based on the usage rate charge for the block.

Monthly Rates (except for residential customers with 1 inch or smaller for the period from May 1 to September 30):

Meter Size	Meter Size Factor	Base Rate	Allowance	1st Block (cu.ft.)	1st Usage Rate
¾ - inch	1.00	$17.75	0-500	Over 500	$0.65
1-inch	1.67	$27.00	0-750	Over 750	$0.65
1 ½ - inch	3.33	$53.25	0-1,500	Over 1,500	$0.65
2 – inch	5.33	$93.19	0-2,625	Over 2,625	$0.65
3 – inch	10.00	$204.13	0-5,750	Over 5,750	$0.65
4 – inch	28.40	$355.00	0-10,000	Over 10,000	$0.65

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Washington Water Service Company

For Commission's Receipt Stamp

(RESERVED FOR FUTURE USE)

(D)

(D)

Original Sheet No. 32
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Washington Water Service Company For Commission's Receipt Stamp

SCHEDULE NO. 3
WATER SYSTEM FACILITIES CHARGE
EQUIVALENT RESIDENTIAL CUSTOMER

Available
Within the limits of all Water Service Areas except the East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applies to all new applicants for properties not currently served, only when surplus system capacity is available and a direct connection can be made to an existing main that has adequate hydraulic capacity, arrangements satisfactory to the Utility are made for construction of additional facilities for connection to an existing main or for wholesale applicants, when surplus source capacity is available.

Conditions
1. The Utility will own and maintain all materials and facilities involved in the construction for water service.
2. The Water System Facilities Charge will be in addition to any line extension, service connection, or any other charges that may be provided elsewhere in this tariff.
3. If further subdivision of the property is made at a later date, each newly created lot will be subject to an additional facilities charge upon application for water service. If service is greater than residential equivalent, then multiple equivalents may be charged.
4. Exemptions:
   a) Any end use customer covered by an existing written contract, which specifies that, no charge or a lower charge will be paid.
   b) Any end use customer connecting to a water system which was contributed to the Utility or for which the Utility paid a nominal amount. However, the developer of such system may be subject to the charge.

Charge

Water System Region SW of the Legacy Service Area – See **Service Area-Legacy Sheet Nos. 22-28**	$1500 + federal income tax gross-up

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Washington Water Service Company For Commission's Receipt Stamp

SCHEDULE NO. 3.1
GENERAL FACILITIES CHARGE

Available
Within the limits of Washington Water Service Company's East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applies to all new applicants for properties not currently served, only when surplus system capacity is available and a direct connection can be made to an existing main that has adequate hydraulic capacity, arrangements satisfactory to the Utility are made for construction of additional facilities for connection to an existing main or for wholesale applicants, when surplus source capacity is available.

Rate
$1,549 per ERU plus the applicable Federal Income Tax gross up as per the provisions of the Tax Cuts and Jobs Acts of 2017 and subsequent Congressional amendments.

Conditions

1. ERU is defined as equivalent residential unit. One ERU generally equates to a ¾" or smaller connection. This means that ERUs are related to meter size. The number of ERUs for any project is associated with the nature of the project and type of connection For example, for a development that is approved for ninety single family house and two irrigation connections, the project would be assessed at 92 ERUs. Other projects are generally assessed by the size of meter, although it can vary depending on fire protection requirements. The utility shall determine the number of ERUs for a project based upon the greater of water use demands, fire flow requirements and other project considerations or meter size; provided that if the project considerations support use of a 1" or 1 ½" meter, the utility may require the use of a 2" compound meter to capture low water flows that a 1" or 1 ½" meter may not measure accurately. In the case where the utility requires use of a 2" compound meter to capture low water flows in lieu of a 1" or 1 ½" meter, that 2" meter will not be used as the basis of calculating the number of ERUs for the project. Where meter size is used to determine ERUs, the meter size to ERU relationships, as developed by the American Water Works Association (AWWA) are set out on the Tale in Condition 6.

2. Any owner, owner's agent, developer, purchaser or purchaser's agent who is a "water service applicant" shall pay the charge set for on this schedule at the time a water availability letter is provided by the Utility; provided that in the case of a development requiring preliminary plat approval, the developer shall pay the charge set forth in this Schedule at the time a final water availability letter is provided by the utility. A "water service applicant" is a person or entity who has requested water service but has not yet become a "customer".

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SCHEDULE NO. 3.1
GENERAL FACILITIES CHARGE

Conditions (cont'd):

3. For the purposes of this tariff, a customer is defined as a person or entity whose property is directly connected to the water system.
4. The Utility will own and maintain all materials involved in the provision of water service.
5. If a main or extension is required to provide service, the terms of the main extension shall be set out in a contract between the water service applicant and the Utility.
6. Funds collected under this Schedule will be maintained in a separate bank account. Funds will be used for developing and purchasing equipment and facilities needed for source, storage and transmission. Reports concerning the collection and use of funds will be provided to the Commission in accordance with WAC 480-110-455.

Meter Size	AWWA Meter Size Factor*	Charge	
¾ inch or smaller	1.00	$ 1,549	Base Charge
1 inch	1.67	$ 2,857	
1 ½ inch	3.33	$ 5,158	
2 inch	5.33	$ 8,256	
3 inch	10.00	$ 15,490	
4 inch	16.67	$ 25,822	
6 inch	33.33	$ 51,628	

Anything larger than a 6 inch meter will be assessed by the AWWA standards.
*AWWA Factor based on ¾ inch basis.

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SCHEDULE NO. 4
READY TO SERVE SERVICE

Available
Within the limits of all Washington Water Service Company Water Service Areas and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
To any property owner who has completed and signed a Water Service Application, Certificate of Water Availability, and paid all applicable fees required for the Utility to commit service to a meter service connection. Applicable to domestic residential customers, where meters have not yet been installed.

Conditions
The charge for this service is not subject to cancelation or reduction for seasonal or temporary periods, unless seasonal rates apply per this tariff. This charge will be the monthly minimum bill for this class of service. At the time water service begins, the customer shall be converted to the metered rates on **Schedule 2 or Schedule 2.1**. Charge and commitment is limited to 1 ERU or connection per parcel.

Monthly Rates	Rate	
Each connection or customer within the Legacy Service Area	$24.72	**(I)**
Each connection or customer within the East Pierce Service Area	$19.68	**(I)**

Note: The Ready to Serve charge may be discontinued upon receiving written request from the customer or for non-payment of the Ready to Serve charge. Termination of the charge will allow the Utility to remove the service connection. This disconnection or removal will allow the Utility to make that available service capacity to supply other connections on the water system.

After a commitment has been revoked for discontinued service, future service to the property will require a new application for service, payment of service connection charges and will be subject to the availability of service company capacity at such time as the future application for service is made.

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Washington Water Service Company — For Commission's Receipt Stamp

SCHEDULE NO. 5
FIRE FLOW RATE

Available
Within the limits of all Water Service Areas except the East Pierce Service Area and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applicable to all commercial customers and residential multi-unit structures (where larger than a duplex) where there is approved hydrant fire flow available in addition to monthly metered rate and flat rate schedules and where fire flow requirements are in excess of that of a single-family residential fire flow.

Conditions
The charge for this service is not subject to cancellation or reduction for seasonal or temporary periods, unless seasonal rates apply per this tariff. This charge will be the monthly minimum bill for this class of service.

Monthly Rates	Rate
Per 1,000 square feet	$7.00

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SCHEDULE NO. 5.1
FIRE PROTECTION SERVICE

Available
For schools and commercial properties included in the East Pierce Service Area where fire flow requirements exceed residential service levels.

Applicable
To fire flow service.

Rate

Per Square Foot of Building	$00.006
Per Square Foot of Building - Schools	$00.003

Conditions
1. In addition to the availability provisions stated above, the rates from this Schedule shall apply to a fire suppression installation where the meter is larger than one inch (1").

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Washington Water Service Company

For Commission's Receipt Stamp

SCHEDULE NO. 6
RESIDENTIAL FIRE SPRINKLER SERVICE INSTALLATION

Availability
This schedule is available in all Water Service Areas served by the Utility and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
For the customer(s) that desire to install fire suppression systems in accordance with NFPA 13D where the customer's residence that is served by the Utility and where the Utility has confirmed the adequacy of the Utility's service capacity.

Charges
Installation of residential fire system -Time and Materials

Conditions

1. The Utility will deny a customer's request for a residential fire sprinkler service if it cannot provide the pressure, flow or level of service required by the customer's fire suppression system.

2. The customer shall construct, at its own discretion, its own fire suppression system on the customer's property. The customer is providing and constructing such system based upon the customer's own knowledge and for the customer's own purposes. The customer will retain ownership and shall be responsible for the maintenance and operation of the fire suppression system.

3. The Utility shall provide to the customer the facilities to provide water to the customer's fire suppression system, consisting of a leak detection device being no larger than a one-inch (1") meter and connection to the Utility's water main, which will flow through a leak detection device to be installed by the Utility. The connection, leak detection device and assorted appurtenances shall be provided to the customer on a time and material basis. Meters larger than one inch (1") will be considered upsized and will be charged in accordance with **Schedule 2 or Schedule 2.1**. A combined service may be used for connections 1" or smaller. A connection larger than 1" shall be used only for the provision of the fire suppression system and shall not be used for any other purpose, including, but not limited to, domestic water service. The customer must provide, at the customer's sole expense, a backflow prevention device, which complies with the Utility's Cross Connection Control program as defined in **Rule 23** of this tariff.

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Washington Water Service Company

For Commission's Receipt Stamp

SCHEDULE NO. 6
RESIDENTIAL FIRE SPRINKLER SERVICE INSTALLATION (cont'd)

Conditions (cont'd)

4. The customer agrees to pay all charges for the installation of facilities and the annual inspection fee within thirty (30) days of date of invoice for such charges. Failure of the customer to pay such charges in a timely manner will result in disconnection of the facilities provided under this agreement.

5. The customer covenants and agrees that it shall be responsible for maintaining the backflow prevention device in working order. The backflow prevention device shall be inspected and tested, at the customer's expense, by a certified BAT specialist as required under WAC 246-290-490. The Utility will maintain a list of certified BAT specialists that are acceptable to the Utility and the customer may choose from any such BAT specialist on the Utility's list. A copy of satisfactory certification will be provided to Utility prior to the date of providing service under this agreement and on an ongoing basis as testing certifications are required by state law and regulation (currently on an annual basis). The backflow prevention device shall be accessible to the Utility and its employees at all times.

6. The customer shall indemnify and hold the Utility and the Utility's directors, officers, employees and agents harmless from any claim for damage to property or personal injury or death resulting from or in connection with the work done under this agreement or the facilities provided under this agreement, including attorney's fees and court costs, except that which is the result of the gross negligence or intentional misconduct of Utility or a violation of RCW 19.122 by the Utility. This **Condition 6** is in addition to, and not in lieu of, the Limitations of Liability set out in **Rule 25** of this tariff.

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For Commission's Receipt Stamp

SCHEDULE NO. 6
RESIDENTIAL FIRE SPRINKLER SERVICE INSTALLATION (cont'd)

Conditions (cont'd)

7. The customer understands and agrees that the Utility is not acting as an insurer of the customer or customer's property or property of others on the property. The Utility shall not be liable for any loss of life, personal injury, loss, or damage to property of the customer, its family members, agents, guests or invitees whether or not caused by failure of the facilities and the customer shall hold the Utility and the Utility's directors, officers, employees and agents harmless from any such claim. The Utility makes no warranties or representations as to performance of the facilities. Nor shall the Utility be liable under any theory in law or equity to the customer or customer's family members, agents, guests or invitees for any consequential, incidental, punitive or other loss or damage beyond direct damages caused by the Utility's gross negligence or intentional misconduct or a violation of RCW 19.122 by the Utility, and then only in an amount not to exceed ten-thousand dollars ($10,000.00).

8. The customer hereby agrees to purchase insurance, in such amount as the customer deems adequate, to protect against loss by fire, which insurance customer agrees shall be the customer's sole source of recovery for failure of the facilities, except for the Utility's gross negligence or intentional misconduct or the Utility's violation of RCW 19.122. Said insurance policy shall include a waiver of subrogation as applied to the Utility, its directors, officers, employees and agents.

9. Only closed loop or single/double head loop fire suppression systems may be connected to the Utility's system.

10. Authorized use of water through a fire suppression system meter shall be billed to the customer at the normal water usage rates established by the Utility on **Schedule 2 or Schedule 2.1**. Authorized use of water through a fire suppression system meter is limited to fire suppression system testing, maintenance, or actual fire prevention or control.

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SCHEDULE NO. 6
RESIDENTIAL FIRE SPRINKLER SERVICE INSTALLATION (cont'd)

Conditions (cont'd)

11. Unauthorized use of water through a fire suppression system meter shall be billed to the customer at a rate of twelve (12) times the water usage rate established by the Utility on **Schedule 2 or Schedule 2.1**.

12. Except as noted in **Condition 13** below, should the unauthorized use of water through a fire suppression system meter not be permanently eliminated by the customer within thirty (30) business days of receipt of written notice of unauthorized use from the Utility, the fire suppression system water service shall be deemed a normal domestic service with all related fees and charges due and payable immediately. Alternatively, if payment of fees and charges is not received, the customer shall be provided notice of disconnection of the fire suppression system water service, after which the fire suppression system water service will be disconnected.

13. Should the unauthorized use of water through the fire suppression system occur concurrently with the disconnection of domestic water service to the property due to lack of payment for the domestic service, the customer will be provided notice of fire suppression system service disconnection by posting such notice of disconnection on the door of the residence. Copies of such notice shall be provided to the appropriate county official and the local fire district and retained by the Utility and shall include the date, time, and name of the Utility employee posting the notice.

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Washington Water Service Company — For Commission's Receipt Stamp

SCHEDULE NO. 7
FIRE HYDRANT INSTALLATION

Availability
This schedule is available to customers taking service under either **Schedules 1, 1.1, 2 or 2.1** of this tariff. This schedule is available in all Water Service Areas served by the Utility and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
To the installation of fire hydrants, where requested by customer(s).

Conditions
Fire hydrants will be constructed only after a customer has made a deposit equal to one-half (1/2) of the estimated cost of installation of the hydrant and then only where the Utility can provide fire flow, which meets minimum standards for state and county or, if applicable, city ordinance.

Installation of a fire hydrant by the Utility shall not constitute a warranty or guaranty by the Utility that a fire will be extinguished. The customer is advised at all times to maintain adequate fire insurance to cover the customer's expected loss from a fire, which may occur.

The Utility will deny a customer request for a hydrant if the system serving the customer cannot provide the level of service required for fire flow under state and county or, if applicable, city ordinance or if the request is for an area that is not capable of service from an existing main without a main extension.

Installation Charge	Rate
Each fire hydrant	$9,200 + federal income tax gross up as applicable

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SCHEDULE NO. 8
SERVICE CONNECTION CHARGE

Available
Within the limits of all Water Service Areas and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applies to all new applicants for properties not currently served and within the Commission Service Area (as defined in the tariff) for the Utility only when surplus system capacity is available and a direct connection can be made to an existing main that has adequate hydraulic capacity.

Conditions
1. A charge will be made the first time a customer's service pipe is connected to the Utility's main. The charge for a larger connection will be the cost of labor and materials. A meter will be furnished, installed and maintained by the Utility without direct cost to the customer.
2. The Utility owns and maintains all materials involved in making a service connection.
3. The service connection charge must be paid before installation.
4. In addition, when it is necessary to bore under or trench through an existing road beyond what is required of a tap and push, the cost of boring or trenching will be in addition to the Service Connection Charge.
5. Meter will be placed in a suitable meter box located at the customer's property line, except when this is not practicable. The meter will be installed upon the customer's premises in some convenient location approved by the Utility where the meter will at all times be accessible for reading, inspection and testing. (See **Rules 7, 8 & 9**).
6. Service Connections will be installed within 30 days from payment, unless prior arrangements in writing are agreed upon by both the customer and the Utility.

Size of Service Connection	Service Connection Charge
For lots requiring new service connection 5/8 x 3/4 inch service setting	$3,950 + federal income tax gross-up
For lots with a service line and angle stop only 3/4 inch service setting	$515 + federal income tax gross-up
1 inch meter service setting (new or existing service)	$6,100 + federal income tax gross-up
Larger than 3/4 inch service setting (new or existing service)	Labor, Materials, and Taxes

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For Commission's Receipt Stamp

SCHEDULE NO. 9
IRRIGATION SERVICE

Availability
This schedule is available in all Water Service Areas served by the Utility and at Utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
To water service through a connection used primarily for irrigation and not for service to provide domestic consumption. This service is applicable to lot(s) that is not buildable or is designated as open space on filed plats or as may be agreed by contract between the Utility and customer (or customer's predecessor-in-interest). Incidental use for drinking fountains or other domestic consumption shall not change the primary use for irrigation purposes.

Monthly Charge
Monthly rates are set out on **Schedule 2 and 2.1**.

Conditions

1. Consumption under this Schedule for each billing period beginning with the period covered by the June bill issued by the Utility and ending with the period covered by the October bill issued by the Utility (*'Restricted Period'*) is limited to one-hundred and seven (107) cubic feet per day measured as a monthly total.

   a. Cubic feet per day average is computed as billed usage divided by the number of days in that billing cycle.

2. Consumption that exceeds the limit of one-hundred and seven (107) cubic feet per day in one billing period may, at the discretion of the Utility, result in service being restricted or discontinued for the remainder of the *'Restricted Period'*. If the computed per day usage is less than the average one-hundred and seven (107) cubic feet per day in any one billing cycle, the difference cannot be banked and used in subsequent billing periods.

3. Each customer must install and maintain a rain sensor as part of their irrigation service so that irrigation will not occur when there is rain.

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SCHEDULE NO. 9
IRRIGATION SERVICE (cont'd)

Conditions (cont'd)

4. Each customer will follow a best practices approach to the use of irrigation service. This best practices approach includes the following:

   a. Revisiting existing landscaping to determine if modifications are needed to reduce use of water.

   b. Irrigating grass areas at a rate of no more than one-inch (1") per week.

   c. Sizing irrigation sprinklers and installing irrigation sprinklers to provide as near a uniform coverage of grass-landscaped areas as feasible.

   d. Not using watering practices that involve a *'sponge'* approach where water is applied in one area with the thought that it will eventually provide coverage of other areas through the water traveling over, through or under the ground.

   e. Not irrigating when the temperature is forecasted to exceed ninety degrees Fahrenheit (90°F).

5. If the Utility issues a no irrigation order for the water system to which the customer is connected, the customer must immediately cease irrigation until the no irrigation order is lifted.

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SCHEDULE NO. 10
CITY TAX ADJUSTMENT SCHEDULE

Applicable
These adjustments apply to all charges for sales of water service pursuant to this tariff within the jurisdiction imposing a tax, as provided in this tariff.

Tax Adjustment
The rates and charges named in this tariff shall be proportionately increased by an adjustment equivalent to the amount of the tax imposed by the jurisdiction and effective as listed below titled as "Rate Applied to Customer's Tariff Charges."

Application
These adjustments apply to all charges for sales of water service pursuant to this tariff within the jurisdiction imposing a tax, as provided in this tariff.

Jurisdiction	City Ord. No.	Effective Date	City Ordinance Rate	Rate applied to Customer's Tariff Charges
City of Lacey				
Classic Heights 63381B	869	04/01/92	.06	.06
White Fir Estates 63381B	869	04/01/92	.06	.06
City of Tumwater				
Israel Place 36274L	02008-001	02/01/08	.06	.06
Summerhill 848980	02008-001	02/01/08	.06	.06
Henderson Blvd 08359U	O2015-008	01/01/2016	.06	.06
The Cloister	O2015-008	01/01/2016	.06	.06
City of Snoqualmie				
Walter Walker Water Works 202767	5.06.120B	08/25/05	.06	.06
City of Gig Harbor	3.16.060	03/12/97	.05	.05
City of Bainbridge Island				
Bucklin 66936L	2016-19	01/01/17	.06	06
Phelps Road 63210W	2016-19	01/01/17	.06	06
Walden 438871	2016-19	01/01/17	.06	06

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SCHEDULE NO. 10.1
CLALLAM COUNTY FRANCHISE FEE

Applicable
These adjustments apply to all charges for sales of water service pursuant to this tariff within the jurisdiction imposing a franchise fee, as provided in this tariff.

Franchise Fee Adjustment
The rates and charges named in this tariff shall be proportionately increased by an adjustment equivalent to the amount of the franchise fee imposed by the jurisdiction and effective as listed below titled as "Rate Applied to Customer's Tariff Charges."

Community	City Ord. No.	Effective Date	County Ordinance Rate	Rate applied to Customer's Tariff Charges
Sunshine Acres Water System	723, 2002	6/21/02	$.50 per 1,000 c.f.	$.50 per 1,000 c.f.
Lee Water System	724, 2002	6/21/02	$.50 per 1,000 c.f.	$.50 per 1,000 c.f.

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SCHEDULE NO. 11
WHOLESALE WATER

CITY OF TACOMA

Available
To water service taken by the Company from the City of Tacoma through interties constructed between the Company and City of Tacoma.

Rates
The rate for such service will be at the rate charged by the City of Tacoma to the Company at the time the water is delivered from the City of Tacoma to the Company. A copy of the invoice from the City of Tacoma can be provided by the Company to UTC upon request.

LAKEWOOD WATER DISTRICT

Available
To water service taken by the Company from the Lakewood Water District through interties constructed between the Company and Lakewood Water District.

Rates
The rate for such service will be at the rate charged by the Lakewood Water District to the Company at the time the water is delivered from the Lakewood Water District to the Company. A copy of the invoice from Lakewood Water District can be provided by the Company to UTC upon request.

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SCHEDULE NO. 12
CAPITAL IMPROVEMENT SURCHARGE*

Available
Within the limits of the Cristalina service area and at utility's option and capability to maintain Department of Health standards of quantity and quality.

Applicable
Applicable to any connection or customer of the utility company.

Conditions
The charge for this service is not subject to cancellation or reduction for seasonal or temporary periods, unless seasonal rates apply per this tariff. This charge will be the monthly minimum bill for this class of service and will be in addition to other charges as provided in this tariff.

Monthly Rates
Each connection or customer will pay a surcharge of $32.00 that will be in addition to the monthly minimum bill plus other allowable charges as provided in this tariff.

Purpose
The surcharge being sought after will include the following Capital Improvements:

> Installation of a hydro pneumatic booster pumping facility to provide adequate volume and pressure to all residents.
> Replacement of substandard leaking and water lines.
> Increasing security of water supply.
> A dedicated and regularly maintained on-site generator with backup power in the event of power outages.

These improvements are both mandatory to be in compliance with the Department of Health and Safe Drinking water requirements as well as the voluntary improvement of the backup generator that has been requested by customers, but is not required for water quality. Surcharge to expire June 1, 2029 or upon recovery of $555,000 loan principle plus interest charges and state excise taxes, whichever occurs first. Surcharge may be paid (within 90 days of effective date) in a one-time payment sum of $6,607 per customer and save interest cost.

*This tariff is adopted pursuant to Order No. UW-141301 Order 01 Paragraphs 34 and 35.

Original Sheet No. 47
WN U-3

Washington Water Service Company For Commission's Receipt Stamp

SCHEDULE X
ANCILLARY CHARGES

Applicable
Applicable to any connection or customer of the utility company.

Rule 5	Disconnection Visit Charge	$15.00
Rule 6	Reconnection Charge	
	8:00 a.m. to 4:00 p.m. Monday through Friday	$25.00
	All other hours	$70.00
Rule 20	Account Set-up Charge	$15.00
	Account Set-up Charge with required meter reading	$22.50
Rule 21	NSF Check Charge	$15.00
Rule 22	Water Availability Analysis Charge	
	Lender Letter	$ 20.00
	≤ 2 ERUs	$100.00
	≥ 3 ERUs	$500.00
Rule 24	Back Flow Assembly Testing and Inspection Charge	Reserved for future use

BY AUTH. OR ORDER OF WASH. UTILITIES & TRANSPORTATION COMM. DOCKET NO. UW-210560

Issued Date: July 15, 2021 Effective Date: February 15, 2022

Issued by: Washington Water Service Company

By: Matthew Brown Title: General Manager

RULES AND REGULATIONS

GOVERNING WATER SERVICE

TO CUSTOMERS

AND WATER RATE SCHEDULES

- - - - - -

WEST HAWAII WATER COMPANY

A subsidiary of Hawaii Water Service Company, Inc.

Post Office Box 384809
Waikoloa, Hawaii 96738

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

WHWC Tariff No. 1
Eleventh Revised Sheet 1
Cancels Tenth Revised Sheet 1

CHECK LIST SHEET

SHEET	REVISION
Title	SECOND
1	ELEVENTH
2	EIGHTH
3	SECOND
4	SECOND
5	FOURTH
6	FOURTH
7	SECOND
8	SECOND
9	SECOND
10	THIRD
11	SIXTH
12	SECOND
13	THIRD
14	SECOND
15	THIRD
16	SECOND
17	SECOND
18	SECOND
19	THIRD
20	SECOND
21	SECOND
22	SECOND
23	SECOND
24	SECOND
25	SECOND
26	SECOND
27	SECOND
28	SECOND
29	SECOND
30	THIRD
31	FIFTH
31A	FIRST
31B	ORIGINAL
32	THIRD
33	THIRD
34	THIRD
35	THIRD

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

WHWC Tariff No. 1
Eighth Revised Sheet 2
Cancels Seventh Revised Sheet 2

CHECK LIST SHEET (cont'd)

SHEET	REVISION
36	THIRD
37	THIRD
38	SIXTH
39	FIFTH
40	SECOND
41	SECOND
42	THIRD

FOREWORD

These Rules and Regulations have been adopted to establish uniform practices governing water service and to define the obligations of the Company to customers and of customers to the Company.

It is the policy of the Company to render fully satisfactory service to all customers and to encourage courtesy to the public by all its employees. The Company desires to cooperate with customers to eliminate the waste of water and thus minimize charges to the customer. Customers are advised to obtain information from the Company on the availability of water, pressure conditions and other pertinent data to assure satisfactory service.

It is the Company's objective to deliver potable water to customers, and irrigation water to selected customers, at a minimum cost consistent with the Company receiving a reasonable rate of return.

The Company will comply with the U.S.E.P.A. Safe Drinking Water Act and all State Department of Health drinking-water program requirements.

RULE I
DEFINITIONS

For the purpose of these Rules and Regulations, unless it is plainly evident from the context that a different meaning is intended, certain words and phrases used herein are defined as follows:

1. The word "Company" shall mean the WAIKOLOA WATER CO., INC., a Hawaii corporation dba WEST HAWAII WATER COMPANY, a subsidiary of HAWAII WATER SERVICE COMPANY, INC., a Hawaii corporation.

2. The word "customer" shall mean the person or persons, firm, corporation, association, or governmental department, whether owner or tenant, whose name(s) appear on the records of the Company as the party receiving water service and responsible and liable for payment of charges to the Company.

3. The term "service connection" shall mean the main tap, pipe, fittings, and valves, from the water main to and including the meter and shut-off valve. Meter boxes are normally installed in the public right of way adjacent to the property line. See Exhibit A for typical service connection.

4. The term "cost of service connection" shall mean the sum of the cost of the labor, materials, transportation, equipment, and road repair, if any, and other incidental charges necessary for the complete installation of a service connection, including the cost of the meter.

5. The term "customer's supply pipe" shall mean the pipe extending from the shut-off valve to the customer's facility.

6. The word "main" or "main pipe" shall mean the Company s supply or distribution pipe to which service connections are made.

7. "Company water system" means the system owned and operated by the Company.

8. "Notice to stop" means oral or written notice to the Company by a customer that the customer wishes to discontinue service. Oral notice will be received only during business hours, Monday through Friday not including holidays. Written notice is effective the date correspondence is stamped received by the Company.

RULE II
GENERAL CONDITIONS

1. Any prospective customer whose premises are within service limits established by the Company and adjacent to a distribution main, where pressure conditions permit, may obtain water service provided that the Company has a sufficient water supply developed for domestic use and for fire protection to take on new or additional service without detriment to those already served.

2. A non-refundable contribution in aid of construction may be required as a condition to receiving service in accordance with Rule XX.

3. Where an extension of mains is necessary refer to Rule XXI.

4. All water supplied by the Company will be measured by means of suitable meters registering in gallons. When it is impractical to meter the service, a flat rate may be charged. The amounts to be paid for water and water service shall be in accordance with the rates on file with the Public Utilities Commission of the State of Hawai`i.

5. The Company shall provide services in the areas listed and identified below, which are shown on Exhibit B.

(a) Lots 4, 8, and 9 which make up the Waikoloa Village area and Lots 1, 2, 3, 5, 6, and 7 surrounding Waikoloa Village on File Plan 1172 on file with the State Bureau of Conveyance.

(b) All lots as shown in both Section A and Section B of File Plan 1139 on file with the State Bureau of Conveyances.

(c) Portions of Lot 1, File Plan 1435, and Lot 3B, File Plan 1653, being TMKs (3) 6-9-01:por. 27 and por. 5, respectively, from their eastern property lines and extending westward to the location of Easement W-1 as shown on File Plan 1653, recorded I the Bureau of Conveyances of the State of Hawai`i, being Tank 300 site, and extending the width of each parcel along a meandering line running at approximately the 300 foot elevation contour line.

RULE III

CONSERVATION MEASURES AND INTERRUPTION OF WATER SUPPLY

1. The Company will exercise reasonable diligence and care to deliver an adequate supply of water to the customer, to avoid shortages or interruptions in water service and to maintain adequate pressure in its water mains. The Company will not be liable for any interruption, shortage, insufficiency of supply, lack of or excessive water pressure, or for termination of water service without notice for conservation measures and for other reasons deemed necessary and proper, as provided herein.

2. The Company will not be liable for temporary colored or turbid water conditions caused by emergency repair of water mains.

3. Whenever, in the Company's opinion, special conservation measures are advisable in order to forestall water shortage and a consequent emergency, the Company may restrict the use of water by any reasonable method of control. In determining the priorities in restricting the use of water, the health and safety of the public shall be given first consideration over other uses.

4. The Company reserves the right at any and all times to shut off water from the mains without notice for the purpose of making repairs, extensions, alterations, or for other reasons relating to the operations of the water system. Customers depending upon a continuous supply of water shall provide emergency water storage and any check valves or other devices necessary for the protection of plumbing or fixtures against failure of the pressure or supply of water in the Company's mains. Repairs or improvements will be prosecuted as rapidly as practicable and, insofar as practicable, at such times as will cause the least inconvenience to the customer. Except in the case of emergency repairs, the Company shall use best efforts to give the Consumer at least 24 hours notice before shutting off service.

5. As a condition to providing service to a new development, the Company may require the developer to record against the property to be served a Declaration of Covenants, Conditions and Restriction ("CC&Rs") that contains conservation measures and water usage restrictions, including, without limitation, landscaping and irrigation requirements, limitations on water usage for landscaping purposes, the right of the Company to require installation of dual water meters to measure and restrict landscaping water usage, the imposition of additional contributions in aid of construction if water usage exceeds the amounts on which the original contributions in aid of construction were based, and other remedies for failing to comply with such CC&Rs.

RULE IV

ELEVATION AGREEMENT, PRESSURE CONDITIONS

1. Where property is situated at such an elevation that it cannot be assured of a dependable supply or of adequate service from the Company's distribution system, the consumer, in consideration of connection with the Company's system, must agree to accept such water service as the Company is able to render from its existing facilities, or to install if necessary and maintain at the customer's expense a tank and pump of suitable design and of sufficient capacity to furnish an adequate and dependable supply of water. The Company shall make every effort to maintain pressure in its water mains, but shall not accept responsibility for failing to maintain pressure or accept any liability for any loss due to lack of pressure. The customer shall execute a written release in favor of the Company for all claims on account of any inadequacy in the Company's system or inadequacy of water supply to the customer.

2. When the pressure of the Company's supply is higher than that for which individual fixtures are designed, the customer shall protect such fixtures by installing and maintaining pressure reducing and relief valves. The Company will not be liable for damage due to pressure conditions caused by or arising from the failure or defective condition of such pressure regulators and relief valves or for damage that may occur through the installation, maintenance, or use of such equipment.

3. When required by the Company the customer shall install an air gap or other protective devices between the customer's supply pipe and the service connection.

4. Wherever a check valve or pressure reducing valve is installed on the customer's cold water supply line between the main and a hot water storage tank and/or heater, there shall be installed on the customer's hot water distributing system a suitable pressure relief valve.

RULE V

APPLICATION FOR WATER SERVICE AND SERVICE CONNECTION

1. Each prospective customer shall be required to sign the standard application form (see Exhibit C) for the water service desired, assuming responsibility for the payment of future charges for water service at the designated location, before water is turned on for any use whatever. The customer signing the application form shall be held liable for the payment of all charges for water and water service at the designated location. Owners of residences where tenants or lessees request water service will be required to also sign the standard application form and will be responsible for payment of water bills in the event tenant/lessee defaults.

2. Service will be granted, without advance deposit required, to property owners or to those having leases with at least a one year term. Service may be provided to tenants of shorter duration if a deposit is made equal to three months estimated billing. The deposit shall be subject to the provisions set forth in Section 4 of this rule.

3. Charges will begin when the water service is established and will continue until notice to stop is received from the customer, or until discontinuation by the Company for failure of the customer to comply with the Rules and Regulations. See definition of "Notice to stop" in Rule I.

4. When an application for water service is made by a customer who was responsible for and failed to pay all bills previously rendered, regardless of location or time incurred, the Company may refuse to furnish water service to such applicant until the outstanding bills are paid. Further, in this case, the Company may charge a deposit equal to three months estimated billing. Such deposit shall be held for the benefit of customer with interest. Interest will accrue at the prevailing interest rate for Regular Savings Accounts at First Hawaiian Bank. Deposit with interest shall be refunded within 30 days after final bill is paid or two years of timely payment, whichever comes first.

5. A connection deposit of not less than $150.00 and at least equal to the Company's estimate of the cost of the service connection shall be required of the applicant before the connection is installed. If the actual cost of the connection is in excess of the deposit, the applicant will be billed and shall pay for the difference. If the actual cost is less than the deposit, the applicant will be refunded the difference.

6. When the application for service connection has been approved, such connection will be installed by the Company at the expense of the applicant and thereafter will be

maintained by the Company at its expense. There shall be one meter for each service connection unless the Company, because of operating necessity, installs two or more meters in parallel. All meters will be sealed by the Company before installation and no seal shall be altered or broken except by one of its authorized employees. All meters shall be installed in locations selected by the Company. The stopcock before the meter is installed for the use of the Company.

7. All service connections shall become the property of the Company for its operation and maintenance after installation, and new connections or disconnections may be made thereto by the Company at any time.

8. The customer shall install and connect at his expense his supply pipe to the shut-off valve installed by the Company. The customer's supply pipe shall at all times remain the sole property of the customer, who shall be responsible for its maintenance and repair.

9. Only employees of the Company will be allowed to connect or disconnect the service connection to or from the Company's main.

10. The Company will determine the location and size of all service connections to its systems. No service connection or water main will be installed by the Company in any private road, lane, street, alley, court or place, until such private streets are open to the public and brought to proper grade and unless the Company is given proper easements or other rights satisfactory to the Company for the main or service connection. Otherwise, an applicant desiring water service to property fronting on such private roads, lanes, etc., must extend his supply pipe to the nearest public street on which a main exists.

11. When the proper size of service connection for any premises has been determined and the installation has been made, the Company has fulfilled its obligations insofar as the size of the service and the location are concerned. If the customer subsequently desires a change in size of the service connection or a change in the location thereof, he shall bear all costs of such change.

12. A readily accessible shut-off valve controlling all outlets will be installed by the Company at the expense of the customer on his supply pipe at a location to be determined by the Company. If a replacement of the shut-off valve is necessary, it shall be paid for by the customer.

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

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13. All work and materials in connection with the change in location or elevation of any part of the existing water system made necessary by the new service connection shall be at the expense of the applicant.

14. When required by the Company, contours or elevations shall be furnished by the applicant, based upon [U.S.C.G.S.] National Geodetic Survey or County of Hawaii data.

15. No obstruction shall be placed on or around any water meter, fire hydrant, or valve so as to render it inaccessible.

RULE VI

METER READING AND RENDERING OF BILLS

1. Meters are read and bills are rendered monthly or semimonthly at the option of the Company. Special readings will be made, when necessary, for closing accounts or for other reasons.

2. Readings of separate meters are not combined. For the purpose of computing charges, all meters serving the customer's premises shall be considered separately, and the readings thereof shall not be combined except in cases where the Company, because of operating necessity, installs two or more meters in parallel to serve the same customer's supply pipe.

3. All bills shall be due and payable upon deposit in the United States mail, receipt by the customer, or other presentation to the customer. Payment shall be made in cash at the office of the Company, or by personal check, cashier's check, or money order, in person or by U.S. mail, at the office of the Company, or at the Company's option, to duly authorized collectors of the Company. Payment may also be made by credit or debit card or by automatic payment service. In the case of payment by credit or debit card, any applicable transaction and processing fees charged by the credit / debit card company will be paid by the customer. If the charges payable hereunder by the customer are not paid within 30 days after presentation or deposit in the United States mail, there may be added as a late payment charge an amount equal to one percent (1%) per month of the unpaid balance. In addition, if any bill is not paid within thirty (30) days after presentation or deposit in the United States mail, the water service shall be subject to discontinuance in accordance with Rule VII.3, and a reconnection charge of $25.00 will be required in addition to payment of the amount due and payable in order to re-establish water service. Also, the Company shall require the customer to put up a deposit subject to Rule V.4. Any bill for which a bank check written in payment has been dishonored will be due and payable immediately upon written notice to the customer by the Company of the check's dishonorment. Within 5 days of issuance of written notice, the full amount of the bill must be paid in cash, money order or cashier's check to the Company's office, along with a $10.00 service charge. Should the customer fail to make payment on the dishonored check, the Company may discontinue service under Rule VII.3, with the thirty-day period running from the date that the original bill was mailed or presented to the customer.

4. The customer shall submit any dispute regarding the charges appearing on the bill to the Company in writing no later than twenty (20) days following the due date for the bill. The Company shall furnish a written response regarding its investigation and determination as to the correctness of or any adjustments to the bill within fifteen (15) days of its receipt of the written dispute. The customer may pay the disputed bill under protest within the time required by this rule to avoid discontinuation of service, in which event the dispute may be submitted to the Hawaii Public Utilities Commission for final determination.

5. If a meter fails to register due to any cause except the non-use of water, an average bill may be rendered. Such average bill will be subject to equitable adjustment taking into account all factors before, during, and after the period of said bill.

6. Any customer who, for any reason, doubts the accuracy of the meter serving his premises may request a test of the meter. The customer, if he so requests, will be notified as to the time of the test and may witness the test

if he so desires. No charge will be made for meter tests if the meter is inaccurate. The customer will be charged the actual costs connected with such test if the meter is accurate within range of plus or minus two percent (2%) for small meters (5/8" and 3/4") and plus or minus five percent (5%) for large meters (1" and larger).

7. If, as a result of the test, the meter is found to register more than two percent fast for small meters or five percent (5%) fast for large meters under conditions of normal operation, the Company will refund to the customer the overcharge based on past consumption, for a period not exceeding six months unless it can be proved that the error was due to some cause, the date of which can be fixed. In this latter case, the overcharge shall be computed back to, but not beyond, such date.

8. If, as a result of the test, the meter is found to register more than two percent (2%) slow for small meters or five percent (5%) slow for large meters under conditions of normal operation, the Company will bill the customer the undercharge based on past consumption, for a period not exceeding six months, unless it can be proved that the error was due to some cause, the date of which can be fixed. In this latter case, the additional charge shall be computed back to, but not beyond, such date.

RULE VII

TERMINATION OF SERVICE AND DISCONNECTION

1. Each customer about to vacate any premises supplied with water by the Company shall give two days notice of his intention to vacate prior thereto, specifying the date service is desired to be discontinued; otherwise the customer shall be held responsible for all water service furnished to such premises until the Company has received such notice of discontinuance. Before any buildings are demolished the Company should be notified so the service connection can be closed. See definition of the term "Notice to stop" in Rule I.

2. Closing bills will ordinarily be determined by measuring the amount of water used since the last bill, as indicated by the meter reading, and adding a pro-rated service charge. In pro-rating service charges, a billing month will be considered as 30 days. If a meter cannot be read, an estimated billing will be rendered.

3. If any bill is not paid within thirty (30) days after the mailing or presentation thereof to the customer, the Company may discontinue service after it has made a reasonable attempt to collect payment and has given the customer written notice that the customer has at least fifteen (15) days within which to settle the customer's account or have service discontinued.

4. Water service may also be discontinued for non-payment of a sewer service bill to the extent that a premises receives water service from the Company and sewer service from Waikoloa Sanitary Sewer Company, Inc., dba West Hawaii Sewer Company, Inc. ("WHSC"), and to the extent that sewer and water service has been contracted for by the same person or persons, in accordance with paragraph 3 above.

5. If the customer fails to comply with any of these Rules and Regulations, or tampers with the service facilities of the Company, the Company will have the right to discontinue the service.

6. The Company may refuse to grant service or may discontinue existing water service to any premises to protect itself against fraud, abuse or unauthorized use of water.

7. Where negligent or wasteful use of water exists on any premises, the Company may discontinue the service if such conditions are not corrected within five days after giving the customer written notice of intent to do so.

8. The Company may refuse to furnish water, and may discontinue the service to any premises, where the demands of the customer will result in inadequate service to others.

9. Unless otherwise stated or unless termination without notice is necessary to protect against a condition determined by the Company to be hazardous or to prevent an abuse of service that adversely affects the Company water system or its service to other customers, a customer shall be given at least five (5) days written notice prior to termination of

service, and the customer's service shall not be discontinued on the day preceding or days on which the Company's business office is closed.

RULE VIII

DAMAGE AND ACCESSIBILITY TO COMPANY'S PROPERTY, METER DAMAGED BY HOT WATER

1. Any damage to Company facilities shall be reported as soon as possible. Any damage to water mains, service connections, valves, fire hydrants, or other property of the Company, including consequential damage caused by damage to water facilities, shall be paid for by the person or organization responsible for the damage.

2. The customer shall be liable for any damage to a meter or other equipment or property of the Company caused by the customer or his tenants, agents, employees, contractors, licensees or permittees, on the customer's premises, and the Company shall be promptly reimbursed by the customer for any such damage upon presentation of a bill therefore.

3. When a meter is found to have been damaged by hot water or steam emanating from the premises served, the customer shall pay for all costs required to repair and/or replace the meter.

RULE IX

INGRESS TO AND EGRESS FROM CUSTOMER'S PREMISES

Any officer or employee of the Company shall have the right of ingress to and egress from the customer's premises at all reasonable hours for purposes reasonably connected with the furnishing of water to said premises and the exercise of any and all rights secured to the Company by law or these Rules and Regulations. In case any such officer or employee is refused admittance to any premises, or being admitted shall be hindered or prevented from making such inspection, the Company may cause the water to be turned off from said premises after giving 24 hours notice to the owner or occupant of said premises of its intention to do so.

RULE X

RESPONSIBILITY FOR WATER RECEIVING EQUIPMENT

1. The customer shall at his own risk and expense furnish, install and keep in good and safe condition all equipment that may be required for receiving, controlling, applying and utilizing water. The Company will not be responsible for any loss or damage caused by the improper installation of such equipment, or the negligence, want of proper care, or wrongful act of the customer or of any of his tenants, agents, employees, contractors, licensees or permittees in installing, maintaining, using, operating or interfering with any such equipment.

2. Water service may be discontinued to any customer whose water system includes plumbing fixtures, or water containers in any form, or of any use, which in the opinion of the Company may endanger the Company's water supply from a public health standpoint. Any such discontinuation of service shall continue until objectionable installations have been corrected and the Company has been assured that the objectionable uses and practices will not be resumed.

3. The Company will not be responsible, and the customer will be responsible, for water damage or other damage to property caused by spigots, faucets, valves and other equipment that may be open when water is turned on at the meter, whether this occurs at the time of first installation or after a temporary shutdown.

4. All equipment belonging to the Company and installed upon the customer's premises for measurement, test, check or any other purpose, shall continue to be the property of the Company, and may be repaired, replaced or removed by the Company at any time without the consent of the customer. The customer shall exercise reasonable care to prevent damage to meters and other equipment of the Company upon said premises and shall in no way interfere with the operation of the same.

RULE XI

ABATEMENT OF NOISES

1. Where it has been determined that noises emanating from a customer's premises are caused by plumbing fixtures or other equipment attached to water pipes and such noises are being transmitted through the water pipes and causing annoyance to other customers, the Company may issue a notice in writing to the offending customer or to the owner of such premises, or to his agent, giving reasonable time within which to correct or to remove the cause of complaint. Failure on the part of such customer, owner, or person responsible to correct or remove the cause of the noise will be sufficient reason for discontinuance of water service to the customer until such time as the condition complained of has been remedied.

RULE XII

ELECTRICAL GROUNDING

1. Protective grounding of alternating current secondary distribution circuits made to the water system shall be subject to the following conditions:

(a) The grounding installation shall conform in all details with the National Electrical Code of the National Board of Fire Underwriters and with the County Building Code. The Company shall not be responsible for any damage or injury caused by any electrical grounding.

(b) The installation of the bonding jumper around the meter shall be the responsibility of the installer of the grounding connection. The bonding jumper shall be installed in such a manner as not to interfere with the installation of any of the Company's facilities.

(c) Whenever grounding fault occurs and causes electrical current to flow into the pipeline system, the customer shall have the correction made immediately and shall pay for any damages attributable to such grounding fault. Corrections not made will be subject to discontinuance of water service.

2. No grounding of direct current system to any portion of the water system shall be permitted.

3. No grounding other than as provided in paragraph 1, (a) and (b) hereof shall be made to any portion of the water system without the Company's written approval.

4. The Company does not maintain a continuous metallic water piping system and disavows any liability to public utility electric companies, electric customers, or any other agency or individual to maintain or operate such a system.

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

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RULE XIII

CUSTOMER'S PUMPING INSTALLATIONS

1. Customers shall not be permitted to install or operate pumps pumping water directly from the mains of the Company's system except in cases approved in writing. No such approval will be given in cases where it is the opinion of the Company that such an installation and the operation thereof may adversely affect the water service extended by the Company to other customers.

2. No pump shall be equipped with a direct water supply connection for priming purposes except with the written permission of the Company.

RULE XIV

CROSS-CONNECTIONS, BACKFLOW PROTECTION AND IRRIGATION SYSTEM ANTI-SIPHON VALVES

1. In order to provide proper sanitary protection to the Company's water supply and to comply with the applicable regulations of the United States Public Health Service and of the State Department of Health, as adopted or amended from time to time, the Company will require that following the effective date of these Rules and Regulations no cross-connections with other water supplies, or other physical connections, shall exist, or be installed, located, maintained or operated which could permit backflow of contaminated water or any other dangerous, impure, unsanitary, or unpotable substance from the consumer s premises into the Company's water supply system, except as provided below:

(a) Owners or operators of presently existing water supplies which are in active use and cross-connected to the Company's system will be required to secure permits for the continuance of such cross-connections. Permits will be granted on a provisional basis, renewable yearly, under the following conditions:

(i) Where such water supplies are regularly examined by the Company, or other agencies satisfactory to the Company, and are approved by the Company as acceptable, safe and sanitary supplies and continue as such at all times while the connections are in existence.

(ii) Where such water supplies do not meet the requirements of (i) above, are not normally under pressure and are maintained solely for fire fighting purposes, and where adequate protection against backflow to the Company's water system is provided by mechanical, or other, methods or devices satisfactory to the Company.

(iii) The company may waive the requirement of a permit and allow cross-connections to be continued or established if the connections are with water supplies defined as primary or community supplies by the State Department of Health and approved by the Company and the State Department of Health as acceptable, safe and sanitary supplies.

(b) Other physical connections may be permitted if, in the judgment of the Company, adequate protection can be provided the water supply of the Company against backflow by the installation of mechanical, or other methods or devices approved by the Company and installed, maintained and operated by the customer in a manner satisfactory to the Company at all times; provided, however, that the Company may require the customer to eliminate or rearrange designated plumbing or piping connections or fixtures, or to install a backflow device at the meter or other location subject to the approval of the company, as an added safety measure in addition to any and all other backflow protection required or provided by mechanical, or other, methods or devices, whenever (1) the customer is engaged in the handling of dangerous or corrosive liquids or industrial or process waters, highly contaminated water or sewage, or is engaged in the medical or dental treatment of persons who might have diseases transmittable by water, or whenever (2) in the judgment of the Company there exists a danger of backflow into the Company's mains because of the possibility of unauthorized connections being created through non-compliance or inadvertence on account of the complexity of the system or systems or because of failure by the customer to provide adequately qualified personnel and supervision for maintenance and extension of the consumer s piping system or systems, or for any other sufficient reason or cause.

2. The Company will require the installation of mechanical, or other, methods or devices on the customer's side of the meter to prevent backflow whenever the customer maintains a separate pressure system or a separate storage facility, or in any way increases the pressures of the water within his premises above the pressure furnished by the Company or has such equipment devices or arrangement of piping, storage or industrial methods or processes that might under certain conditions raise the pressure of the water within his premises above the pressure of the water in the mains of the Company. Plans for such installations must be approved by the Company.

3. As a protection to the customer's plumbing system a suitable pressure relief valve must be installed and maintained by him at his expense when backflow devices are installed on the consumer s side of the meter.

4. Any device installed for the prevention of backflow as may be required under these Rules and Regulations, shall, unless the Company approves otherwise in writing, be located

above ground and in such a manner as to be safe from flooding or submergence in water or other liquids, properly protected from external damage, freely accessible and with adequate working room for inspections, testing and repairing.

All such devices shall be tested by customer at least once every four months and inspected internally not less than once annually by customer. Repairs, replacement of parts, etc., shall be made whenever necessary at the expense of the customer. Making of tests and annual inspections shall be the responsibility of the customer and shall be made by the customer or other qualified person or persons in accordance with methods acceptable to the Company. The customer is required to maintain a log of tests and inspections made. Records of tests and inspections shall be made on forms prescribed by the Company and a copy of such records shall be furnished to the Company. Failure of the customer to make the proper tests and submission of records may, at the option of the Company, result in the Company's making the tests, needed repairs and replacements and charging the costs thereof to the customer.

5. In the case the customer connects an irrigation system to the Company's system, an anti-siphon valve or backflow prevention valve, which provides an air gap when there is no water flow into the irrigation system, shall be installed before the irrigation system begins. Inspection and approval of such devices shall be by the Company. Installation, maintenance and operation shall be by the customer.

6. Upon request of the Company, the customer shall present an affidavit either certifying to the fact that there are no connections or other installations of the type prohibited in paragraph 1 of this Section on his premises or describing in detail all non-conforming connections or installations.

7. The several conditions relative to the installation and maintenance of cross-connections and other physical connections referred to in this Section shall be subject to change to meet changing requirements of the State and Federal health authorities and of the county Building Code.

8. Failure on the part of the customer to comply with the Company's requirements relative to cross-connections and backflow protection will be sufficient reason for discontinuing water service until such time as the requirements have been met.

RULE XV

AUTOMATIC FIRE SPRINKLER SERVICE

1. Separate automatic fire sprinkler service may be furnished upon Company approval only and where adequate provision is made to prevent diversion of water through such service to other purposes. The fire service connection will be installed by the Company and shall be paid for by the customer in accordance with the provisions for the installation of new service connections. After the water is turned on, the Company assumes no liability for damage of any kind whatsoever that may occur to the premises served, regardless of cause.

2. No charge will be made for water used through such connection for fire protection purposes but any water lost through leakage or used in violation of the conditions contained herein shall be paid for by the customer at the regular schedule of water rates and charges. The Company may disconnect and remove the said service connection if water is used for other than fire protection purposes or if leaks are not corrected. Whenever such disconnection is in effect, the Company shall not be held in any way liable for loss or damage sustained due to such condition.

3. Service charges will be in accordance with the rates established by the Company from time to time.

4. All automatic fire sprinkler services may be metered with a detector check valve and a by-pass meter of a type approved by the Company. The meter and the meter box required therefor shall be furnished by the customer and approved as to size and type by the Company. All service connections shall become the property of the Company after installation.

RULE XVI

USE OF AND DAMAGE TO FIRE HYDRANTS, CHANGE IN HYDRANT LOCATION, RESPONSIBILITY FOR MAINTENANCE AND OPERATION OF PRIVATE HYDRANTS

1. Any use of a fire hydrant or tampering therewith or the taking of water there from for purposes other than fire protection by persons other than authorized employees of the Fire Department or the Company is prohibited, except upon prior application to and written permit by the Company. The Fire Department shall have the prior right to use any hydrant at any time and shall have the authority to remove peremptorily, if necessary in case of fire, any connection that may be made to a hydrant under a permit and the connections thereto shall be subject to the direction and approval of the Company. The customer shall not use hydrant main line valves to control flows.

2. Application for a permit for the use of a fire hydrant for purposes other than fire protection shall be made in writing to the Company and when required, shall be accompanied by a deposit in cash. It shall be non-transferable and shall be shown upon demand by the permittee, its agents or employees. The Company reserves the right to reject any application, to refuse to issue any permit and to revoke any permit at any time. The Company also reserves the right to perform for the permittee at his expense the work of installing and removing the connections and of operating the hydrant. No permit will be issued unless the permittee agrees to notify the Company as soon as the use of the hydrant is finished. In the event that a permit shall be revoked, the use of the hydrant thereunder shall cease immediately and all connections thereto shall be properly removed forthwith. The Company will inspect each hydrant which has been used under a permit, and all costs of repairs which the Company may adjudge to be due to such use and the cost of inspection shall be paid for by the permittee. All water drawn from a hydrant under permit shall be metered or estimated as to quantity in a manner satisfactory to the Company and shall be paid for by the permittee at the current water rates. The permittee shall pay all of the costs of connecting to and disconnecting from the hydrant.

3. Only regulation fire hydrant wrenches which shall have been approved by the Company shall be used for the operation of fire hydrants. The use of any other type of wrench or operating device shall not be permitted. The permit will be revoked if other than approved regulation fire hydrant wrenches are used.

4. The permittee shall report promptly any defect in or damage to the hydrant. The cost of any damage to property or of any injury to persons resulting from the use of the hydrant shall be paid for by the permittee. The company will not be held responsible for any damage to property or injury to persons arising from the use of any hydrant for any cause whatsoever. Any damage to fire hydrants shall be paid by the person or organization responsible for the damage.

5. The Company will, if it approves the request for a change in location of a hydrant, change such location provided the cost of all labor, material, equipment and all other charges are paid by the person requesting such change.

6. The Company will not be responsible for the operations and maintenance of private fire hydrants located within customers' lot(s). The customer shall at his expense test periodically and keep in good and safe working condition including proper maintenance all private hydrants under his control and not under the jurisdiction of the Company.

RULE XVII

REFRIGERATION AND AIR CONDITIONING EQUIPMENT

1. No new installation or replacement installation of refrigeration or air conditioning equipment requiring the use of water from the Company water system shall be made on any premises until such installation has been authorized in writing by the Company. Before new or replacement installation of such refrigeration or air conditioning equipment is made, the owner shall inform the Company in writing of the make, type, horsepower and tonnage of installation, the minimum and maximum water requirements, the name and address of the applicant, the location of the premises where the unit is to be installed, and such additional information regarding the proposed installation as may be required by the Company.

2. Any water using unit of refrigeration or air conditioning equipment of small size shall be equipped with an automatic water regulating device and/or water conserving device which will limit the total flow of water to 6 gallons per minute momentary actual load or 2 gallons per minute per ton of refrigeration, whichever is the less, and which will automatically stop the flow of water when the unit stops.

3. Any large size water using unit of refrigeration or air conditioning equipment shall be equipped with water conserving device which will (a) limit the flow of water to not more than 0.2 gallons per minute per ton of refrigeration, actual load and (b) automatically stop the flow of water when the unit is shut down.

4. For the purpose of these regulations a unit of less than 25 tons rated capacity shall be considered a small unit.

5. Where several units serve the same premises, their combined capacity shall be considered to be the capacity of the unit.

6. All installations of water using refrigeration and air conditioning equipment, regardless of capacity, which are to be served by the Company water system must conform with all other applicable Rules and Regulations.

7. Any change in the customer's refrigeration or air conditioning equipment which results in an increase in average water consumption may require a payment of a CIAC Fee per Rule XX.7.

RULE XVIII

RESALE OF WATER

Unless specifically agreed upon, the customer shall not resell any water received by him from the Company.

RULE XIX
SEVERABILITY

If any rule, section, sentence, clause, or phrase of these Rules and Regulations or its application to any person or circumstance or property is held to be unconstitutional or invalid, the remaining portions of these Rules and Regulations or the application of these Rules and Regulations to other persons or circumstances or property shall not be affected. The Company hereby declares that it would have adopted these Rules and Regulations, and each and every rule, section, sentence, clause, or phrase thereof, irrespective of the fact that any one or more other rules, sections, sentences, clauses, or phrases be declared unconstitutional or invalid.

RULE XX

CONTRIBUTION IN AID OF CONSTRUCTION FEE
(FACILITIES CHARGES)

1. As a condition of receiving service or substantially increasing water consumption to new or substantially modified facilities, developer and commercial applicants shall be required to pay a contribution in aid of construction to the Company, which shall be non-refundable except as provided in this Rule.

2. Contribution in aid of construction payments are used by the Company for the purpose of expanding the capacity of the water system, including:

(a) Construction of new wells or increasing the capacity of existing wells;

(b) Construction of new reservoirs;

(c) Construction of new primary transmission system or improvements to increase the capacity or efficiency of the existing primary transmission system;

(d) Construction of water treatment facilities;

(e) Related improvements intended to increase the capacity, efficiency or quality of the primary water system; and

(f) Increased capacity or improved service of electrical systems required for Items 2a-e above.

3. New facilities shall mean premises or facilities that have not been connected to the Company s water system, but shall not include any new connections to single family lots if the lots were in existence as of January 1, 1988.

4. Substantially modified facilities shall mean premises or facilities to which any material change is made in the size of the premises or facilities, or in the character or extent of any commercial activities conducted at the premises or facilities, that results in an estimated increase in annual average water usage by the customer in excess of 300 gallons per day.

5. The contribution in aid of construction required as a condition of service to a new facility shall be payable only once for such facility, provided that an additional contribution in aid of construction may be required from developers or commercial customers for facilities that are substantially modified.

6. The amount of the contribution in aid of construction shall be equal to an equivalent per gallon charge, calculated as follows:

(a) If the Company has no capacity available at the time a request for service or substantial modification is made, the contribution in aid of construction payment shall be based on the Company's good faith estimate, based on engineering and construction analyses, of the anticipated total cost to construct the next capacity addition, and is calculated as follow:

Estimated Daily Gallons for Proposed or Existing Development	X	Estimated Cost per Gallon of the Company's Next Capacity Addition	X	If CIAC is Based On Historical Costs: CPI in the year of payment / CPI for the base year (last capacity addition used in calculating CIAC)

(b) If the Company has capacity available at the time the request for service is made, the applicant shall pay a contribution in aid of construction payment as follows:

Estimated Daily Gallons for Proposed or Existing Development	X	Actual Cost per Gallon of the Company's Most Recent Capacity Addition	X	CPI in year of contribution payment / CPI for base year (last capacity addition used in calculating CIAC)

"CPI" shall mean the "Consumers Price Index for all urban Consumers, Honolulu, Hawaii, ALL ITEMS", as published by the Bureau of Labor Statistics, United States Department of Labor.

(c) Where the contribution in aid of construction is based on estimated construction costs, promptly following completion of construction, the Company shall deliver to the applicant a statement showing the actual costs of construction and a recalculation of the contribution in aid of construction based on actual construction costs. Any difference between the originally calculated and recalculated contribution in aid of construction shall be payable by the Company or the applicant, as applicable, within thirty (30) days of the date of the statement.

7. The contribution in aid of construction shall be calculated on the basis of the Company's estimate of (a) the customer's annual average water consumption, in the case of new facilities, or (b) the customer's increased water consumption, above historical trends in the case of substantially modified facilities.

8. The following guidelines are currently being used by the Company to estimate water consumption:

(a) Single-family detached residences: 600 gpd.

(b) Apartment/condominiums: 400 gpd.

(c) Commercial uses: 220 gpd per 1,000 square feet plus estimated irrigation usage.

(d) Other uses by estimates of consumption approved by the Company.

(e) Estimates of consumption are to be made by the Company and, if by the customer, will require adequate justification for Company approval.

These guidelines are approximate and each development will be evaluated based on design and other factors that influence water usage.

9. Notwithstanding anything contained herein to the contrary, an additional contribution in aid of construction may be required from customers whose water consumption results in an increase in annual average water usage in excess of the greater of 300 gallons per day or 20% over the annual average water consumption that was initially utilized in calculating the contribution in aid of construction initially paid by a developer in the case of new or modified facilities pursuant to paragraph 6.

10. The contribution in aid of construction ("CIAC") for new facilities shall be estimated at the time that an applicant makes a request of the Company for a "will serve" letter. A subsequently issued "will serve" letter will only state the Company's ability and willingness to supply the applicant with the requested service, conditioned upon the applicant's execution of an Extension Agreement within a specified period of time, payment of the CIAC, and construction of or contribution to the cost of any special facilities required to serve the applicant that are not paid for with CIAC. The total CIAC fee to be paid will be dependent on the rate provided for in the Company's Rules and Regulations in effect at the time that final payment is tendered. CIAC shall be payable in full upon execution of an Extension Agreement. If the full CIAC is not paid upon execution of the Extension Agreement, the Extension Agreement and the "will serve" letter shall be null and void. Any Extension Agreement issued by the Company shall not be binding until payment is received.

11. The contribution in aid of construction for substantially modified facilities shall be payable (a) within thirty (30) days after the customer receives a building permit, or (b) as of the date upon which the customer increases water usage as a result of the modification if the customer fails to provide the company with prior written notice of the modification.

12. Any will-serve agreement entered into after June 30, 2015 shall automatically terminate if the applicant does not execute an Extension Agreement and satisfy all other conditions contained in the will-serve agreement within the time set forth in the will-serve agreement. In addition, any Extension Agreement entered into after June 30, 2015 shall automatically terminate if the applicant has not completed construction of the project for which service was requested within one year after the date of the Extension Agreement, or such longer or shorter time as may be set forth in the Extension Agreement. The Company may agree to extend this date if facilities constructed or to be constructed with the CIAC are not required by another user. In the event of such termination of either the will-serve agreement or the Extension Agreement: (a) the Company's commitment to reserve capacity for the applicant shall be null and void; and (b) if the applicant subsequently requests service for the same property, applicant will be required to sign a new will-serve agreement and a new Extension Agreement under which the contribution-in-aid of construction will be recalculated based on the cost of facilities required to serve applicant and applicant will receive a credit in the amount of the unreimbursed balance of the contribution in aid of construction previously paid. In the event of such termination, the Company shall have no obligation to reimburse the applicant for any contribution in aid of construction paid by the applicant. However, the Company will reimburse the applicant for all or a part of the contribution in aid of construction paid by the applicant if (i) such funds have not yet been used and are not required to complete construction of the facilities for which they were collected, or (ii) to the extent that the Company has received contributions in aid of construction from another applicant who will utilize the capacity originally reserved for the applicant.

13. In lieu of requiring an applicant to pay a contribution in aid of construction pursuant to this Rule, the Company may, in its discretion, allow an applicant to contribute or construct facilities that are required to serve the applicant's project pursuant to Rule XXI, System Extensions. Such facilities may include those described in Section 2 of this Rule. Further, in addition to requiring an applicant to pay a contribution in aid of construction pursuant to this Rule, the Company may require an applicant to construct or contribute to the cost of constructing special facilities that are required to serve the Applicant pursuant to Rule XXI to the extent that the cost of such facilities is not included in the contribution in aid of construction.

14. Section 12 of this Rule shall not apply to any applicant who has entered into a will-serve agreement before June 30, 2015. Section 6 of this Rule shall not apply to any applicant who has entered a will serve agreement before June 30, 2015, except to the extent that the terms of such agreement are consistent with the terms of Section 6; provided that, if full payment of the CIAC due under such will-serve agreement has not been paid and the will-serve agreement provides that final payment will be dependent on the rate in effect at the time of such payment, the total CIAC payable will be calculated in accordance with Section 6 above**.** In addition, Section 6 shall not apply to any residential units that are subject to the Memorandum of Understanding dated March 2, 1988 by between Transcontinental Development Company and the County of Hawaii.

RULE XXI
SYSTEM EXTENSIONS

1. Extensions of mains from the Company water system to serve new customers, and connections to main extensions with respect to which customer contributions were made, shall be made under the provisions of this rule. In addition, the Company may, in its discretion, allow an applicant to contribute or construct additional property or facilities that are required to serve the applicant's project pursuant to this Rule XXI in lieu of, or in addition to, requiring the applicant to pay a contribution in aid of construction pursuant to this Rule XXI. As used in this Rule XXI, an "extension" shall include any such additional property or facilities. An extension contract shall be executed by the Company and the applicant before the Company commences construction work on an extension or, if an extension has been constructed by applicant, before the property or facilities comprising the extension are transferred to the Company.

2. Customer contributions may be either refundable or non-refundable depending on their use. The non-refundable construction cost, for the purposes of this rule, shall be the cost of installing facilities of adequate capacity for the service requested. If the Company, at its option, determines that it is appropriate to install facilities with a larger capacity or resulting in a greater footage of extension than required for the service requested, or if the applicant elects to construct such larger facilities, the oversizing cost, for the purposes of this rule, shall be the difference between the total construction cost of the facilities installed and the non-refundable construction cost. Such oversizing cost shall be subject to refund in accordance with Sections 6(g) and 6(h) of this rule.

3. Ownership, design and construction of property and facilities shall be in accordance with the following provisions:

(a) Any facilities installed or property dedicated hereunder shall be the sole property of the Company.

(b) The size, type, and quality of materials, and their location, shall be specified by the Company, and the actual construction shall be done by the Company or by a contractor acceptable to it.

(c) When an extension must comply with an ordinance, regulation, or specification of a public authority, the estimated and actual construction costs of the extension shall be based upon the facilities required to comply therewith.

(d) The Company may, but will not be required to, make extensions under this rule in easements or rights of way where final grades have not been established, or where street grades have not been brought to those established by public authority. If extensions are made when grades have not been established and there is a reasonable probability that the existing grade will be changed, the Company may require that the applicant or applicants for the extension deposit, at the time of execution of the extension contract, the estimated net cost of relocating, raising or lowering facilities upon establishment of final grades. Adjustment of any difference between the amount so deposited and the actual cost of relocating, raising or lowering facilities shall be made within ten days after the Company has ascertained such actual cost. The net deposit representing actual cost is not subject to refund. When such displacements are determined by proper authority not to be required, the entire deposit related to the proposed relocation, raising or lowering shall be refunded.

4. Estimates, plans and specifications shall be required of the applicant as follows:

(a) As part of the application for an extension, the applicant s engineer shall prepare a preliminary sketch and rough estimates of the cost of installation to be contributed by said applicant.

(b) The Company shall review plans submitted to it within a reasonable time after receipt of such plans, specifications and cost estimates of the proposed extension. If the extension is to include oversizing of facilities for which there will be an oversizing cost, appropriate details shall be set forth in the plans, specifications and cost estimates.

(c) The applicant shall furnish a map to a suitable scale showing the street and lot layouts and, when requested by the Company, contours or other indication of the relative elevation of the various parts of the area to be developed. If changes are made subsequent to the presentation of this map by the applicant, and these changes require additional expense in revising plans, specifications and cost estimate, the applicant s engineer shall make those changes at no expense to the Company.

5. Timing and adjustment of customer contributions shall be in accordance with the following provisions:

(a) Unless the applicant for the extension elects to arrange for the installation of the extension himself, as permitted by Section 6(e), the full amount of the required customer contribution will be required by the Company at the time of execution of the extension contract. An acceptable surety bond may, at the sole discretion of the Company, also be acceptable.

(b) If the applicant for an extension posts a surety bond in lieu of cash, such surety bond must be replaced with cash not less than ten (10) calendar days before construction is to commence. However, the applicant may be required to deposit sufficient cash to cover the cost of materials before they are ordered by the Company.

(c) An applicant for an extension who makes a contribution shall be provided with a statement of actual construction cost and oversizing cost showing in reasonable detail the costs incurred for material, labor, any other direct and indirect costs, overheads, and total costs, unit costs or contract costs, whichever are appropriate.

(d) The statement shall be submitted within a reasonable time after the actual construction costs of the installation have been ascertained by the Company.

(e) Any difference between the actual construction costs and the total amount of the customer contribution shall be shown as a revision of the amount of the customer contribution and shall be payable by the applicant, or by the Company, as applicable, within thirty (30) days of date of submission of statement.

6. Customer contributions and refunds shall be treated in the following manner:

(a) Unless the procedure outlined in Section 6(e) is followed, an applicant for an extension to serve a new development, subdivision, tract, housing project, industrial development or organized commercial district, etc., shall be required to pay to the Company, before construction is commenced, a non-refundable contribution equal to the estimated

non-refundable construction cost of the extension to be actually installed, from the nearest Company facility at least equal in size or capacity to the extension required to serve both the new customer and a reasonable estimate of the potential customers who might be served directly from the extension without additional extension. The cost of the extension shall include necessary connections, pipes, fittings, valves, valve boxes, meters, meter enclosures, booster stations, pressure regulating stations, and other water system distribution appurtenances and Hawaii and Federal income taxes applicable to the contribution calculated by the full gross up method.

(b) If special facilities consisting of items not covered by Section 6(a) are required for the service requested, the cost of the special facilities shall be included in the customer contribution.

(c) In addition to the non-refundable contribution required by Sections 6(a) and 6(b), an applicant for an extension shall be required to advance to the Company the oversizing cost estimated by the Company for the extension deemed to be appropriate by the Company. (This additional contribution shall be refundable in accordance with Sections 6(g) and 6(h) of this rule.)

(d) A pioneer, for the purposes of this rule, shall be a developer/customer who makes a contribution to pay the oversizing cost of an extension.

(e) In lieu of providing the customer contribution in accordance with Sections 6(a), 6(b) and 6(c), the applicant for an extension shall be permitted, if deemed to be qualified in the sole judgment of the Company, to construct and install the facilities, or to arrange for their installation. If extension facilities are arranged for by applicant and constructed by others, the extension shall be installed pursuant to competitive bidding procedures unless waived by the Company. The cost, including the cost of inspection and supervision by the Company, shall be paid directly by applicant. The applicant shall provide the Company with a statement of actual construction cost in reasonable detail. The installation shall be in accordance with the plans and specifications submitted by the Company pursuant to Section 4(b). All facilities shall be dedicated to the Company through appropriate deeds, rights of way, easements, bills of sale or other

instruments as required upon completion, in accordance with Section 3(a) of this rule. At the time of dedication, the customer/developer will pay to the Company Hawaii and Federal income taxes calculated by the full gross up method based on the value of the system being dedicated as determined in this section above.

(f) If a subsequent applicant connects to an extension which was paid for by one or more pioneers, that subsequent applicant shall be required to pay a non-refundable extension refund charge equal to its proportionate share of the oversizing cost of such extension based on anticipated consumption. Such extension refund charge shall only be assessed to the extent that it is to be paid by the Company to the pioneer or pioneers pursuant to Sections 6(g) and 6(h), or to the extent that the Company has previously reimbursed the pioneer for such oversizing costs.

(g) A refund of all or part of the refundable customer contribution made by a pioneer shall be made if subsequent applicants are provided service from the extension and pay an extension refund charge based on their proportionate share of the oversizing cost of the extension. The refunds, if any, shall be made from subsequent extension refund charges covering a proportionate share of the oversizing cost for the extension.

(h) Refunds to pioneers, if any, will be made annually in the first quarter of each applicable year to pioneers on record as of December 31 of the previous year, for a period of ten years following the year that the extension was placed into service. Refunds shall be made without interest. The total refunds which a pioneer may receive shall not exceed the amount of the customer contribution paid by the pioneer.

(i) All customer contributions and extension refund charges shall include the Hawaii and federal income tax applicable to the contribution calculated at the marginal income tax rate applicable to corporations using a full gross-up method.

7. Any contract entered into under this rule may be assigned, after settlement of actual construction costs, after written notice to the Company by the holder of said contract as shown by the Company's records. Such assignment shall apply only to those refunds which become due more than thirty (30) days after the date of receipt by the Company of

the notice of assignment. The Company shall not be required to make any one refund payment under such contract to more than a single assignee.

8. Extension contracts may be terminated as follows: Any contract entered into under Section 6 of this rule may be purchased by the Company and terminated, provided the payment is not in excess of the remaining contract balance.

9. If an applicant constructs or contributes to the cost of construction of facilities pursuant to this Rule, and if the applicant does not use such facilities within the time required under the Extension Agreement, the Company may elect to terminate the Extension Agreement and to use any such facilities to serve other customers. In that event, (a) the Company's commitment to reserve capacity for the applicant shall be null and void; and (b) if the applicant subsequently requests service for the same property, the applicant will be required to sign a new will-serve agreement and a new Extension Agreement, and will receive a credit in the amount of the unreimbursed balance of amounts previously paid by the applicant for facilities to serve such property under this Rule. In the event of such termination, the Company shall have no obligation to reimburse the applicant for any amounts paid by the applicant for such facilities, except for refundable contributions which shall be refunded in accordance with Section 6 of this Rule. However, the Company may, it its discretion, reimburse the applicant for all or a part of the amounts paid by the applicant pursuant to this rule if (i) such funds have not yet been used and are not required to complete construction of the facilities for which they were collected, or (ii) the Company has received funds from another applicant who will utilize the capacity originally reserved for the applicant.

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

WHWC Tariff No. 1
Sixth Revised Sheet 38
Cancels Fifth Revised Sheet 38

WATER RATE SCHEDULES

GENERAL USE RATES
Monthly Standby Charge

Meter Charge by Meter Size (inches)	Phase 1 (Effective 1/1/19)	Phase 2 (Effective 1/1/20)
5/8" (Residential & Non-Residential)	$ 12.07	$ 12.39
3/4" (Residential & Non-Residential)	$ 12.07	$ 12.39
1"	$ 23.14	$ 23.74
1 1/2"	$ 40.59	$ 41.64
2"	$ 55.35	$ 56.78
3"	$ 110.70	$ 113.56
4"	$ 184.48	$ 189.25
6"	$ 368.94	$ 378.48
8"	$ 664.10	$ 681.28

Monthly Water Consumption Charge

Quantity Charge	Phase 1 (Effective 1/1/19)	Phase 2 (Effective 1/1/20)
per 1,000 gallons of water consumption	$ 1.3177	$ 1.3517

Water Availability Charge

$2.00 per month will be charged to the owner of each lot at which a service connection is possible but has not been applied for.

Private Fire Service Charges

For each connection for automatic fire sprinklers or other private fire protection, there shall be a charge per month based on the size of the connection as follows:

Private Water Service by Meter Size (inches)	Phase 1 (Effective 1/1/19)	Phase 2 (Effective 1/1/20)
3"	$ 110.70	$ 113.56
4"	$ 184.48	$ 189.25
6"	$ 368.94	$ 378.48
8"	$ 664.10	$ 681.28

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

WHWC Tariff No. 1
Fifth Revised Sheet 39
Cancels Fourth Revised Sheet 39

POWER COST CHARGE

All water use shall be subject to the imposition of a Power Cost Charge in addition to the Monthly Standby Charge and the Monthly Water Consumption Charge. The Power Cost Charge is assessed per 1,000 gallons. The amount of the Power Cost Charge shall be computed by multiplying the actual cost per kilowatt hour for the billing period by the pump efficiency factor of 5.63 kilowatt hours per thousand gallons, and then adding the associated Public Service Company tax of 5.885% and the Public Utility Commission fee of 0.50%.

Formula to be used:

Power Cost Charge Per Thousand Gallons =
Actual electrical cost per kwh
Times 5.63 kwh per thousand gallons
Times 1.06385

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

WHWC Tariff No. 1
Second Revised Sheet 40
Cancels First Revised Sheet 40

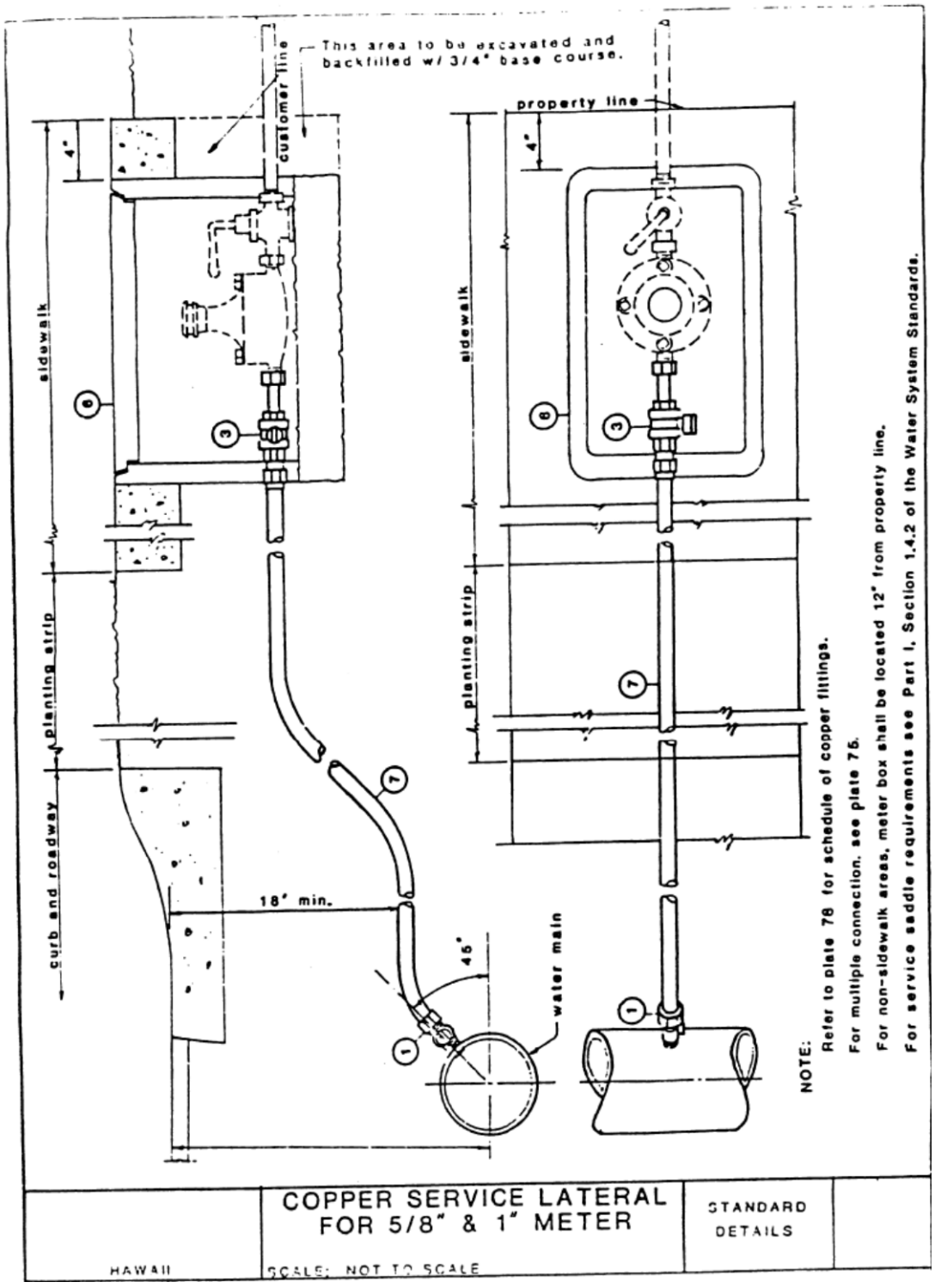
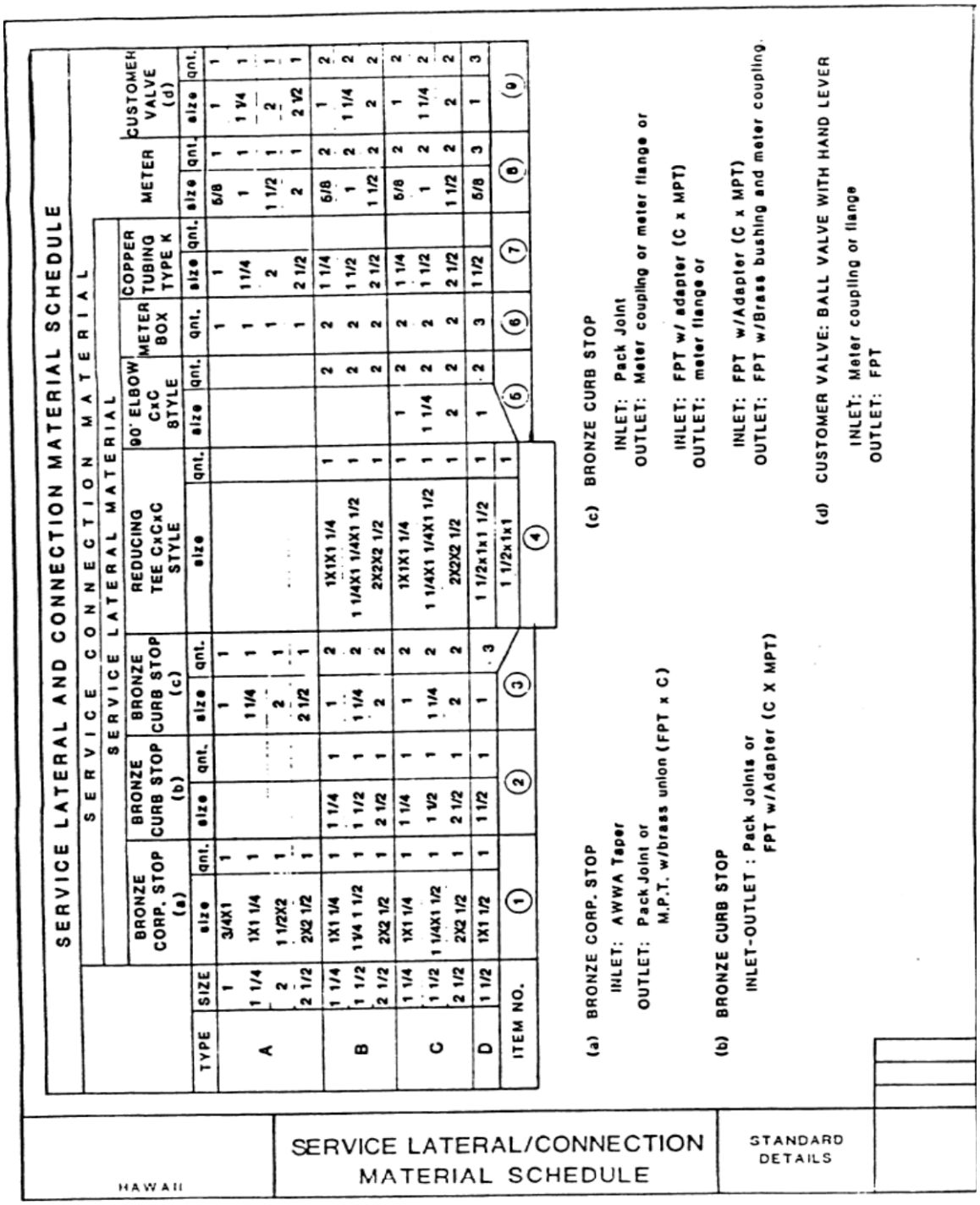


EXHIBIT A (Part 1 of 2)



SERVICE LATERAL AND CONNECTION MATERIAL SCHEDULE

		SERVICE CONNECTION MATERIAL																											
		SERVICE LATERAL MATERIAL																											
		BRONZE CORP. STOP (a)		BRONZE CURB STOP (b)		BRONZE CURB STOP (c)		REDUCING TEE CxCxC STYLE		90° ELBOW CxC STYLE		METER BOX		COPPER TUBING TYPE K		METER		CUSTOMER VALVE (d)											
TYPE	SIZE	size	qnt.	size	qnt.	size	qnt.	size	qnt.	size	qnt.	qnt.		size	qnt.	size	qnt.	size	qnt.										
A	1	3/4X1	1			1	1																						
	1 1/4	1X1 1/4	1			1 1/4	1					1		1 1/4		1	1	1	1										
	2	1 1/2X2	1			2	1					1		2		1 1/2	1	1 1/4	1										
	2 1/2	2X2 1/2	1			2 1/2	1					1		2 1/2		2	1	2 1/2	1										
B	1 1/4	1X1 1/4	1	1 1/4	1	1	2	1X1X1 1/4	1		2	2		1 1/4		5/8	2	1	2										
	1 1/2	1 1/4 X 1 1/2	1	1 1/2	1	1 1/4	2	1 1/4X1 1/4X1 1/2	1		2	2		1 1/2		1	2	1 1/4	2										
	2 1/2	2X2 1/2	1	2 1/2	1	2	2	2X2X2 1/2	1		2	2		2 1/2		1 1/2	2	2	2										
C	1 1/4	1X1 1/4	1	1 1/4	1	1	2	1X1X1 1/4	1	1	2	2		1 1/4		5/8	2	1	2										
	1 1/2	1 1/4X1 1/2	1	1 1/2	1	1 1/4	2	1 1/4X1 1/4X1 1/2	1	1 1/4	2	2		1 1/2		1	2	1 1/4	2										
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D	1 1/2	1X1 1/2	1	1 1/2	1	1	3	1 1/2x1x1 1/2	1	1	2	3		1 1/2		5/8	3	1	3										
ITEM NO.		①		②		③		④		⑤		⑥		⑦		⑧		⑨											

(a) BRONZE CORP. STOP
INLET: AWWA Taper
OUTLET: Pack Joint or M.P.T. w/brass union (FPT x C)

(b) BRONZE CURB STOP
INLET-OUTLET : Pack Joints or FPT w/Adapter (C X MPT)

(c) BRONZE CURB STOP
INLET: Pack Joint
OUTLET: Meter coupling or meter flange or
INLET: FPT w/ adapter (C x MPT)
OUTLET: meter flange or
INLET: FPT w/Adapter (C x MPT)
OUTLET: FPT w/Brass bushing and meter coupling

(d) CUSTOMER VALVE: BALL VALVE WITH HAND LEVER
INLET: Meter coupling or flange
OUTLET: FPT

HAWAII | SERVICE LATERAL/CONNECTION MATERIAL SCHEDULE | STANDARD DETAILS

EXHIBIT A (Part 2 of 2)

WEST HAWAII WATER COMPANY
A subsidiary of Hawaii Water Service Company, Inc.
Waikoloa, Hawaii

WHWC Tariff No. 1
Third Revised Sheet 42
Cancels Second Revised Sheet 42

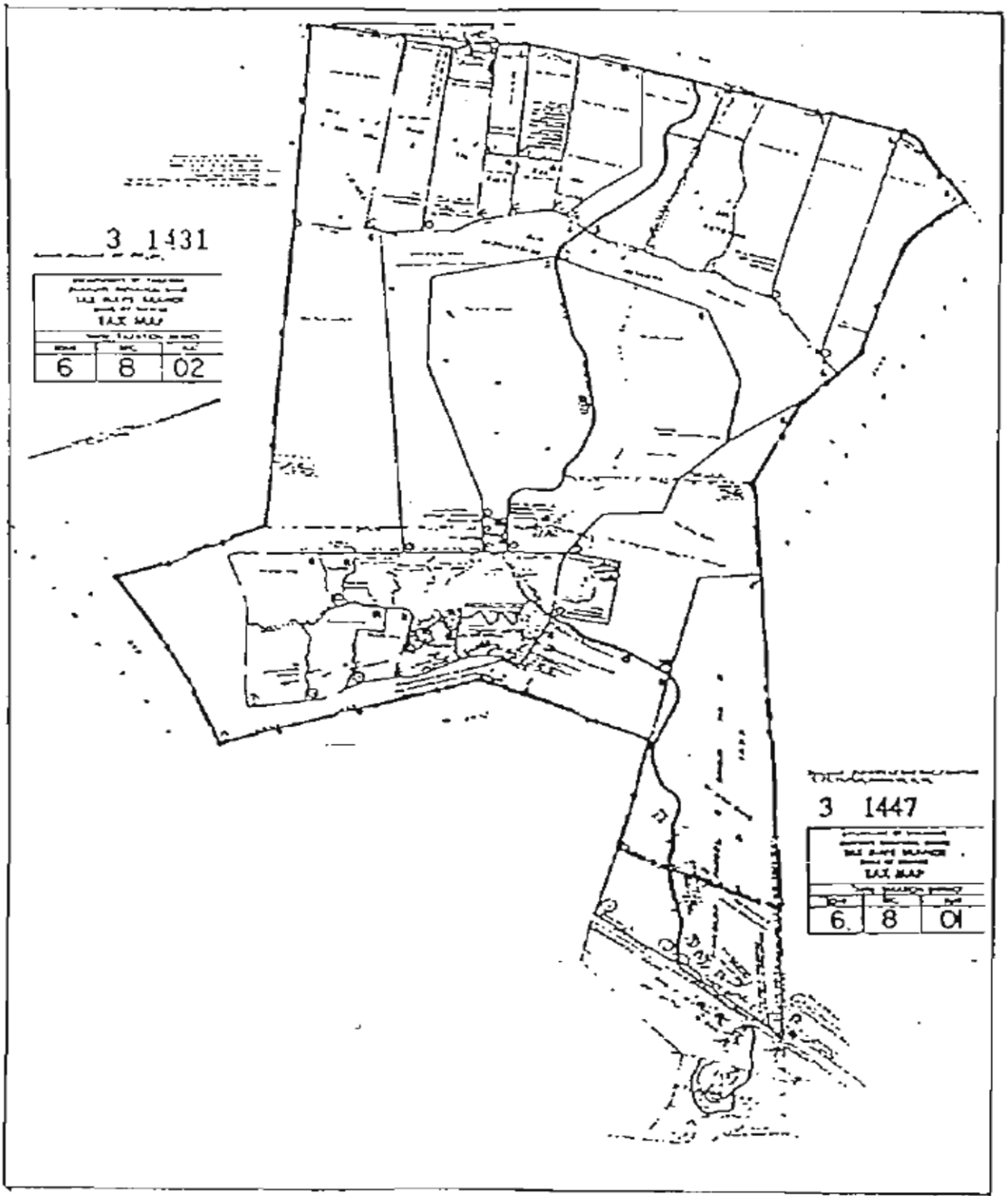

EXHIBIT B

NEW MEXICO WATER SERVICE COMPANY
SEWER

ADVICE NOTICE

Page 1 of 1

Advice No. 20

Date: September 3, 2024

NEW MEXICO PUBLIC REGULATION COMMISSION

New Mexico Water Service Company hereby gives notice to the public and the Commission of the filing and publishing of the following changes in tariff schedules which are attached hereto:

Rate No.	Title of Sheet	Canceling Rate No.	Date Effective
Thirteenth Revised Rate No. 1	Residential Sewer Service	Twelfth Revised Rate No. 1	October 14, 2024
Thirteenth Revised Rate No. 2	Commercial Sewer Service	Twelfth Revised Rate No. 2	October 14, 2024
Thirteenth Revised Rate No. 4	Institutional Sewer Service	Twelfth Revised Rate No. 4	October 14, 2024

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER

SEWER SERVICE RATE SCHEDULES

TABLE OF CONTENTS

Rate No.	Title	
Thirteenth Revised Rate No. 1	**Residential Sewer Service**	**X**
Thirteenth Revised Rate No. 2	**Commercial Sewer Service**	**X**
First Revised Rate No. 3	Other Charges	
Thirteenth Revised Rate No. 4	**Institutional Sewer Service**	**X**
Original Rate No. 5	Sewer Utility Capacity Charge	

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER
THIRTEENTH REVISED RATE NO. 1
CANCELING TWELFTH REVISED RATE NO. 1

RESIDENTIAL SEWER SERVICE

APPLICABILITY:
This rate is applicable for sewer service for all single family residences.

TERRITORY:
All single family residences provided with sewer service.

MONTHLY RATES:

Customer Charge: $33.32 X

Plus Commodity Charge:
$7.24 for each 1,000 gallons of average monthly winter water use, prorated per 100 gallons. X

Average winter water use determined from billings for the residence made in each January, February, and March period. Monthly charge adjusted on billings made each April and would be constant through March of the following year.

Rates when average monthly winter water use is not known:
If a customer 1) occupies a newly constructed residence or has not established a winter quarter average, or 2) does not receive water service from New Mexico Water Service Co., the monthly Rate will be the average of all the billings for residential customers for which average monthly winter water use information is available.

Minus Return Flow Use Credit:
$.174 for each 1,000 gallons of average monthly winter water use, prorated per 100 gallons.

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER
THIRTEENTH REVISED RATE NO. 1
CANCELING TWELFTH REVISED RATE NO. 1

RESIDENTIAL SEWER SERVICE

MONTHLY MINIMUM:
Customer Charge plus applicable taxes.

TERMS OF PAYMENT:
All bills under this rate are due and payable when rendered and become delinquent twenty (20) calendar days thereafter.

TERMS AND CONDITIONS:
New Mexico Water Service Co.'s filed rules apply to service under this schedule.

TAX ADJUSTMENT CLAUSE:
Billings under this schedule may be increased by an amount equal to the taxes payable under the Gross Receipts and Compensation Tax Act and all other taxes, fees or charges (exclusive of ad valorem taxes and state and federal income taxes) payable by New Mexico Water Service Co. and levied or assessed by any governmental authority on the utility service rendered, or on the right or privilege of rendering the service, or on any object or event incidental to the rendition of this service.

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER
THIRTEENTH REVISED RATE NO. 2
CANCELING TWELFTH REVISED RATE NO. 2

COMMERCIAL SEWER SERVICE

APPLICABILITY:
This rate is applicable for sewer service for all customers except for residential (Rate No. 1) and institutional (Rate No. 4) customers.

TERRITORY:
All customers provided with sewer service, except residential and schools.

MONTHLY RATES:

Customer Charge based on size of water meter as follows:

Water Meter Size (inches)	Customer Charge	
5/8	$ 33.32	X
3/4	$ 41.66	X
1	$ 53.37	X
1 1/2	$ 86.72	X
2	$ 120.09	X
3	$ 233.53	X
4	$ 417.05	X
6	$ 850.80	X
8	$ 967.58	X

Where meter size is indicated by two sizes, the larger size will be used to determine the Customer Charge. For example, the Customer Charge for a customer with a ¾-inch X 1-inch meter will be based on a 1-inch meter.

Plus Commodity Charge:
$7.24 for each 1,000 gallons of average monthly winter water use, prorated per 100 gallons. X

Average winter water use determined from customer billings made in each January, February, and March period. Monthly charge adjusted on billings made each April and would be constant through March of the following year.

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER
THIRTEENTH REVISED RATE NO. 2
CANCELING TWELFTH REVISED RATE NO. 2

COMMERCIAL SEWER SERVICE

Rates when average monthly winter water use is not known:
The initial monthly rate will be established by estimating average monthly winter water use. This will be determined by the utility company using information readily available to it, and information provided by the customer. Once actual average monthly winter use is known, the utility company will prepare an adjusted customer billing or credit, as applicable, for the difference between the initial rate and the actual rate for all months in which the initial monthly rate was applied.

Charges in addition to those indicated above for customers having sewage with characteristics differing from normal domestic sewage, such as wastewater with an elevated biochemical oxygen demand or industrial wastewater containing heavy metals or other unusual constituents, or wastewater having unusually high intermittent flows:

110 percent of all costs incurred by company for collection, treatment, sampling, analysis, monitoring, administration, professional services, facilities, and equipment which would not have been incurred if customer's sewage had been normal domestic sewage.

Minus Return Flow Use Credit:
$.174 for each 1,000 gallons of average monthly winter water use, prorated per 100 gallons.

MONTHLY MINIMUM:
Customer Charge plus applicable taxes.

TERMS OF PAYMENT:
All bills under this rate are due and payable when rendered and become delinquent twenty (20) calendar days thereafter.

TERMS AND CONDITIONS:
New Mexico Water Service Co.'s filed rules apply to service under this schedule.

TAX ADJUSTMENT CLAUSE:
Billings under this schedule may be increased by an amount equal to the taxes payable under the Gross Receipts and Compensation Tax Act and all other taxes, fees or charges (exclusive of ad valorem taxes and state and federal income taxes) payable by New Mexico Water Service Co. and levied or assessed by any governmental authority on the utility service rendered, or on the right or privilege of rendering the service, or on any object or event incidental to the rendition of this service.

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER
THIRTEENTH REVISED RATE NO. 4
CANCELING TWELFTH REVISED RATE NO. 4

INSTITUTIONAL SEWER SERVICE

APPLICABILITY:
This rate is applicable for sewer service for all schools.

TERRITORY:
All institutional customers provided with sewer service.

MONTHLY RATES:

Customer Charge based on size of water meter as follows:

Water Meter Size (inches)	Customer Charge	
5/8	$ 33.32	X
3/4	$ 41.66	X
1	$ 53.37	X
1 1/2	$ 86.72	X
2	$ 120.09	X
3	$ 233.53	X
4	$ 417.05	X
6	$ 850.80	X
8	$ 967.58	X

Where meter size is indicated by two sizes, the larger size will be used to determine the Customer Charge. For example, the Customer Charge for a customer with a ¾-inch X 1-inch meter will be based on a 1-inch meter.

Plus Commodity Charge:
$7.24 for each 1,000 gallons of average monthly winter water use, prorated per 100 gallons. X

Average winter water use determined from customer billings made in each January, February, and March period. Monthly charge adjusted on billings made each April and would be constant through March of the following year.

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

NEW MEXICO WATER SERVICE COMPANY
SEWER
THIRTEENTH REVISED RATE NO. 4
CANCELING TWELFTH REVISED RATE NO. 4

INSTITUTIONAL SEWER SERVICE

Rates when average monthly winter water use is not known:
The initial monthly rate will be established by estimating average monthly winter water use. This will be determined by the utility company using information readily available to it, and information provided by the customer. Once actual average monthly winter use is known, the utility company will prepare an adjusted customer billing or credit, as applicable, for the difference between the initial rate and the actual rate for all months in which the initial monthly rate was applied.

Charges in addition to those indicated above for customers having sewage with characteristics differing from normal domestic sewage, such as wastewater with an elevated biochemical oxygen demand or industrial wastewater containing heavy metals or other unusual constituents, or wastewater having unusually high intermittent flows:

110 percent of all costs incurred by company for collection, treatment, sampling, analysis, monitoring, administration, professional services, facilities, and equipment which would not have been incurred if customer's sewage had been normal domestic sewage.

Minus Return Flow Use Credit:
$.174 for each 1,000 gallons of average monthly winter water use, prorated per 100 gallons.

MONTHLY MINIMUM:
Customer Charge plus applicable taxes.

TERMS OF PAYMENT:
All bills under this rate are due and payable when rendered and become delinquent twenty (20) calendar days thereafter.

TERMS AND CONDITIONS:
New Mexico Water Service Co.'s filed rules apply to service under this schedule.

TAX ADJUSTMENT CLAUSE:
Billings under this schedule may be increased by an amount equal to the taxes payable under the Gross Receipts and Compensation Tax Act and all other taxes, fees or charges (exclusive of ad valorem taxes and state and federal income taxes) payable by New Mexico Water Service Co. and levied or assessed by any governmental authority on the utility service rendered, or on the right or privilege of rendering the service, or on any object or event incidental to the rendition of this service.

EFFECTIVE
October 14, 2024
Replaced by NMPRC
By: Rule No. 17.13.970.9

ADVICE NOTICE NO. 20
NEW MEXICO WATER SERVICE CO.
Cynthia Apodaca, General Manager

PINELANDS WATER COMPANY

Tenth Revised Title Page
Canceling
Ninth Revised Title Page

B.P.U. No. 2 - WATER

PINELANDS WATER COMPANY

TARIFF

FOR

WATER SERVICE

APPLICABLE IN

SOUTHAMPTON TOWNSHIP

BURLINGTON COUNTY, NEW JERSEY

Date of Issue: September 7, 2022

Effective for service
Rendered on and after:
April 1, 2024

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

Filed pursuant to an Order of the Board of Public Utilities, State of New Jersey, dated March 22, 2023, in Docket No. WR22090555

PINELANDS WATER COMPANY

Fourth Revised Sheet A
Canceling
Third Revised Sheet A

B.P.U. No. 2 – WATER

AN INTRODUCTION TO CUSTOMERS

The tariff located here in the Company's offices is available and open for your review. The Company is responsible to maintain its tariff on an absolutely current basis and must, by State law and regulations, maintain it in exactly the same format as its Company's tariff which is on file at the Board of Public Utilities, ., 44 South Clinton Avenue, 9th Floor, Trenton, NJ.

If, after your review of this tariff and discussion with appropriate utility employees, you still have questions regarding clarification or interpretations, please contact the Board of Public Utilities, Division of Water and Sewer, Bureau of Rates and Tariff Design at 1-609-633-9800 or the Board's Division of Customer Assistance at 1-609-341-9188 or 1-800-624-0241 or on their website at www.nj.gov/bpu/.

As a customer, you have the right to review this tariff at the Company's offices or at the Board's office in Trenton. Your inquiries will be handled by the Board's Staff in an expeditious manner in order to protect your rights as well as those of the water company. Please feel free to exercise this right by telephoning or by visiting the Board's offices at any time between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, or by writing a letter. The letter should contain the writer's name, address and phone number. If the writer is a customer of record, the account number should be included.

The Company has available, here in its office, and will provide for your review, a handout entitled " Customer Rights, Responsibilities and Frequently Asked Questions.." This is a summary of the most frequent customer complaints and rights; it does not include all customer rights or utility obligations.

The Board of Public Utilities is responsible for the final interpretation and enforcement of a utility's tariff provisions and rates. The utility is bound by New Jersey's statutes and the Board's regulations. If a conflict should exist, the Board's regulations supersede the tariff provision absent approval to the contrary by the Board.

Date of Issue: March 29, 2019

Effective for service
Rendered on and after:
November 4, 2019

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

Filed pursuant to an Order of the Board of Public Utilities, State of New Jersey, dated October 25, 2019, in Docket No. WR19030417

PINELANDS WATER COMPANY

Second Revised Sheet B
Canceling
First Revised Sheet B

B.P.U. No. 2 – WATER

AN OVERVIEW OF COMMON CUSTOMER COMPLAINTS AND CUSTOMER RIGHTS

(1) No public utility shall refuse to furnish or supply service to a qualified applicant.

DEPOSITS

(2) If after notice of the methods of establishing credit and being afforded an opportunity, a customer has not established credit, the utility may require a reasonable deposit as a condition of supplying service.

(3)
The utility shall furnish a receipt to each customer that makes a deposit. If the deposit is provided by mail, internet or telephone, the utility may comply with this requirement by displaying the amount of the deposit on the customer's next bill. (N.J.A.C. 14:3-3.4(i)).

Each utility shall review a residential customer's account at least once every year and a nonresidential customer's account at least every two years. If this review indicates that the customer has met the utility's standard requirements for establishing credit, the utility shall refund the customer's deposit. (N.J.A.C. 14:3-3.5 (a)).

Interest payments on the customer deposits held to secure residential accounts shall be made to the customer at least once during each 12-month period in which a deposit is held. (N.J.A.C. 14:3-3.5(g)).

When a utility refunds a deposit or pays a customer interest on a deposit, the utility shall offer the customer the option of a credit to the customer's account or a separate check. In either case, the utility shall provide the full refund or payment within one billing period after the review required under N.J.A.C. 14:3-3.5(a) is completed, or after the interest payment is due, as applicable, unless other reasonable arrangements are made between the customer and the utility. (N.J.A.C. 14:3-3.5(h)).

(4) Where a water or sewer utility furnishes unmetered service, for which payment is received in advance, it may not request a deposit. (N.J.A.C. 14:3-3.4(j)).

DEFERRED PAYMENT ARRANGEMENTS

(5) A customer is entitled to at least one deferred payment plan in one year. In the case of a residential customer who received more than one utility service from the same utility (ex: water and sewer; gas and electric) and the amount which is in arrears is a combination of those services, the utility shall offer a separate deferred payment agreement for each service based on the outstanding balance for that service. (N.J.A.C. 14:3-7.7(b).2) If the customer defaults on the terms of the agreement, the utility may discontinue service after providing the customer with a notice of discontinuance. In the case of a residential customer who receives more than one utility service from the same utility and has subsequently entered into an agreement for each separate service, default on one such agreement shall constitute grounds for discontinuance of only that service. (N.J.A.C. 14:3-7. 7(f))

Date of Issue: March 29, 2019

Effective for service
Rendered on and after:
November 4, 2019

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

Filed pursuant to an Order of the Board of Public Utilities, State of New Jersey, dated October 25, 2019, in Docket No. WR19030417

PINELANDS WATER COMPANY
B.P.U. No. 2 – WATER

Second Revised Sheet C
Canceling
First Revised Sheet C

DISCONTINUANCE OF SERVICE

(6)
A utility shall not discontinue service because of nonpayment in cases where a charge is in dispute, provided the undisputed charges are paid and the customer has requested that the Board of Public Utilities investigate the disputed charge. (N.J.A.C. 14:3-3A.2(e)5)

In accordance with N.J.A.C. 14:3-7.6(b) the utility shall notify the customer that they may make a request to the Board of Public Utilities for an investigation of the disputed charge.

(7)
A notice of discontinuance sent to the customer shall be postmarked no earlier than (15) days after the postmark date of the outstanding bill. The notice of discontinuance for nonpayment shall provide the customer with at least 10 days written notice of the utility's intention to discontinue service. (N.J.A.C. 14:3-3A.3)

The utility shall make good faith efforts to determine which of their residential customers are over 65 years of age, and shall make good faith efforts to notify such customers of discontinuance of service by telephone in addition to notice by regular mail. This effort may consist of an appropriate inquiry set forth on the notice informing customers that they may designate a third party to receive notice of discontinuance. (N.J.A.C. 14:3-3A.4(c))

(8) Public utilities shall not discontinue residential service except between the hours of 8:00 AM and 4:00 PM Monday through Thursday, unless there is a safety related emergency. There shall be no involuntary termination of service on Fridays, Saturdays, and Sundays or on the day before a holiday or on a holiday absent such emergency. (N.J.A.C. 14:3-3A.1(c))

(9) The occupant of a multiple family dwelling has the right to be notified of a pending service discontinuance at least fifteen (15) days prior to the service being discontinued. (N.J.A.C. 14:3-3A.6)

(10) A customer has the right to have any complaint against the utility handled promptly by that utility. (Board Order, Docket No. CO8602155)

(11) Each utility shall, upon request, furnish its customers with such information as is reasonable in order that the customers may obtain safe, adequate and proper service. (N.J.A.C. 14:3-3.3(a)) Each utility shall inform its customers, where peculiar or unusual circumstances prevail, as to the conditions under which sufficient and satisfactory service may be secured from its system. (N.J.A.C. 14:3-3.3(c)) Each utility shall supply its customers with information on the furnishing and performance of service in a manner that tends to conserve energy resources and preserve the quality of the environment. (N.J.A.C. 14:3-3.3(d))

Date of Issue: March 29, 2019

Effective for service
Rendered on and after:
November 4, 2019

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

Filed pursuant to an Order of the Board of Public Utilities, State of New Jersey, dated October 25, 2019, in Docket No. WR19030417

PINELANDS WATER COMPANY

Second Revised Sheet D
Canceling
First Revised Sheet D

B.P.U. No. 2 – WATER

METERS

(12) The utility must provide for one free water meter test within a year if the customer so requests it. The customer can request that the Company or the Board test the meter. A meter of a customer who has a complaint filed with the Board reflecting on the accuracy of the meter shall not be removed from service by the utility during the pendency of said complaint or during the following thirty (30) days unless otherwise authorized or directed by the Board. When a billing dispute is known to exist, the utility shall, prior to removing the meter, advise the customer that the meter may be tested by the utility or may have the Board of Public Utilities conduct the test of the meter or witness a testing of the meter by the utility, or the customer may have the test witnessed by a third party. (N.J.A.C. 14:3-4.5) Upon application to the Board, for a meter test, a $5.00 fee, in accordance with N.J.S.A. 48:2-56, shall be paid by the customer at the time application is made. (N.J.A.C. 14:3-4.5) A meter test arising from a billing dispute may be appropriate in instances which include, but are not limited to, unexplained increased consumption, crossed meters, consumption while an account is vacant or any other instance where the meter's accuracy might be an issue in the bill dispute. (N.J.A.C. 14:3-4.5)

(13) Whenever a water meter is found to be registering fast by more than one and one-half percent, an adjustment of charges shall be made in accordance with the following: (1) If the date when the meter had first become inaccurate can be definitely ascertained then the adjustment shall be such percentage as the meter is found to be in error at the time of test adjusted on the amount of the bills covering the entire period that the meter has registered inaccurately. In all other cases, the adjustment shall be such percentage as the meter is found to be in error at the time of the test on one-half of the total amount of the billing affected by the fast meter since the previous test. No adjustment shall be made for a period greater than the time during which the customer has received service through that meter. No adjustment shall be made for a meter that is found to be registering less than 100 percent except in the case of meter tampering, non-registering meters or in circumstances in which the customer should reasonably have known that his bill did not reflect his usage. (N.J.A.C. 14:3-4.6)

(14) A utility must maintain records of customers' accounts for each billing period occurring within a six year period. Such records shall contain all information necessary to permit computation of the bill. (N.J.A.C. 14:3-6.1(b))

Date of Issue: March 29, 2019

Effective for service
Rendered on and after:
November 4, 2019

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

Filed pursuant to an Order of the Board of Public Utilities, State of New Jersey, dated October 25, 2019, in Docket No. WR19030417

PINELANDS WATER COMPANY

Second Revised Sheet E
Canceling
First Revised Sheet E

B.P.U. No. 2 – WATER

FORM OF BILL FOR METERED SERVICE

(15) Bills rendered must contain the following: (a) the meter readings at the beginning and end of the billing period; (b) the dates on which the meter is read; (c) the number and kind of units measured; (d) identification of applicable rate schedule or a statement that the applicable rate schedule will be furnished on request; (e) the amount of the bill; (f) a distinctive marking to indicate an estimated or average bill; (g) an explanation or statement of any conversion from meter reading to billing units or any other calculations or factors used in determining the bill; and (h) the gross receipts and franchise tax statement. (N.J.A.C. 14:3-7.2)

Date of Issue: March 29, 2019

Effective for service
Rendered on and after:
November 4, 2019

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

Filed pursuant to an Order of the Board of Public Utilities, State of New Jersey, dated October 25, 2019, in Docket No. WR19030417

PINELANDS WATER COMPANY

Second Revised Sheet F
Canceling
First Revsied Sheet F

B.P.U. No. 2 – WATER

THE UTILITY CUSTOMER'S

BILL OF RIGHTS

ESTABLISHED BY THE BOARD OF PUBLIC UTILITIES (BPU)

The following utility Customer's Bill of Rights is a synopsis of the most frequently cited sections of the New Jersey Administrative Code Title 14, Chapter 3. The Utility Customer's Bill of Rights is not meant to replace the regulations contained in N.J.A.C. 14:3 but is intended to give the utility customer a concise plain language guide to the regulations. Any application of the Utility Customer's Bill of Rights must be consistent with the regulations as contained in N.J.A.C. 14:3.

1. You have the right to utility service if you are a qualified applicant.

2. You shall not be asked to pay unreasonably high deposits as a condition of service, nor to make unreasonable payments on past-due bills.

3. You have the right to budget billing, or payment plans if you are a water customer.

4. You are entitled to at least one deferred payment plan in one year.

5. You have the right to have any complaint against your utility handled promptly by that utility.

6. You have the right to call upon the New Jersey State Board of Public Utilities (BPU) to investigate your utility complaints and inquiries. Your service may not be terminated for nonpayment during a BPU investigation.

7. If you suspect it is not working properly, you have the right to have your meter tested, free of charge once a year by your utility. For a $5 fee the meter test will be conducted under the supervision of the staff of the BPU.

8. You have the right to a written notice of termination, ten days prior to discontinuance of service.

Date of Issue: March 29, 2019

Effective for service
Rendered on and after:
November 4, 2019

Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

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PINELANDS WATER COMPANY

First Revised Sheet No. 1
Canceling
Original Sheet No. 1

B.P.U. No. 2 - WATER

THE UTILITY CUSTOMER'S

BILL OF RIGHTS
(Continued)

9. Residential service may be shut-off, after proper notice, Monday through Thursday, 8:00 a.m. to 4:00 p.m. A utility may not shut-off residential service on Friday, Saturday, Sunday or a holiday or the day before a holiday or if a valid medical emergency exists in your household.

10. If you live in a multi-family dwelling, you have the right to receive posted notice of any impending shutoff. This notice must be posted in a common area and/or sent individually to occupants.

11. You have the right to have a "diversion of service" investigation if you suspect that the level of consumption reflected in your utility bill is unexplainably high.

12. Service shall not be shut-off for non-payment of repair charges, merchandise charges or yellow page charges nor shall notice threatening such discontinuance be given.

13. You have the option of having a deposit refund applied to your account as a credit or of having the deposit refunded by separate check.

BPU - TELEPHONE NUMBER
1-609-777-3300
www.nj.gov/bpu/

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PINELANDS WATER COMPANY

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

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TERRITORY SERVED

This tariff shall apply to the service area of the Company which includes retail service to the communities known as Hampton Lakes and LeisureTowne in the Southampton Township in Burlington County.

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

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STANDARD TERMS AND CONDITIONS

1. DEFINITIONS

1.1 TARIFF, as referred to herein, is this entire "Tariff for Water Service" as the same may be amended or revised from time to time.

1.2 WATER SERVICE includes all service necessary to supply customers with water at their premises.

1.3 A CUSTOMER is a person, partnership, firm, corporation, governmental subdivision or agency receiving water service to premises, or water from a non premises location, as hereinafter defined.

1.4 PREMISES include the following:

(a) A building under one roof owned or leased by one customer, and occupied as one residence or one place of business.

(b) A combination of buildings owned or leased by one customer, in one common enclosure, occupied by one customer.

(c) The one side of a double house, having a solid vertical partition wall, or

(d) A building owned or leased by one customer having a number of apartments, offices, or lofts which are rented to tenants, using one or more halls and entrances in common.

(e) A combination of buildings owned or leased by one customer, in one common enclosure, none of the individual buildings of which is adapted to separate ownership.

(f) A cooperative apartment.

(g) A condominium unit.

(h) A public building.

(i) A single plot, such as a park, playground or cemetery.

(j) A water utility.

(k) Any point of connection from which water from the Company is taken by the end-use customer (for example, a fire hydrant).

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PINELANDS WATER COMPANY

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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

1 DEFINITIONS (Continued)

1.5 A TRANSMISSION MAIN is a pipe of large diameter which delivers water from wells, pumping stations, and or distribution reservoirs to the distribution mains.

1.6 A DISTRIBUTION MAIN is a pipe which delivers water to the service pipes attached thereto to serve the premises of customers.

1.7 A TAP or CORPORATION STOP is the valve or fitting on the distribution main to which the service pipe is attached. It is used for shutting off water to the service pipe.

1.8 A SERVICE PIPE is a supply pipe leading from the valve or corporation stop at the main to the valve or curb stop at the premises served.

1.9 A CURB STOP is the fitting or valve attached to the service pipe at the premises served for turning on and shutting off water.

1.10 A CONNECTING PIPE is the supply pipe connected to the service pipe at the curb stop and leading therefrom to the meter on the customer's premises.

1.11 A METER is a device which measures and registers the quantity of water supplied to the customer.

1.12 A PRESSURE REGULATOR is a device which is placed in pipelines to maintain automatically a given working pressure on its outlet side regardless of the pressure on the inlet side.

1.13 A PRESSURE RELIEF VALVE is a device installed in pipelines and other pressure systems to relieve automatically excess house system pressure, above the predetermined setting of the relief valve.

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PINELANDS WATER COMPANY

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First Revised Sheet No. 10

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

1. DEFINITIONS (continued)

1.14 A CHECK VALVE is an automatically operated valve designed to permit the flow of water in one direction only.

1.15 A BACKFLOW PREVENTER is any effective device, method or construction used to prevent backflow into a public potable water system. The term APPROVED BACKFLOW PREVENTER is a device which has been approved by the licensed operator of the public community water system in accordance with NJAC 7:10-10.2(e) and the Company's Cross Connection Control Plan.

1.16 A WATER MAIN EXTENSION is an addition to the existing system of transmission and distribution mains.

1.17 A METER ENCLOSURE, is a structure, approved by the Company, designed to contain, protect and provide accessibility for water meters and appurtenances installed outside of a premise.

1.18 A LOCK VALVE is a special valve that can be secured in the closed position by a padlock.

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PINELANDS WATER COMPANY

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B.P.U. No. 2 - WATER

First Revised Sheet No. 11

STANDARD TERMS AND CONDITIONS

2. APPLICATION FOR ESTABLISHMENT OF SERVICE

2.1 Application for water service may be made by telephone, by mail or in person. Such application shall be made, and accepted, and any applicable deposits and fees shall be paid before any service is provided.

2.2 Written application is required only for establishment of service to a location not previously served. Application forms, where required, will be provided by the Company upon request.

2.3 All applications shall be made by the prospective customer or that customer's duly authorized agent.

2.4 A separate application for water service must be made for each water connection, including fire and irrigation service.

2.5 Applications for water service are not transferable. Each new owner or occupant of the premises to be supplied is required to make a new application.

2.6 Application shall not be accepted from a present or former customer in arrears on a valid bill for water service on any other premises for which the customer had made application for water service except in cases where a mutually agreed payment plan has been established between such customer and the Company for payment of a valid bill which is past due.

2.7 Each customer shall notify the Company promptly of any change of ownership of the premises supplied under his application.

2.8 Where more than one rate schedule is available to particular customers, the utility shall have at all times the duty to assist such customers in the selection of the rate schedule most favorable for their individual requirements and to make every reasonable effort to insure that such customers are served under the most advantageous schedule.

PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

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STANDARD TERMS AND CONDITIONS

2. APPLICATION FOR ESTABLISHMENT OF SERVICE (Continued)

2.9 Application may be made for a new connection and service pipe through which water service is not immediately desired. A special form of agreement shall be entered into, which provides that the customer shall bear the entire expense of making the connection, subject to a refund of the cost of installing the service line from the main to the curb, including the curb stop, whenever regular service is commenced. No refunds will be made after ten years from the date of installation of the connection.

2.10 The Company may reject applications for water service where such service is not available, or where such service might affect the supply to other customers or for failure of the applicant to agree to comply with any of these standard terms and conditions.

PINELANDS WATER COMPANY

Third Revised Sheet No. 13
Canceling
Second Revised Sheet No. 13

B.P.U. No. 2 – WATER

STANDARD TERMS AND CONDITIONS

3. CUSTOMERS' DEPOSITS

3.1 Deposits may be required of any existing customer or any applicant for existing water service who has not established or maintained satisfactory credit. The amount of the deposit will not exceed the estimated average bill for the billing period and type of service under the applicable rate schedule plus one month where monthly billing periods apply or one third when quarterly billing periods apply.

3.2 A customer in default in the payment of bills may be required to furnish a deposit or increase the existing deposit in an amount sufficient to secure the payment of future bills. Service may be discontinued for failure to make such deposit, after proper notice.

3.3 If a customer who has made a deposit fails to pay a bill, the Company may apply as much of such deposit as is necessary to pay the bill and may require that the deposit be restored to its original amount.

3.4 The Company will furnish a receipt to each customer who has made a deposit.

3.5 The Company shall review a residential customer's account at least once every year and a non-residential customer's account at least once every two years and if such review indicates that the customer has established credit satisfactory to the Company, then the outstanding deposit shall be refunded to the customer. The Company shall afford its customer the option of having the deposit refund applied to the customer's account in the form of a credit or of having the deposit refunded by separate check in a period not to exceed one billing cycle. (N.J.A.C. 14:3-3.5(a)).

3.6 Simple interest at a rate prescribed by the Board of Public Utilities shall be paid by the utility on all deposits held by it as required by N.J.A.C. 14:3-3.5(d). Interest payments shall be made at least once during each twelve-month period in which a deposit is held and shall take the form of credits on bills toward utility service rendered or to be rendered. The effect of this subsection shall be limited to those deposits, if any, held by electric, gas, telephone and water utilities to secure residential accounts (N.J.A.C. 14:3-3.5(g)).

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STANDARD TERMS AND CONDITIONS

3. CUSTOMERS' DEPOSITS (Continued)

3.7 Following discontinuance of service, the customer will receive a refund of any deposit, together with outstanding interest, less any amount due for unpaid bills.

3.8 Deposits will be required to guarantee the payment for metered water used for construction purposes where no advance payments have been made. These deposits will be based upon the cost of the meter, plus the estimated amount of water which may be used during construction. When the meter is returned to the Company in good condition, the deposit will be refunded together with outstanding interest, less any amount due for unpaid bills.

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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

4. SERVICE PIPES

4.1 The service pipe from the distribution main to the curb line, including the curb stop, meter pit and meter, will be furnished, installed and maintained by the Company at its expense, except as otherwise provided in this Tariff.

4.2 Only employees or other persons authorized by the Company will be permitted to make connections to the mains, access meter pits, operate curb stops and remove, service, or repair meters of the Company.

4.3 The Company will control the size of the opening to be made in the distribution main and the size of the service pipe to be installed.

4.4 No service pipe will be installed until the connecting pipe has been installed and staked by the Customer within 24" of the curb or edge of pavement; or where the connecting pipe is installed in the same trench with sewer pipe, gas pipe, electric conduit or any other facility.

4.5 A curb stop and meter pit will be installed by the Company at or near the premises, in such a manner as to permit the attachment of the customer's connecting pipe up to and including 2" diameter pipe. The curb stop or meter pit is available for turning on and shutting off the supply of water in emergencies or for purposes of repair. Only Company employees or persons duly authorized to do so by the Company are permitted to operate the curb stop or meter pit.

4.6 No premises shall be supplied by more than one service pipe, unless agreed upon by the Company and the customer.

4.7 Where two or more customers are supplied through a single service pipe, the piping of the premises or meter housing shall provide a separate lock valve ahead of the inlet to each customer's meter.

4.8 (Reserved for Future Use)

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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

4. SERVICE PIPES (Continued)

4.9 Any change requested by the customer in the location or configuration of the existing service pipe, if approved by the Company, shall be made at the expense of the customer including the necessary modifications to comply with the Company's cross connection control and exterior meter enclosure requirements.

4.10 Where a service pipe is for temporary use, the customer shall bear the entire expense of making the connection, subject to a refund whenever service is established on a permanent basis.

4.11 Where a service pipe is available for a customer's premises, the customer may obtain a larger size service without charge, provided such service is established on a permanent basis. Any subsequent request for a reduction in the size of the meter shall be subject to Company approval and the payment by the customer of the cost of installing the larger size service.

4.12 Where a large size service pipe has been installed at the request of a customer, for premises not previously supplied, any subsequent request for a reduction in the size of the meter shall be subject to Company approval and the payment by the customer of the difference between the cost of installing the service pipe and the cost of installing a service line that is usually installed with the new sized meter.

4.13 Charges and costs, if any, associated with special road opening and restoration requirements imposed by the governing agency shall be reimbursed by the customer (or prospective customer) requesting said work resulting in the need to open a roadway under moratorium.. This includes fines or charges in excess of normal road opening permit fees, costs for restoration work required, and any other costs incurred by the Company for this work. The burden of obtaining the approval of the governing agency for this road opening, and any costs related to this approval shall be the responsibility of the customer (or prospective customer).

4.14 Charges for service pipe installation that are excessive shall be paid by the Customer. The cost of a service pipe installation shall be considered excessive if the cost of the installation exceeds two (2) times the average cost of the same diameter service of the previous 12 month calendar year. The Customer shall reimburse the Company for the difference between the actual installation costs and the amount used to determine if the costs is excessive.

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Pinelands Water Company
485C Route 1 South
Suite 400
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PINELANDS WATER COMPANY

Second Revised Sheet No. 17
Canceling
First Revised Sheet No. 17

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

5. CONNECTING PIPES

5.1 A connecting pipe attached to the service pipe shall be installed at the expense of the customer to convey the water supply within the property of the customer.

5.2 The connecting pipe is the property of the customer and shall be maintained and kept in repair by the customer. The un-metered length of any connecting pipe shall not exceed 10' in length, as measured from the curb stop or curb line to the proposed point of metering.

5.3 The connecting pipe shall be of strength and quality approved by the local municipal construction code or other authority with jurisdiction.

5.4 The connecting pipe shall be installed by a licensed plumber or other approved mechanic prior to the installation of the Company's service pipe. The Connecting pipe shall be installed to within 24" of the curb or edge of pavement, the termination point staked and the pipe shall be properly sealed by the plumber or mechanic to prevent the entry of ground water into the pipe. The pipe shall be installed without sharp bends, at right angles to the line of the street, in a trench not less than four feet in depth, to avoid damage and possible interruption to service caused by freezing. The pipe shall not be installed within three feet of any permanent excavation or vault or other subsurface structure. Other utility service pipes, such as sewer or gas, shall not be installed in the same trench.

5.5 The Company reserves the right to inspect the installation prior to backfilling the trench and to withhold the supply of water service whenever such installation or any part thereof is deemed by the Company to be leaking, unsafe, inadequate or unsuitable for receiving service, or to interfere with or impair the continuity or quality of service to the customer or to others.

5.6 No attachment shall be made to the service or connecting pipe, or any branch thereof, between the meter and the main.

5.7 The customer shall make all changes in the connecting pipe due to changes in grade, relocation of mains, or other causes, at the customer's expense, unless the change is instituted by the Company.

5.8 Where it is necessary to install a connecting pipe on the property of persons other than the applicant for service, written authority from such property owners, in a form approved by the Company, shall be obtained by the applicant.

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PINELANDS WATER COMPANY

Third Revised Sheet No. 18
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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

6. METERS

6.1 The Company will furnish, install, own, and maintain meters without charge, except as otherwise provided in this Tariff, and will determine the size, type and make of meter to be used, based on the service desired.

6.2 No unmetered connections are permitted.

6.3 Meters will be maintained and may be tested in accordance with regulatory requirements or as determined appropriate by the Company. The Customer shall provide and maintan acceptable access to the meter installation for Company representatives and agents to perform these activities.

6.4 If access to the meter and meter installation is not provided by the Customer, either by denial of access or by non response to Company requests for access, the Company may utilize an additional meter installation as determined appropriate by the Company for the purpose of billing. In this situation the new meter shall be used for billing, the original meter shall cease to be used for billing, and the original meter installation shall become the property and responsibility of the Customer.

6.5 The Company may require a remote meter reading device to be installed by the Company at the expense of the Company

6.6 (Reserved for Future Use.)

6.7 The location of the meter and the arrangement of the fittings and pipe shall be subject to inspection and approval by the Company. Valves are to be installed on the inlet and outlet side of the meter.

6.8 Meters shall be installed inside a permanent meter enclosure located no more than 10-feet from the curb stop unless otherwise required or agreed to by the Company. When meters are permitted by the Company to be installed inside the customer's commercial, multi-unit dwelling or industrial building, the meters shall be located in a clean, dry, heated, illuminated, safe place not subject to great variations in temperature, within 5-feet to the point of entrance of the connecting pipe. The location shall be separated from the remainder of the premise by a permanent wall with a single exterior entrance such as to be easily accessible, with a minimum of inconvenience to the Company, for reading, inspecting, testing, changing and making necessary adjustments or repairs. For meters larger than 4" located within the premise, the customer shall provide a paved concrete surface that is readily accessible to self-propelled, mechanical lifting equipment without the need to dismantle or remove any portions of the structure, landscape or features of the property to remove the meter.

PINELANDS WATER COMPANY

Second Revised Sheet No. 19
Canceling
First Revised Sheet No. 19

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

6. METERS (Continued)

6.9 For meters one and one-half inches (l-l/2") in size and larger, if requested by the Customer, or when service cannot readily be interrupted for testing or replacing the meter per BPU regulations, or upon the Company's discovery of open bypass, the installation for said meter shall be equipped with metered and cross connection controlled bypass piping of a type and arrangement approved by the Company which will permit the removal or testing of the meter without interruption of water service.

6.10 (Reserved for Future Use.)

6.11 Where it is necessary to install a meter enclosure outside of the public right-of-way, or in a driveway, roadway, or any other location determined to be unacceptable by the Company the installation is subject to the approval of the Company and the cost of installing, operating and maintaining the meter enclosure shall be the responsibility of the customer.
Where it is necessary to set a meter outside of a building, the meter shall be placed in a convenient meter box or vault, referred to as the meter housing. This installation is subject to the approval of the Company. The cost of installing and maintaining the meter housing is the responsibility of the customer. Housing for small meters can be purchased from the Company at cost.

6.12 Company installed and owned meter enclosure shall be located in an accessible place, protected from vehicular traffic, away from terraces, fences or other structures and shall be so located that they will not be a hazard to pedestrians.

6.13 If the meter enclosure is installed upon property which is not owned by the customer, the customer is required to furnish the Company written permission from the owner of the property which will be binding on the owner, and the owner's administrators, executors, heirs, successors and assigns.

6.14 The meter enclosure shall be frost-proof, heated when above-ground and either well drained or watertight and shall be provided with a secure cover or access door with a convenient locking device. Meter enclosures shall be kept clear of snow, ice, dirt, mulch, tress/shrubs, fences, landscaping, vehicles, equipment or any other objects which might prevent ready accessibility for reading, inspecting, testing, changing and making necessary adjustments or repairs of the meter.

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PINELANDS WATER COMPANY

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Second Revised Sheet No. 20

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

6. METERS (Continued)

6.15 The Company maintains and repairs meters except in case of misuse or damage by frost, hot water or external causes, in which event the cost of repairing and replacing the meter shall be charged to the customer, said charge to be based on the direct labor and equipment costs of removing, repairing, replacing and/or resetting the meter.

6.16 All meters are carefully tested before being placed in service and are inspected periodically while in service. Therefore, the quantity of water recorded by the meter, as ascertained by periodic meter readings, shall be taken to be the amount delivered to the customer, except where the meter has been found to be registering fast or has ceased to register.

6.17 Where the meter has ceased to register or where access to the meter cannot be obtained, meter readings may be estimated by a fair and reasonable method based upon the best information available.

6.18 If a customer observes an unusual increase over the average quantity of water used, which cannot be accounted for, the customer is to inform the Company immediately.

6.19 When a billing dispute is known to exist, the utility shall, prior to removing the meter, advise the customer that the customer may have the meter tested by the utility or may have the Board either conduct a test of the meter or witness a testing of the meter by the utility, and that in any event the customer may have the test witnessed by a third party. (N.J.A.C. 14:3-4.5(c))

A meter test arising from a billing dispute may be appropriate in instances which include, but are not limited to, unexplained increased consumption, crossed meters, consumption while account is vacant or any other instance where the meter's accuracy might be an issue in a bill dispute.

A report giving results of such tests shall be made to the customer, and a complete record of such test shall be kept on file at the office of the utility in accordance with N.J.A.C. 14:3-4.7 Meter records.

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

Third Revised Sheet No. 21
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Second Revised Sheet No. 21

STANDARD TERMS AND CONDITIONS

6. METERS (Continued)

6.20 If a meter is found to be registering fast by more than 1 ½ percent, an adjustment of charges will be made.

6.21 If a meter, upon test, is found to register within the prescribed limits of accuracy, the Company reserves the right to reset the same meter in the premises from which it was removed.

6.22 Only employees or persons authorized by the Company shall remove the meter under any circumstances.

6.23 Tampering with the meter, meter pit, curbstops, or its connections is prohibited.

6.24 Winterizing of Irrigation Meters – the Customer shall be responsible for protecting and insuring that meters in meter housings are properly protected when irrigation systems are winterized. Only personnel approved and registered by the Company may work on, remove, and reinstall irrigation meters in accordance with Company requirements. These registered personnel, or any other persons, CANNOT operate the Company's Curb Stop shutoff valve. Only Company personnel, or its agents, may operate the Curb Stop valve.

PINELANDS WATER COMPANY

Second Revisdt Sheet No. 22
Canceling
First Revised Sheet No. 22

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

7. CUSTOMERS' PREMISES

7.1 The Company may refuse to provide a water service connection with any customer's piping system or furnish water to any connecting pipe already installed, when the customer's piping system is not installed in accordance with the regulations of the Company (including but not limited to the Cross Connection Control Plan) and of the municipality in which the premises are located; or when the piping system on the premises has not been protected from allowing groundwater/soil to enter the connecting pipe or when it is not at sufficient depth to prevent freezing.

7.2 The Company shall have the right of reasonable access to a customer's premises and to all property supplied by it, at reasonable times, for the purpose of inspection incident to the rendering of service, reading meters or inspecting, testing or repairing its facilities used in connection with supplying service, or for the removal of its property.

7.3 The customer shall obtain or cause to be obtained, all permits and other authorizations needed by the Company for access to its facilities. The Company, where necessary, will make application for any street opening permits for installing its service connections and shall not be required to furnish service until after such permits are granted. The municipal charge, if any, for permission to open the street shall be paid by the customer.

7.4 Reserved.

7.5 The customer shall not permit access to the meter or other facilities of the Company except to authorized employees of the Company, duly authorized state regulatory officials and the customer’s certified backflow prevention device testers..

7.6 In case of defective service, the customer shall not interfere with the apparatus or appliances belonging to the Company but shall notify the Company immediately.

7.7 All piping within a customer's premises shall comply with State, municipal and other regulations in force with respect thereto.

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PINELANDS WATER COMPANY

Second Revised Sheet No. 23
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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

7. CUSTOMERS' PREMISES (Continued)

7.8 Physical connections, such as cross connections, either permanent or temporary, between pipes on a customer's premises supplied by the Company and any unapproved source of supply are prohibited.

7.9 In any premises where a NJ DEP Approved auxiliary water source is permitted, the pipes carrying water from the mains of the Company are required to be marked in some distinctive manner for ready identification.

7.10 No device or connection shall be permitted between pipes or fixtures carrying water from the mains of the Company and any portion of the plumbing system of the premises or any other piping system on the premises in cases where the system is not designed to prevent backflow or back-siphonage in accordance with the Company's Cross Connection Control Plan.

7.11 If a premise is to remain unoccupied for an indefinite period, customers are cautioned to have the interior plumbing drained, especially during cold weather, to avoid damage to pipes and fixtures. When requested, the Company will suspend service to unoccupied premises temporarily by shutting off the water at the curb and removing the meter.

7.12 Whenever leakage occurs from pipes or facilities owned by the customer, the customer, at the customer's expense, shall make the necessary repairs without delay. If the customer fails to make said repairs, the Company reserves the right to discontinue the supply until such time as the leak is repaired. A reconnection charge will apply should the Company take action to physically discontinue water service.

7.13 All costs associated with periodic testing of an approved backflow prevention device and reporting of said test results shall be the responsibility of the Customer. The reporting format and mechanism for reporting test results shall be determined by the Company.

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PINELANDS WATER COMPANY

Second Revised Sheet No. 24
Canceling
First Revised Sheet No. 24

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

8. BILLS

8.1 All bills will be computed in accordance with the rates of the Company as shown in this Tariff, as the same may be amended or revised from time to time. Rates are subject to such changes as the State regulatory body having jurisdiction may require, authorize or allow.

8.2 Bills for metered water service will be rendered at least once in each calendar quarter. Bills may be rendered monthly when the consumption charges for the last four quarters have exceeded $1,200.00 or when mutually agreed upon by the customer and Company.

8.3 Bills will show the meter reading at the beginning and end of the billing period, the dates on which the meter is read, the number and kind of units measured, a statement of explanation of any conversion from meter reading to billing units or any other calculations or factors used in determining the bill, a distinctive marking to indicate estimated or actual bill and a statement that approximately 13 percent or $ of your current period charges reflect the average gross receipts and franchise taxes which are paid to the State of New Jersey and largely distributed to New Jersey Municipalities. For purposes of bills, only those meters actually read by Company personnel are considered actual meter readings. The bill shall contain a statement indicating that an actual meter read may be an electronic read. The bill shall also indicate a statement that the rate schedule is available upon request. (N.J.A.C. 14:3-7.2)

8.4 Where a bill has been estimated due to the fact that the Company has been unable to gain access to the meter, it will be so noted on the bill. An appropriate adjustment will be made for any difference between actual use and estimated use of water when the next regular meter reading is obtained.

8.5 Except in cases where a meter that is fast by more than 1-1/2 percent, the amount of the bill, based on the reading of the meter is deemed conclusive and must be paid. No adjustment shall be made for a meter that is registering less than 100 percent except in the case of meter tampering, non registering meters or in circumstances in which the customer should reasonably have known that his bill did not reflect the customer's actual usage.

8.6 Facilities charges are based on the size of the meter.

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PINELANDS WATER COMPANY

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First Revised Sheet No. 25

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

8. BILLS (Continued)

8.7 A customer having two or more meters (excluding meters for Private Fire Protection and irrigation under applicable Rate Schedules) on the same premises will be charged at the Facilities charge for each plus the consumption rate for the quantity of water equivalent to the sum registered on all of the meters on the premises. Each installation under applicable Rate Schedule No. 2 Private Fire Service (PFS) will be charged separately.

8.8 A customer wishing to discontinue service must give notice to that effect. Where such notice is not received by the Company the customer shall be liable for service until the final reading of the meter is taken. Notice to discontinue service will not relieve a customer from any minimum or guaranteed payment under any contract or rate.

8.9 If requested in writing by the customer, the Company will send bills to, and will receive payments from agents or tenants. However, this accommodation shall in no way relieve the customer of the responsibility of paying such charge. In the case of a residential account, if such charges are not paid, and notice is issued with intent to discontinue service, notice shall be served on both the billing address and the service address. (N.J.A.C. 14:3-3A.6)

8.10 At least fifteen (15) days' time for payment shall be allowed after sending a bill. The Company may discontinue service for nonpayment of bills provided it gives the customer at least ten (10) days' written notice of its intention to discontinue. The notice of discontinuance shall not be served until the expiration of the said l5 day period. However, in case of fraud, illegal use, or when it is clearly indicated that the customer is preparing to leave, immediate payment of accounts may be required.

8.11 Accounts that are not paid in a timely manner automatically receive a low credit rating. Should a bill remain unpaid after normal collection procedures have been applied, water service will be discontinued after proper written notice is issued, as provided in the regulation of the Board of Public Utilities. If service is discontinued, the Company reserves the right to issue a bill for a deposit, the amount of such deposit being determined as provided in paragraph 3.1 on Sheet No. 13.

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

First Revised Sheet No. 26
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Original Sheet No. 26

STANDARD TERMS AND CONDITIONS

8. BILLS (Continued)

8.12 Where water service is discontinued for nonpayment of bills, service will not be resumed until payment or satisfactory arrangements for payment have been made. Under such circumstances, the Company may require a deposit from the customer to insure prompt payment of future bills.

8.13 In case of fraud or where it is indicated that the customer is preparing to vacate the premises served, immediate payment of accounts may be required.

8.14 Sales to other utilities which are exempt from revenue-based taxes will be credited with an amount equivalent to the tax exemptions.

8.15 Late Payment Charge: A late payment charge at the rate of 0.75% per monthly period shall be applied to the accounts of non-residential customers taking service under Rate Schedules No. 1 and No. 2 contained herein. Service to state, county or municipal government entities will not be subject to a late payment charge. The charge will be applied to all amounts billed including accounts payable and unpaid finance charges applied to previous bills, and will not be applied sooner than 25 days after a bill is rendered, in accordance with N.J.A.C. 14:3-7.1(e). The amount of the finance charge to be added to the unpaid balance shall be calculated by multiplying the unpaid balance by the late payment charge rate. When payment is received by the Company from a customer who has an unpaid balance which includes charges for late payment, the payment shall be applied first to unpaid water service charges and then to the remainder of the unpaid balance.

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

Third Revised Sheet No. 27
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Second Revised Sheet No. 27

STANDARD TERMS AND CONDITIONS

9. DISCONTINUANCE OF SERVICE

9.1 The Company shall, upon reasonable notice, when it can be reasonably given, have the right to suspend or curtail or discontinue service for the following reasons:

9.1.1 For the purpose of making permanent or temporary repairs, changes or improvements in any part of its system;

9.1.2 For compliance in good faith with any governmental order or directive , including water diversion or other permit, notwithstanding such order or directive subsequently may be held to be invalid;

9.1.3 For any or the following acts or omissions on the part of the customer:

(a) Nonpayment of a valid bill due for service furnished at a present or previous location. However, nonpayment for business service shall not be a reason for discontinuance of residence service, except in cases of diversion of service pursuant to N.J.A.C. 14:3-7.8, and service shall not be discontinued for nonpayment of repairs charges, merchandise charges and non-tariff contracted service charges between the customer and the utility, nor shall notice threatening such discontinuance be given.

(b) Tampering with any facility of the Company; theft of service, failure to install, test and maintain adequate cross connection control as required under the Company's Cross Connection Control Plan.

(c) Fraudulent representation in relation to the use of service.

(d) Customer moving from the premises, unless the customer requests that service be discontinued;

(e) Providing the Company's service to another without approval of the Company.

(f) Failure to make a deposit as provided for in N.J.A.C. 14:3-3A.1(a)(4) or the Company's tariff;

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PINELANDS WATER COMPANY

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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

9. DISCONTINUANCE OF SERVICE (Continued)

9.1.3 (Continued)

(g) Refusal to contract for service where such contract is required;

(h) Connecting and operating in such manner as to produce disturbing effects on the service of the Company or other customers, includes but is not limited to failure to comply with the Company's Cross Connection Control Plan;

(i) Failure of the customer to comply with any reasonable standard terms and conditions contained in the Company's tariff;

(j) Where the condition of the customer's installation presents a hazard to life or property;

(k) Failure of customer to repair any faulty facility of the customer.

(l) Nonpayment of a valid bill for wastewater service furnished at a present or previous location by Pinelands Wastewater Company; However, nonpayment for business service shall not be a reason for discontinuance of residence service, except in cases of diversion of service pursuant to N.J.A.C. 14:3-7.8, and service shall not be discontinued for nonpayment of repairs charges, merchandise charges and non-tariff contracted service charges between the customer and the utility, nor shall notice threatening such discontinuance be given.

9.1.4 For refusal of reasonable access to customer's premises for necessary purposes in connection with rendering of service, including meter installation, reading or testing, or the maintenance or removal of the Company's property.

9.2 A customer wishing to discontinue service must give notice to that effect. Where such notice is not received by the Company, the customer shall be liable for service until the final reading of the meter is taken. Notice to discontinue service will not relieve a customer from any minimum or guaranteed payment under any contract or rate.

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Second Revised Sheet No. 29

B.P.U. No. 2 – WATER

STANDARD TERMS AND CONDITIONS

9. DISCONTINUANCE OF SERVICE (Continued)

9.3 Public Utilities shall not discontinue residential service except between the hours of 8:00 A.M. and 4:00 P.M. Monday through Thursday, unless there is a safety related emergency. There shall be no involuntary termination of service on Fridays, Saturdays, and Sundays or on the day before a holiday or on a holiday, absent such emergency. The Company shall not discontinue service unless the customer's arrearage is more than $100.00 or the account is more than three months in arrears. N.J.A.C. 14:3-3A.2(a).

9.4 Discontinuance of residential service for nonpayment is prohibited if a medical emergency exists within the premises which would be aggravated by discontinuance of service and the customer gives reasonable proof of inability to pay. Discontinuance shall be prohibited for a period of up to two months when a customer submits a physician's statement in writing to the Company as to the existence of the emergency, its nature and probable duration, and that termination of service will aggravate the medical emergency. Recertification by the physician as to continuance of the medical emergency shall be submitted to the Company after 30 days. However, at the end of such period of emergency, the customer shall still remain liable for payment of service(s) rendered, subject to the provisions of N.J.A.C. 14:3-3A.2(i).

(a) The Board may extend the 60-day period for good cause.
(b) The Company may in its discretion delay discontinuance of residential service for nonpayment prior to submissions of the physician's statement required by this subsection when a medical emergency is known to exist.

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PINELANDS WATER COMPANY

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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

10. PRIVATE FIRE PROTECTION SERVICE

10.1 Customers are required to make separate written application for private fire protection service and enter into an agreement pertaining to conditions for service.

10.2 Private fire service installations shall be made in accordance with the provisions of this Tariff regarding the installation of service and connecting pipes and other facilities. Private fire protection systems that include storage tanks, pumping equipment, fire hydrants and/or any combination of these will be required to comply with the Company's Cross Connection Control Plan.

10.3 Private fire service lines that do not include fire hydrants, storage tanks, pumping equipment and/or any combination of these shall be equipped with a rated fire service meter and double check valve assembly in accordance with the Company's Cross Connection Control Plan; private fire service lines without private hydrants shall be equipped with detector-check type meters and shall be used exclusively for fire protection purposes. The connecting pipe shall be the at least the same size as the meter.

10.4 No water shall be used through private fire protection facilities except for purposes of testing or in case of fire.

10.5 The charge for private fire service is based on the size of the meter. Bills are rendered monthly. No charge is made for water used solely for fire extinguishing purposes or for reasonable testing purposes, provided the Company is notified in advance that tests are to be made.

10.6 Where a tank, standpipe or other storage facility is used, it shall be so constructed and arranged as to protect the water from pollution and shall conform with all applicable rules and regulations of the State Department of Environmental Protection and the Company's Cross Connection Control Plan.

10.7 Authorized representatives of the Company shall have the right to inspect all fire protection facilities on a customer's premises at reasonable hours.

10.8 The customer shall be responsible for all costs associated with a fire watch program is required by local officials in response to emergency or planned work performed by the Company that interrupts or is anticipated to interrupt water supply to fire services

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B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

11 MUNICIPAL SERVICE

11.1 Upon application of duly authorized representatives of municipalities or fire districts in the territory supplied, the Company will install fire hydrants for purposes of public fire protection, at locations agreed upon by the municipalities or fire districts and the Company.

11.2 Such hydrants are owned by the company and subject to regular inspection and maintenance by the Company.

11.3 Municipalities and fire districts shall pay a monthly charge for municipal service as provided in the applicable Rate Schedule set forth in this Tariff.

11.4 Hydrants are not to be used for any purpose, other than public fire protection, without the written permission of the Company.

11.5 Municipal fire departments or fire districts should inform the Company promptly of any hydrant which is leaking, or in need of attention so that such hydrant may be placed in readiness for instant operation.

11.6 Where it is necessary to use hydrants for any purpose other than public fire protection, a special permit is required, issued by the Company under restrictions imposed in the interest of the public.

11.7 Only special hydrant wrenches, approved by the Company shall be used for opening or closing a hydrant.

11.8 No attachment of any sort shall be left connected to a hydrant except when it is in actual use. No hydrant shall be left unattended while attachments are connected during the time it is in use. Before closing time each day, the hydrant shall be shut, attachments removed, caps replaced and the hydrant left in readiness for instant use.

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Issued by: G. Christian Andreasen, Jr., President
Pinelands Water Company
485C Route 1 South
Suite 400
Iselin, New Jersey 08830

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PINELANDS WATER COMPANY

First Revised Sheet No. 32
Canceling
Original Sheet No. 32

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

12. WATER MAIN EXTENSIONS

12.1 Applications for extensions may be made in person, by telephone or by mail, at any Commercial Office of the Company. Upon receipt of such application, the Company will advise the applicant as to the most suitable plan for installing the proposed extension and the probable cost to the customer.

12.2 Distribution mains will be extended only in public streets or highways or in new streets or highways, not yet accepted, but which have been laid out according to an accepted plan approved by the appropriate authority to be in public streets or highways. The Company will require an easement in cases where the streets or highways have not been accepted. In no case, however, will distribution mains be installed until streets or highways have been rough graded to an established and approved grade. In the alternative, and at the sole and absolute discretion of the Company, mains may be installed in properly configured and recorded easements with terms acceptable to the Company

12.3 Water main extensions will be installed pursuant to agreements which will be prepared in accordance with all applicable laws of the State and Board of Public Utilities regulations and orders including but not limited to those regulations contained in N.J.A.C. 14:3-1, N.J.A.C. 14:3-6, and N.J.A.C. 14:3-8.

12.4 Each extension shall become a part of the distribution system of the Company and shall be owned, maintained and controlled by the Company.

12.5 The Company shall have the right to connect additional customers to an extension and to construct further extensions thereto.

PINELANDS WATER COMPANY

Second Revised Sheet No. 33
Canceling
First Revised Sheet No. 33

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

13. GENERAL RULES

13.1 The Company reserves the right to install services and meters on the basis of the normal requirements for service. The Company does not undertake to provide service for unduly high rates of water demand prevailing only for short periods of time and reserves the right to refuse to install oversize services or meters to serve such high demands.

13.2 The Company will endeavor to provide a regular and uninterrupted supply of water through its facilities, but in case service is interrupted, irregular, defective or fails because of breakdown or emergency, or from causes beyond the control of the Company, the Company will not be liable for damage or inconvenience resulting therefrom.

13.3 The Company does not undertake to render any special service or maintain any fixed pressure. In the event of an accident or for other reasons, the Company may shut off the water in its mains and pipes and may restrict the use of water whenever the public welfare may require it. All customers requiring an uninterrupted supply or a uniform pressure of water for steam boilers, hot water or other apparatus, or for any other purpose, shall provide their own means of obtaining such service.

13.4 When the supply of water is to be shut off temporarily or curtailed, a notice stating the purpose and probable duration of the shutoff or curtailment will be given to customers affected whenever practicable.

13.5 The Company may make rules reasonably designed for compliance with its water diversion or other permits. Such rules may include outdoor water use restrictions such as alternate day or “odd-even” outdoor water use limitations.

13.6 The Company does not undertake to supply any uniform quality of water for special purposes, such as dialysis centers, medical/dental ofices, adult/child care facilities, manufacturing or processing plants, laboratories, swimming pools, bleaching or dyeing plants or laundries. Customers requiring water of special quality, or water at all times free from discoloration or turbidity, shall provide their own means of treating the water or shall provide such other protection as may be deemed necessary for the purposes required.

PINELANDS WATER COMPANY

Third Revised Sheet No. 34
Canceling
Second Revised Sheet No. 34

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

13. GENERAL RULES (Continued)

13.7 Neither by inspection approval nor nonrejection, nor in any other way, does the Company give any guarantee, or assume any responsibility, expressed or implied, as to the adequacy, safety or characteristics of any structures, equipment, pipes, appliances or devices owned, installed, or maintained by the customer or leased by the customer from third parties.

13.8 Except as to the liability, if any, imposed by law, the Company will not assume responsibility for any injury, casualty, or damage resulting from the supply, or use of water service, or from the presence or operation of the Company's structures, equipment, pipes, appliances or devices on the customer's premises.

13.9 No person, unless authorized by the Company, is permitted to turn the water on or off at any hydrant, street valve, corporation stop and curb stop, or other street connection, or tamper with, disconnect or remove, any meter without the consent of the Company. Penalties provided by law for any such action will be rigidly enforced.

13.10 No agent, representative or employee of the Company has authority to modify any provision contained in this Tariff or to bind the Company by any promise or representation contrary thereto.

13.11 From time to time, the Company may provide public notices, specific notices, correspondence or other notifications ("Notices") regarding the presence of conditions affecting the quality and/or quantity of water service provided by the Company. (Examples of such Notices include, but are not limited to, boil water alerts, notice of hydrant or main flushing, and notice of water quality testing results.) These Notices may contain information about actions members of the public may wish to, are recommended to, or should take in response to the conditions identified in the Notice. In the event the Company issues a Notice, the Company will not be liable for any expenses or costs incurred by a customer or end-user for any action taken in response to any condition identified in the Notice.

13.12 This Tariff is made a part of all agreements for the supply of water service unless specifically modified in a particular Rate Schedule. A copy of the Company's Tariff with terms and conditions will be furnished to any customer upon request.

13.13 The Company reserves the right to terminate, change, revise or supplement this Tariff, to the extent permitted by law, or permitted by the applicable regulations of the State regulatory body having jurisdiction.

13.14 The Regulations of the New Jersey Board of Public Utilities applicable to water utilities are incorporated herein by reference to the extent that the subject matter of any Regulation has not been covered herein.

13.15 Use of public fire hydrants for the purposes of anything other than public fire protection and by persons other than Public Fire Protection and Company personnel is prohibited.

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

First Revised Sheet No. 35
Canceling
Original Sheet No. 35

STANDARD TERMS AND CONDITIONS

14. EMERGENCY RESPONSES DUE TO EXTRAORDINARY DEMAND AND/OR DIMINISHED SUPPLY

14.1.1 Discontinuance of service for failure to comply with use restrictions.

For compliance by the utility in good faith with any governmental order or directive, notwithstanding that such order or directive subsequently may be held to be invalid, the Company may, upon reasonable notice, as set forth in sections 14.2.l and 14.2.3 herein, suspend, curtail, or discontinue service pursuant to N.J.S.A. 48:2-23, N.J.S.A. 48:2-24, N.J.A.C. 14:3-3A.1 and N.J.A.C. 14:3-3A.2 for any of the following acts or omissions on the part of the customer:

(1) Connecting or operating any piping or other facility, including but not limited to, lawn sprinkling on the customer's premises in such a manner as to adversely affect the safety or adequacy of service provided to other customers present or prospective; or

(2) Continuing waste of water by customers, after notice from the utility, through improper or imperfect pipes, fixtures, or failure to comply with restrictions; or

(3) Failure to comply with the standard terms and conditions contained in this tariff or failure to comply with any state law, or the rules, regulations, orders or restrictions of any governmental authority having jurisdiction.

14.l.2 Water service shall be restored when the conditions under which such service was discontinued, as specified above, are corrected and upon the payment of the SPECIAL RESTORATION OF SERVICE CHARGE of $100.00 for each restoration.

14.2.l The Company will endeavor to provide a regular and uninterrupted supply of water through its facilities. However, if because of emergencies beyond the control of the Company, including governmental mandate, service is interrupted, irregular, defective or fails, the Company will not be liable for damage or inconvenience resulting therefrom. In the event of an extraordinary demand and/or diminished supply, the Company may restrict the use of water whenever the public

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PINELANDS WATER COMPANY

Third Revised Sheet No. 36
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Second Revised Sheet No. 36

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS

14. EMERGENCY RESPONSES DUE TO EXTRAORDINARY DEMAND AND/OR DIMINISHED SUPPLY (Continued)

14.2.1 (Continued)

welfare may require it and, if necessary, may shut off the water in its mains and pipes. In such cases the Company shall advise its customers by placing a prominent advertisement detailing the conditions and restrictions in a newspaper of general circulation in the utility service area. The notice will state the purpose and probable duration of the restriction or discontinuance. Failure to provide regular and uninterrupted service due to breakdowns is covered under other sections of this tariff.

14.2.2 The Company may restrict water service during certain periods, where the Company advises the Board of Public Utilities, in order to protect the public water supply, or otherwise to comply with any regulations, orders or decrees issued by the Governor of New Jersey or the Department of Environmental Protection pursuant to the Water Supply Management Act. Such interruptions or restrictions shall be reported to the Department of Environmental Protection and the Board by each utility by the speediest means of communications available, followed by a detailed written report, pursuant to the provisions of N.J.A.C. 14: 3-3.7(g), within one week. Thereafter the utility shall provide weekly reports for the duration of the emergency.

14.2.3 When the supply of water to individual customers is to be shut off or curtailed for failure to comply with emergency water restrictions imposed because of extraordinary demand or diminished supply, the Company shall advise its customers by placing a doortag on the front door of the home of the individual(s) in violation of the restrictions, at least twenty-four (24) hours prior to discontinuance or curtailment, or by giving another form of notice acceptable to the Board. The Company will advise business and commercial customers, in writing, by mailing a notice to the customers' billing address. In the case of doortags, they shall be sequentially numbered and include the date, time and nature of the violation and the procedure for restoration of service. All such notices shall be accounted for by the utility.

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PINELANDS WATER COMPANY Original Sheet No. 36A

B.P.U. No. 2 - WATER

STANDARD TERMS AND CONDITIONS (Continued)

15. MULTI-USE SERVICE REQUIREMENTS

By applying for multi-use service, the customer or builder certifies that:

15.1. The customer or builder has hydraulically calculated the demand for the customer's or builder's water system, based on the simultaneous domestic demand and fire sprinkler demand. The customer or builder shall make this calculation in accordance with the Uniform Construction Code.

15.2. The customer or builder will ensure that the system is installed in accordance with the Uniform Construction Code at N.J.A.C. 5:23.

15.3. The customer will, prior to installation of the meter, obtain a construction permit in accordance with the Uniform Construction Code from the enforcing agency having jurisdiction over the system.

15.4. By applying for multi-use service, the customer agrees to be responsible for all claims, costs and liability for personal injury, death and/or property damage, resulting from the customer's individual water system, unless caused by the negligence of the water utility.

By applying for multi-use service, and operating the same, the customer agrees:

15.5. To include cross connection control device(s) in accordance with the Company's Cross Connection Control Plan.

15.6. To be solely responsible for all costs and expenses relating to the installation, operation, maintenance, repair and replacement of the customer's water system, including the fire suppression system and compliance with the Company's Cross Connection Control Plan.

15.7. To ensure the customer's water system complies with the applicable requirements of the Uniform Construction Code in effect at the time of system installation, including any applicable building, plumbing and fire protection subcodes.

15.8. To ensure that the customer's water system is maintained in accordance with all applicable law so as to protect against backflow, back-siphonage and contamination of the potable water system in accordance with the Company's Cross Connection Control Plan.

15.9. A water utility may terminate a customer's multi-use service for non-payment of a valid water bill for multi-use service, in accordance with the Board's rules governing discontinuance of service at N.J.A.C. 14:3-3A.4(j).

PINELANDS WATER COMPANY

Thirteenth Revised Sheet No. 37
Canceling
Twelfth Revised Sheet No. 37

B.P.U. No. 2 - WATER

RATE SCHEDULE NO. 1

GENERAL WATER SERVICE - GS

APPLICABILITY:

Applicable to the use of water supplied through meters in the entire territory served by the Company.

CHARACTER OF SERVICE:

Continuous except as limited by "Standard Terms and Conditions".

RATE:

Consumption Charges

For all water used - Rate per 1,000 gallons - $4.5840

Quarterly Service Charge

Size of Meter	Per Quarter
5/8"	$ 55.50
3/4"	83.13
1"	138.48
1 ½"	276.87
2"	443.04

A customer with a separate irrigation meter for a lawn sprinkler system shall be charged a single service charge for a 3/4" meter, unless either meter is larger than 3/4", in which case the larger meter size will be charged.

Billing shall be based on the facilities charge plus consumption charges (shown above) for each period.

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The State of New Jersey enacted Ch. 443 of the Laws of New Jersey 1983 concerning the periodic testing of public water supplies which establishes a water tax of $0.01 per 1,000 gallons of water. This tax is reflected and included in the above rates.

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PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

Second Revised Sheet No. 38
Canceling
First Revised Sheet No. 38

RATE SCHEDULE No. 1 (Continued)

GENERAL WATER SERVICE - GS

TERMS OF PAYMENT:

A customer has at least 15 days to pay a valid bill for service after the Company sends it. The Company will take into consideration mailing time but reserves the right to issue a written notice of its intention to discontinue water service.

Bills for metered water are rendered at least once in each calendar quarter. Bills may be rendered monthly when the consumption charges for the last four quarters have exceeded $1,200.00 or when mutually agreed upon by the customer and Company.

SPECIAL PROVISIONS:

Whenever service to a customer is established or discontinued during a billing period, the facilities charge will be pro-rated on a daily basis to the date when service is established or discontinued to such customer.

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PINELANDS WATER COMPANY

Thirteenth Revised Sheet No. 39
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Twelfth Revised Sheet No. 39

B.P.U. No. 2 - WATER

RATE SCHEDULE NO. 2

PRIVATE FIRE SERVICE - PFS

APPLICABILITY:

Applicable to customers throughout entire territory for private fire protection service. Excludes residential customers with a service line of 2" or less, any residential health care facility and any rooming or boarding house (NJSA 48:19-18).

CHARACTER OF SERVICE:

Continuous except as limited by "Standard Terms and Conditions".

RATE:

Sprinkler connections without hose or hydrants connected to them on private property where such sprinkler connections are independently metered and used for fire service only.

Service Charge Size of Meter	Per Quarter	Per Month
5/8"	$ 55.50	$ 18.50
3/4"	83.13	27.71
1"	138.48	46.16
1 ½"	276.87	92.29
2"	443.04	147.68

Consumption Charges

In accordance with Paragraph 10.4 of the "Standard Terms and Conditions", water for any use other than fire protection shall be charged at the General Water Service Rate for Consumption Charges (as shown on Sheet No. 37).

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PINELANDS WATER COMPANY

B.P.U. No. 2 – WATER

Second Revised Sheet No. 40
Canceling
First Revised Sheet No. 40

RATE SCHEDULE NO. 2 (Continued)

PRIVATE FIRE SERVICE - PFS

TERMS OF PAYMENT:

A customer has at least 15 days to pay a valid bill for service after the Company sends it. The Company will take into consideration mailing time but reserves the right to issue a written notice of its intention to discontinue water service.

Bills are rendered quarterly unless monthly as agreed by the customer and the Company.

SPECIAL PROVISIONS:

See "Standard Terms and Conditions", Paragraphs 10.1 through 10.7 inclusive, Sheet No. 30.

Whenever service to a customer is established or discontinued during a billing period, the service charge will be pro-rated on a daily basis to the date when service is established or discontinued to such customer.

PINELANDS WATER COMPANY

B.P.U. No. 2 - WATER

Thirteenth Revised Sheet No. 41
Canceling
Twelfth Revised Sheet No. 41

RATE SCHEDULE NO. 3

PUBLIC FIRE PROTECTION SERVICE

APPLICABLE TO USE OF SERVICE FOR:

Municipal Fire Hydrants in Southampton Township.

CHARACTER OF SERVICE:

The service to fire hydrants shall be subject to the rules and regulations of Pinelands Water Company. Such service shall be only such as the Pinelands Water Company can deliver at the time of the demand.

RATES:

$661.65 per hydrant, per year.

TERMS:

Service shall be rendered on an annual basis from the first day of January to the next succeeding first day of January.

Service may be terminated by Southampton Township by giving notice of at least thirty (30) days that service is to be terminated.

TERMS OF PAYMENT:

A customer has at least 15 days to pay a valid bill for service after the Company sends it. The Company will take into consideration mailing time but reserves the right to issue a written notice of its intention to discontinue water service.

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PINELANDS WATER COMPANY

B.P.U. No. 2 – WATER

First Revised Sheet No. 42
Canceling
Original Sheet No. 42

RATE SCHEDULE NO. 4

MISCELLANEOUS SERVICE

APPLICABILITY:

Applicable to the following types of miscellaneous service throughout the entire territory.

CHARACTER OF SERVICE:

Continuous except as limited by "Standard Terms and Conditions".

RATE:

WATER FOR BUILDING OR OTHER TEMPORARY PURPOSE

Metered
Water for building or other temporary purpose will be supplied through meters when feasible and charged for at General Water Service Rate.

See rates for General Water Service, Rate Schedule No. 1, Sheet No. 37 and Sheet No. 38.

Unmetered:
The rates shall be the same as set forth under the General Water Service, Rate Schedule No. 1, on the basis of the Company's estimate of the volume of water to be used. Charges shall be payable in advance.

Special Provisions
Where metered service is provided, a deposit equal to the cost of the meter shall be made with the Company. The meter shall be kept safe and accessible during its use. The deposit, less the cost of repairs to the meter, if any, will be returned to the applicant by the Company after surrender of the meter and payment of all charges for water supplied through it.

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PINELANDS WATER COMPANY

B.P.U. No. 2 – WATER

First Revised Sheet No. 43
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Original Sheet No. 43

RATE SCHEDULE NO. 4 (Continued)

MISCELLANEOUS SERVICE

CHARGES NOT INVOLVING USE OF WATER

Resumption of service after discontinuance due to nonpayment of bills or violation of the Company's Tariff.

During regular business hours	$40.00
During nonbusiness hours	$50.00

A utility shall not make any charge for replacing a meter where such replacement is requested by a customer, unless the meter first referred to has been in use less than two years in which case a charge, which shall not exceed the cost of making the replacement, may be made. No charge shall be made for replacing a meter for test purposes, or for replacing a meter necessitated by a change in service characteristics which conform to the provisions of these regulations, or for replacing a defective meter, unless the defect is due to the negligence of the customer in which case a charge which shall not exceed the cost of making the replacement may be made.

Replacing meters within a period of one year at the request of the customer.

5/8 and 3/4 inch meters $52.00

1 inch and over - At cost, including labor, materials and transportation. Meter repair is not to exceed the costs that the Company would incur for its purchase of a new meter.

Multiple meters at same location - at cost, including labor, materials

Removing and replacing meters damaged due to negligence of customer including frozen and broken meters.

Meter size - 5/8 inch	$60.00
3/4 inch	$72.00
1 inch	$84.00

Over 1 inch - At cost, including labor, materials and transportation. Meter repair is not to exceed the costs that the Company would incur for its purchase of a new meter.

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PINELANDS WATER COMPANY

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Original Sheet No. 44

B.P.U. No. 2 – WATER

RATE SCHEDULE NO. 4 (Continued)

MISCELLANEOUS SERVICE

CHARGES NOT INVOLVING USE OF WATER (Continued)

Turn off charge - when service is discontinued at the request of the customer, such as for seasonal reasons or termination of service.

Turn off charge $40.00

Multiple meters at same location - at cost including labor, materials and transportation.

Turn on charge - when service had been discontinued at the request of the customer for seasonal reasons when meter is not removed. During turn off period facilities charges, including minimum or consumption charges, will not be in effect.

Turn on charge $40.00

Multiple meters at same location - at cost, including labor, materials and transportation.

Bad check charge - Should the Company receive a negotiable instrument from a customer in payment of a bill, charge, or deposit due and such instrument is subsequently dishonored or uncollectible for any reason, the Company shall charge the customer a handling charge of $25.00 per instrument.

Meter testing charge - Where the customer is to be charged for meter testing as provided for by this tariff, the charges shall be as follows:

For meters sized up to 2 inches - $68.00.
For meters sized over 2 inches - At cost including labor, meters and transportation.

TERM:

As required to meet the class of service rendered.

TERMS OF PAYMENT:

A customer has at least 15 days to pay a valid bill for service after the Company sends it. The Company will take into consideration mailing time but reserves the right to issue a written notice of its intention to discontinue water service.

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PINELANDS WATER COMPANY

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B.P.U. No. 2 – WATER

RATE SCHEDULE NO. 4 (Continued)

MISCELLANEOUS SERVICE

CHARGES NOT INVOLVING USE OF WATER (Continued)

SPECIAL PROVISIONS:

See "Standard Terms and Conditions".

UNAUTHORIZED WATER USE

APPLICABILITY:

Applicable when the Company has determined the unauthorized use of potable water from the Company water system by any party, including, but not limited to customers and/or other entities or personnel.

CHARACTER OF SERVICE:

Unauthorized and used without knowledge of the Company at the time of the unauthorized usage. This can be unauthorized use of water through Fire Hydrant use, or other connection to the Company water system.

RATE:

CHARGES FOR UNAUTHORIZED WATER USE

All unauthorized usage is unmetered. Meters that may be used by unauthorized users are not recognized by the Company and may not be considered in determining the amount of water used. The Company will have the authority to estimate usage based on its records, observations and judgement.

In addition to any legal action that may be initiated by the Company and/or any criminal action initated by the appropriate governmental authority, the following charges are in effect for unauthorized use of water;consisting of an incident charge plus a volumetric charge:

Charge per incident: $1,000 for the first incident; increasing in increments of $1,000 for each successive incident, without limit.

Volumetric Charge: $1.00 per gallon of water used, as determined by the Company.

SPECIAL PROVISIONS:

See "Standard Terms and Conditions".

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TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
TWENTY-FOURTH REVISED TARIFF COVER PAGE
CANCELING
TWENTY-THIRD REVISED TARIFF COVER PAGE
AUGUST 31, 2022
EFFECTIVE DATE: SEPTEMBER 1, 2022

TIDEWATER UTILITIES, INC.

Schedule made and filed by Tidewater Utilities, Inc., pursuant to the requirements of the Public Service Commission of the State of Delaware, showing the rates, charges, rules and regulations applicable to its water service in the State of Delaware.

Tariff for

Water Service

Applicable To Service Areas in

New Castle, Kent and Sussex Counties, Delaware

By: A. Bruce O'Connor, President
1100 South Little Creek Road
Dover Delaware 19901
1-800- 523-7224 or 302-734-7500

TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
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SEPTEMBER 20, 1999
EFFECTIVE DATE: DECEMBER 1, 2000

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TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
ORIGINAL PAGE NO. 1
SEPTEMBER 20, 1999
EFFECTIVE DATE: DECEMBER 1, 2000

TIDEWATER UTILITIES, INC.

I. RULES AND REGULATIONS GOVERNING WATER SERVICE AND SERVICE RATES AND CHARGES

1. APPLICATIONS FOR SERVICE

1.1 DEFINITIONS:

a) "Customer" means the owner or lessee of the property, or any person, partnership, firm, association or corporation or governmental agency being supplied with water by the Company.

b) "Company" means Tidewater Utilities, Inc.

c) "Premises" means the land and building or structure owned, rented or leased by the customer.

d) "Water Main" means a water pipe line owned and maintained by the Company, located in public rights-of-way or utility easements, which distributes water to the premises of one or more customers.

e) "Commission" means Delaware Public Service Commission.

f) "Unit" means commercial space from which a business is operated or a dwelling occupied or intended to be occupied as separate living quarters by a single family, a group of persons living together as a household or a person living alone, consisting of a house, townhouse, mobile home, apartment or efficiency apartment, containing private kitchen, bathroom and sleeping facilities.

g) "Office of the Company" means 1100 South Little Creek Road, Dover Delaware 19901; Telephone (800) 523-7224 or (302) 734-7500.

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1.2 WRITTEN APPLICATION FOR CONNECTION AND SERVICE:

A new water service connection will be made and water furnished upon receipt of written application signed by the property owner or lessee, or his properly authorized agent, together with payment of the service connection charge and deposit, if any. Application forms for this purpose will be furnished by the Company and all applications must receive the approval of the Company before connection is made or water furnished.

1.3 APPLICATION FOR SERVICE:

Where a connection had been previously installed and new water service is desired, for example, because of a change of ownership or occupancy, a proper written or oral notification is to be made by the owner or lessee. The Company shall have the right upon ten days notice to disconnect water service to the premises until such notification is made and approved.

1.4 COMMENCEMENT OF SERVICE:

Upon installation of a service connection and turn on of water service to the property, the quarterly billing period will commence, regardless of the date when the customer may make first actual use of such connected and available services.

1.5 RENEWAL OF DISCONTINUED SERVICE:

Service will be renewed under a proper application when the conditions under which such service was discontinued are corrected and upon the payment of all charges and amounts due as provided in the schedule of rates and rules of the Company.

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EFFECTIVE DATE: FEBRUARY 1, 2003

2. CUSTOMER DEPOSITS AND BILLINGS

2.1 GENERAL:

The Company may require deposits from customers who have failed to make timely payment to secure future payment of bills for water service. The amount of the deposit shall equal the applicable minimum service charge for a period of two billing periods.

2.2 INTEREST ON DEPOSITS:

Interest on the deposit will accrue at the current rate approved by the Commission. Interest accruing on customer deposits will be credited to the customers' bills once every twelve months.

2.3 RETURN OF DEPOSITS:

Deposits received from customers will be held for eight consecutive billing periods. If the depositor's water bill has been paid in full by the due date for each such eight consecutive billing periods, the deposit will be refunded by a credit to the customer's account, with interest, on the ninth quarterly billing period.

3. SERVICE CONNECTIONS

3.1 COMPANY MAINS AND SERVICE LINES:

The Company will make all connections to its mains, furnish and install and maintain all service lines from the main to and including the curb stop and box, or meter stop and meter box, which will be placed inside the curb line, all of which service lines will be the property of the Company and under its control. The Company reserves the right to determine the size and kind of the Company service line which runs from the water main to the curb stop or meter stop and which is to be installed by the Company at the rates usually charged for such installation. The minimum size service for commercial customers shall be one inch.

3.2 PROPERTY OWNER SERVICE LINE:

The Company will prescribe the size, type and class of pipe and all materials laid between the curb stop and the property which is to be furnished and installed by the owner of the property. All service lines must have a meter pit with approved yoke and stops installed within ten feet of the property line. All service lines from the curb to the property must be laid in a straight line and at least 42" below the surface of the ground.

The customer shall install all service lines located on its premises in accordance with the following Company specifications: Minimum size of ¾ inch diameter pipe: SCH 40 PVC, SDR-7 or SDR-9, connected only with glue or compression fittings. No hose clamp fittings shall be permitted. The customer shall also install a proper shut-off valve in the service line before such line enters the customer's building, structure or water fixtures.

The Company shall not be responsible for low water pressure caused by abnormally long and/or undersized service lines.

3.3 STANDBY OR SUPPLEMENTAL CONNECTION:

A customer desiring water service for standby to supplement his present water supply shall make application for service and agree to a water service contract. Under no circumstances shall a Company water service be connected to any other source of water. A positive air break of at least six inches must be maintained between Company water supplies and any other water source.

3.4 SEPARATE TRENCH:

No water service pipe shall be laid in the same trench with gas pipe, drain or sewer pipe, or electric cable, or any other facility. All sewer connections must be laid in a separate trench having a minimum 10-foot separation.

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3.5 PROPERTY SUPPLIED BY SINGLE SERVICE LINE:

A customer service line from the meter to a property shall not supply more than one property, except under special circumstances approved in writing by the Company. Any such property upon written request of the owner may be supplied by two or more meters, each of which shall be considered for billing purposes as being one customer account, and provided that each supply to each such meter has an individual control at or near the curb. Installation or continuance of any such multiple meter applications shall be in the discretion of the Company, and the Company shall have the right to reduce, modify or discontinue any service as it sees fit.

3.6 CROSS CONNECTION CONTROL

a) A cross connection is any pipe, valve or other physical connection or other arrangement or device connecting the pipelines of the Company, or facilities directly or indirectly connected therewith, to and with pipes or fixtures by which any contamination might be admitted or drawn from lines other than the Company's into the distribution system of the Company, or into lines connected therewith.

b) No direct connection of pumping equipment for any purpose or cross-connection with any other piping system will be allowed unless approved in writing by the Company.

c) The Company reserves the right to require any customer, owner or tenant to install, at their expense, and as part of a service connection such equipment or material which it deems necessary and as may be acceptable or required from time to time by any regulatory agency or good engineering practices, to prevent backflow into the water supply and minimize or eliminate contamination of its water supply system.

d) Backflow preventors shall be required in all domestic, commercial, industrial, public and municipal services where water is used in any process which, in the opinion of the Company, could constitute a cross-connection and/or health hazard. Customer shall install backflow preventers on their service lines when they connect any irrigation system or equipment on their property. All back flow prevention equipment must be approved by the Company prior to installation.

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3.6 CROSS CONNECTION CONTROL – Continued

e) Upon issuance of a non-potable water well permit and installation of such non-potable well on customer's property, and in accordance with Title 7 Chapter 60 §6075 (d), the Company may inspect the well at any reasonable time to insure that there are not interconnections with any portion of any building's plumbing and/or the Company's water service connection. Additionally, the Company may conduct an inspection for interconnections with a non-potable well upon valid reasons including suspicious water usage

4. DISCONTINUANCE OF SERVICE

4.1 AT THE REQUEST OF THE CUSTOMER:

All agreements regarding water service shall continue in full force and effect until and unless reasonable oral or written notice is given of a desire to terminate the contract by reason of a customer moving off the Company's system in the event of a change in ownership or occupancy. Water may be turned off from the premises temporarily upon the oral or written request of the customer and upon payment to the Company of the approved Turn-off Charge without in any way affecting the existing agreement for service or the customer's duty to pay the approved Facilities Charges. In the event a Seasonal Turn Off is requested, the customer shall pay the approved seasonal Turn-off Charge at the time of the turn off. In each case service will be restored upon payment of any required Turn-on Charge and other amounts due before service is restored.

4.2 BY COMPANY:

Service may be discontinued by the Company for any of the following reasons:

(a) For the use of water for any property or purpose other than described in the application.

(b) For the willful waste of water through improper or imperfect pipes, fixtures, use or otherwise.

(c) For tampering with or damaging any service pipe, meter, curb stop, cock, or seal, or any other equipment or appliance of the Company.

(d) In case of vacancy of the property.

(e) For neglecting to make or renew deposits or for nonpayment of any charge due under the rules or tariff of the Company.

(f) For refusal of reasonable access to the property for purpose of inspecting, reading, or removing the meter, and for failure to afford Company access to the meter at least once every three months during the Company's regular working hours, on Monday through Friday.

(g) For making or refusing to sever any cross-connection between a pipe or a fixture carrying water furnished by the Company and a pipe or fixture carrying water from any other source.

(h) For nonpayment of water service or repair charges.

(i) For interfering with or adversely affecting or impairing service to other customers of the Company.

(j) For extending service lines or other water lines to other buildings, structures or water fixtures without first obtaining prior written approval of the Company and/or refusing to pay the applicable tariff for such extensions of the Company's water service.

(k) For refusal to have water pipes properly arranged for meter installation.

(l) If water bills have not been paid in twenty days, water service may be discontinued in accordance with the delinquent bill procedures provided in these rules. For temporary shut-off either requested by a customer or for failure to pay past due bills there will be a charge for turning off and there will be a charge for turning back on.

(m) For violation of any rules of the Company as filed with the Public Service Commission or any violation of State or Municipal regulations governing such water service.

(n) The Company can discontinue service immediately when it receives notice that a customer has issued a bad check to cover a past due water account that was scheduled for disconnection due to non-payment.

(o) For any other reasons set forth in the regulations of the Commission ("Minimum Standards Governing Service Provided by Public Water Companies").

4.3 TURNING OFF WATER WITHOUT AUTHORITY:

A service may be turned on or turned off only by the Company. The customer shall not turn the water on or off at any curb or meter stop or disconnect or remove the meter or permit its disconnection or removal without the written consent of the Company. Turning on or turning off service shall not be deemed as a discontinuance of service or a termination of the service contract.

4.4 TEMPORARY DISCONTINUANCE OF SERVICE:

As necessity may arise in the case of breakdown, emergency or any other unavoidable cause, the Company shall have the right to shut off the water supply temporarily in order to make the necessary repairs, connections, etc.; but the Company will use all reasonable and practical measures to notify the customer in advance of such temporary discontinuance of service. In such case, the Company shall not in any way be liable for any loss or damage or any inconvenience suffered by the customer or any claim of any nature for interruption in service, lessening of supply, inadequate pressure, poor quality of water, or for any other cause beyond its control. When a supply of water is to be temporarily shut off, notice will be given, when practicable, to all customers affected by the shutting off, stating the probable duration of the interruption of service, and also the purpose for which the shut off is made.

4.5 RESERVATION AND REGULATION OF SUPPLY:

The Company shall have the right to reserve a sufficient supply of water at all times in its reservoirs to provide for fire service (if applicable) and other emergencies, and may restrict or regulate the quantity or manner of water used by the customer in case of scarcity or whenever the public welfare may require it.

4.6 ACCESS:

Company's authorized agent may have access to customer's premises during regular business hours or at such other times as may be necessary in the case of an emergency. Whenever practicable, the Company will notify the customer in advance of its intent to access the premises.

5. METERS

5.1 METERS FURNISHED BY THE COMPANY:

All meters will be furnished and installed by the Company and will remain the property of the Company and be accessible to and subject to its control.

5.2 ALL SERVICES TO BE METERED:

Each service line from a curb to a property shall be metered, and the Company reserves the right to determine the size and type of the meter (including remote meters and appurtenances).

5.3 LOCATION OF METERS:

All meters shall be set in suitable below ground meter boxes or in a suitable location on the outside or inside of a building on the premises, by the Company. A below-ground meter box shall be located within ten feet of the property line. Meters 1-1/2" and larger shall be set within the building in an open space so that the meter is accessible at all times for reading and repair. A meter shall never be placed behind an appliance, heating equipment, or other fixtures hindering its free and easy access. In cases where it is not practical to put a meter within a building, or at the discretion of the Company, a brick or concrete pit shall be provided at the owner's cost to house the meter. A suitable steel or cast-iron cover shall be provided. The Company shall make available to the customer or his agents a drawing of the meter box. All meters three inches and larger shall be provided with a bypass to provide the customer with emergency water. After plumbing has been installed and tested, the meter bars must be removed, bypasses closed, and the water shut off at the curb so that the water is not available until the meter has been installed.

Remote meters and related appurtenances may be installed in a form and location determined by the Company. The customer shall provide reasonable access to such equipment.

Water service for construction purposes will be supplied through a metered connection.

5.4 RESPONSIBILITY FOR DAMAGE:

Meters will be maintained and repaired by the Company so far as ordinary wear and tear are concerned; but damage due to freezing, hot water, or external damage due to negligence of the customer shall be paid for by the customer. The Company's judgment shall be final and binding in all matters pertaining to repairs to meters.

5.5 COST OF REPAIR OR REINSTALLATION:

The charge for repair or reinstallation or changing of the meter when removed because of damage in any way due to the negligence of the customer will be charged for on the basis of labor and materials to repair.

5.6 MINIMUM CHARGE:

Every meter is installed subject to a fixed Facilities Charge in accordance with the Company's established service rates.

5.7 NOTICE TO COMPANY OF METER PROBLEMS:

The customer shall immediately notify the Company of injury to or the inaccuracy or non-working of the meter as soon as it comes to his knowledge.

5.8 REGISTRATION CONCLUSIVE:

The quantity recorded by the meter shall be conclusive on both the customer and the Company, except when the meter has been found to be registering inaccurately or has ceased to register. In such case the quantity may be determined by the average registration of the meter when in order.

5.9 DISPUTED ACCOUNT:

In case of a disputed account involving the accuracy of the meter, such meter will be tested upon the request of the customer in conformity with the provisions of the rules and regulations of the Commission pertaining to water utilities. In the event that the meter so tested is found to have an error in registration in excess of 2%, slow or fast, the bills will be increased or decreased accordingly, as provided by the aforesaid rules.

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APRIL 26, 2004
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5.10 REQUEST FOR METER TEST:

When meters are removed after installation, at the request of the customer for testing, the following rules of the Commission will apply:

Upon request by a customer, the utility shall make a test of the accuracy of the registration of the meter serving his premises.

If the meter is found to be within 2% of zero error the customer may be billed for the testing. The amount of the fee shall be $30.06, for meter service up to one inch, and for other domestic services up to two inches the fee shall be $60.11. If the meter is found to be greater than 2% of zero error the customer shall not be charged for testing.

The customer or his representative may be present when the meter is tested. In either case, a written report of the results of the test shall be made to the customer within a reasonable time after the completion of the test. A record of the report along with the complete record of the test shall be kept on file at the utility's office for at least three years.

5.11 PERIODIC METER TESTS:

In order to check the accuracy of registration of meters in service, periodic tests shall be made by the Company and at intervals not exceeding the following rules of the Commission:

(1)	5/8 in. and ¾ in.	Once every 15 years
(2)	1 in. and 1-1/2 in.	Once every 10 years
(3)	2 in., 3 in., and 4 in.	Once every 3 years
(4)	6 in. and larger	Once every year

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NOVEMBER 25, 2013
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6. PUBLIC FIRE SERVICE

6.1 ALLOWABLE USE:

No person except an authorized agent of the Company or other person authorized by the Company shall take water from any public fire hydrant or hose plug, except for fire purposes or the use of the fire department in case of fire, and no public fire hydrant shall be used for sprinkling streets, flushing sewers or gutters, or for any other purposes except with the approval and consent of the Company.

6.2 MAINTENANCE:

All Company-owned fire hydrants shall be maintained by the Company. The Company assumes no maintenance, repair or ownership responsibility for any fire hydrant installed by a developer, builder or customer unless and until such fire hydrant has been accepted by the Company as part of its public fire service system.

6.3 CHANGE OF LOCATION:

Upon written request for a change in the location of any fire hydrant, the Company, if an approved location can be found, will make such change at the expense of the person making the request. Charges shall be based on time and material to make such changes.

6.4 INSPECTION:

Upon request of the Fire Marshall or duly authorized officials of any municipality or governing body, the Company will make inspections at convenient times and at reasonable intervals to determine the condition of the fire hydrants, such inspections to be made by a representative of the Company and a duly authorized representative of the Fire Marshall or municipality.

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7. RESPONSIBILITY OF THE COMPANY

7.1 LIMITATION OF COMPANY RESPONSIBILITY:

It is agreed by the parties receiving fire service and any other water service, that the Company does not assume any liability as insurer of property or person and that the Company does not guarantee any continuing or special service, pressure, capacity, or facility. It is agreed by the parties receiving services that the Company shall be free and exempt of any and all claims for loss, damage or injury to any person or property by reason of fire, water leak or flood, failure to maintain water pressure or capacity.

8. BILLS AND PAYMENT

8.1 PLACE OF PAYMENT:

Bills are payable at the office of the Company or other designated location, forthwith upon receipt.

8.2 BILLS RENDERED AND DUE:

Regular meter readings will be made quarterly and bills will be rendered as soon as possible after the reading of the meter. All bills are due and payable upon presentation or delivery. All billings are payable at the Office of the Company.

All charges will be in accordance with tariffs approved by the Commission, a copy of which is attached hereto.

Quarterly Facilities Charges shall not be reduced or discounted for any reason except in the event of a Seasonal Turn Off, or new customer connection in which case the Facilities Charge will be prorated.

8.3 DELINQUENT BILLS:

If a bill remains unpaid for a period of twenty-five (25) days from the date rendered it shall be classified as delinquent, and a late notice will be sent. If the bill is then not paid within ten (10) days of mailing of the late notice and if payment arrangements are not made service will be terminated. If service is thus terminated it will not be restored until all unpaid bills and charges including the turn off and turn on charges are paid or satisfactory arrangements are made for payment. If the bill serves a multi-dwelling premise, a tag will be attached to the entrance door and the service will be terminated within forty-eight (48) hours.

The Company shall charge a late fee payment of 0.75% per month on all account balances that are not paid within thirty (30) days from the date rendered.

8.4 SEASONAL TURN OFFS:

Customers may request a Seasonal Turn Off by giving notice to the Company and paying the Seasonal Turn Off Charge. During the period of the Seasonal Turn Off, the Customer will not be required to make payment of the Facilities Charge. Service thus suspended will not be restored until all unpaid bills and charges including turn off charges are paid or satisfactory arrangements are made for payment. The amount of the Seasonal Turn Off Charge will depend upon meter size and is set forth below.

8.5 TEMPORARY SHUT OFFS:

Customers desiring an abatement from water bills due to vacancy shall give notice in writing to the Company requesting that water service be temporarily shut off. Temporary Turn-off and Turn-on Charges will apply. No abatement on water bills will be made for leaks or for water wasted by damaged fixtures.

9. GENERAL

9.1 COMPLAINTS:

Complaints with regard to the character of quality of service furnished or the reading of meters or the bills rendered, must be made at the Company's office, and a record of such complaint will be kept by the Company, giving the name and address of the complainant, the date and nature of the complaint, and the date and nature of the remedial action taken by the Company.

9.2 GENERAL:

All pipes, meters and fixtures shall be subject at all reasonable hours to inspection by properly identified employees of the Company. No plumber, owner, or other unauthorized person shall turn the water on or off at the curb or meter stop or disconnect or remove the meter without the consent of the Company.

No agent or employee of the Company has authority to bind it to any promise, agreement, or representation not provided for in these rules and regulations.

The Company reserves the right, subject to the approval of the Public Service Commission, to change, take from, or add to, the foregoing rules and regulation.

II. RULES GOVERNING EXTENSIONS

1. PURPOSE

1.01 The purpose of these rules is to establish a uniform system for the control of all engineering, construction and account procedures used by Tidewater Utilities, Inc. in making water main extensions.

1.02 Any policies or procedures indicated herein which may conflict with the provisions of any written agreement pertaining to the installation of water facilities to or within any property development or subdivision shall be superseded by the terms of such specific agreement.

2. PLANS

2.01 The developer shall submit two sets of preliminary plot plans of new developments or subdivisions or of changes within a subdivision to the Company at the same time that such information is presented to other agencies having jurisdiction or control.

2.02 Upon approval of the plot plan by other controlling agencies, the developer will furnish the Company with two sets of such approved drawings showing street names, street numbers (if available) and lot numbers. The Company will design and layout the water distribution systems showing the size of mains, location of valves, fittings, hydrants, and other appurtenances, and will return one set of drawings to the developer for approval.

2.03 The developer shall be responsible to furnish the Company with a drawing reproducible in written and electronic form, showing street names, street numbers (if available), lot numbers, and the water distribution system as laid out by the Company and approved by the developer, at no cost to the Company.

3. REQUESTS FOR WATER MAIN EXTENSIONS

3.01 The developer shall submit to the Company, in writing, all requests for water main extensions. Said requests will indicate the street names and lot numbers proposed to be served by the extension.

3.02 Upon receipt of a request for an extension, the Company will prepare and submit to the developer an appropriate agreement pertaining to the facilities to be provided and the work proposed to be done.

3.03 The developer shall execute said agreement and return same to the Company with a deposit equal to the total estimated cost, as set forth in the agreement, prior to the time when he desires work to be started.

3.04 The developer should take into account the time required to obtain materials and necessary permits. Materials will not be ordered until executed agreements and deposits are received by the Company.

3.05 If an individual customer is not near an existing main, the customer must apply for the necessary extension. If the Company cannot justify the cost of a main extension, the Company and customer shall enter into an agreement providing for payment of the cost of such extension.

4. PERMITS

4.01 The Company will be responsible for obtaining Department of Health, Fire Marshall, State Highway Department, and such other water facility construction permits as may be required.

5. WATER MAIN INSTALLATIONS

5.01 The installation of all water mains and appurtenances shall be performed by the Company or the Company's contractor. No developer shall be permitted to enter into a contract for the installation of water mains, nor shall he be permitted to make such installation with his own equipment and personnel, unless approved in advance and inspected by the Company. All installations shall conform to the Company's specifications.

5.02 The developer shall be responsible to perform and furnish the following:

(a) Provide a suitable area for stockpiling or stringing of pipe materials so that they may remain in a fixed location until completion of installation.

(b) Rough grade the limits of street rights-of-way for the total length of the extension.

(c) Provide a water main stake-out on the property line of the same side of the street on which the main is to be laid. Said stake-out shall indicate the off-set distance from the stake to the center line of pipeline, the cut required from the top of stake to the invert of the pipeline (the minimum cover from finished grade to top of pipe is four feet), the location of valves, fittings and fire hydrants. Stakes are to be set no farther apart than one hundred feet on straight runs and fifty feet on all curves.

5.03 When the provisions of Paragraph 5.02 have been met and materials have been received, construction of water main will begin.

5.04 Upon completion of installation, the water main will be tested and disinfected for twenty-four hours prior to being thoroughly flushed, after which time it shall be put into service.

6. REQUESTS FOR SERVICE INSTALLATIONS

6.01 All water service lines extending from the main to the property will be installed by the Company or the Company's contractor.

6.02 The service connection fee for water services shall be the tariff in effect as approved by the Commission. Services provided for this fee include the furnishing and installing of water meter, meter pit and stops for ¾" and 1" services and furnishing and installing water meter and stops for 1-1/2" and 2" services. The customer shall provide the meter pit and stops for 1-1/2" or larger meters.

6.03 Requests for water service installations will be made in writing by the developer, or the property owner or lessees, at least forty-five (45) days in advance of the date on which they are desired to put into service. Said requests will make reference to specific street addresses and lot numbers for which water service is requested. Payment in accordance with Paragraph 6.02 shall accompany a request for water service installations.

6.04 Water services will not be connected to mains until said mains have been tested, disinfected, flushed and put into service.

6.05 The Company shall determine the location of the water service location. Finished grade will be indicated by the developer or owner on a stake so that the meter box can be installed to grade.

6.06 Upon completion of installation the Company or its contractor shall install a stake extending at least three feet above-ground level immediately adjacent to the meter box to indicate its location.

7. ADJUSTMENTS TO FACILITIES

7.01 Any adjustments of the Company's facilities which may be necessitated due to changes in grade or due to damage by others will be done by the Company or its contractor at developer's expense.

7.02 If any valve boxes, curb boxes, or meter pits are covered up or damaged by others, these facilities will be located and brought to proper grade by the Company or its contractor at developer's expense.

7.03 Developer shall not, under any circumstances, operate or alter or allow others to operate or alter the Company's facilities. Any operation or alteration of the Company's facilities will be done by the Company's personnel upon request.

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8. MISCELLANEOUS

8.01 These rules and regulations supplement all applicable regulations governing service supplied by water companies adapted by the Commission ("Minimum Standards Governing Service Provided by Public Water Companies").

8.02 The Company reserves the right to amend, change, revoke or add to these rules, and any such change shall have only prospective effect.

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FOURTEENTH REVISED PAGE NO. 21
CANCELING
THIRTEENTH REVISED PAGE NO. 21
AUGUST 31, 2022
EFFECTIVE DATE: SEPTEMBER 1, 2022

TARIFF SCHEDULE OF RATES

1. GENERAL WATER SERVICE CHARGES:

General Water Service customers are charged a Facilities Charge plus a Water Consumption Charge and a Public Fire Hydrant Charge, where applicable:

(a) FACILITIES CHARGES:

A Facilities Charge payable in advance is based on the customer's meter size, as follows:

Meter Size	Monthly Facilities Charge	Quarterly Facilities Charge
5/8" - 3/4"	$ 17.11	$ 51.33
1"	$ 28.51	$ 85.53
1-1/2"	$ 51.34	$ 154.02
2"	$ 79.86	$ 239.58
3"	$ 154.01	$ 462.03
4"	$ 239.58	$ 718.74
6"	$ 467.74	$ 1,403.22
8"	$ 730.13	$ 2,190.39
10"	$ 970.89	$ 2,912.67

(b) WATER CONSUMPTION CHARGES:

Quarterly Residential Customers	Rate per Thousand Gallons
0 – 5,000 gallons	$7.2619
5,001 – 20,000 gallons	$7.3555
Over 20,000 gallons	$7.4503

All other general water service customers are charged for consumption at $7.4493 per thousand gallons registered on the meter.

(c) PUBLIC FIRE HYDRANT CHARGES:

Where fire hydrants are installed, such districts will be termed Fire Hydrant Districts. A service charge of $13.38 per quarter, or $4.46 per month, will be added to the regular Facilities Charge on all services in these districts. Apartment houses, hotels, motels and other multiple unit buildings will be charged one such hydrant service charge of $13.38 per quarter, or $4.46 per month, for every four units.

TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
ELEVENTH REVISED SHEET PAGE NO. 22
CANCELING
TENTH REVISED PAGE NO. 22
AUGUST 31, 2022
EFFECTIVE DATE: SEPTEMBER 1, 2022

2. PRIVATE FIRE SERVICE CHARGES:

a) Customers with one service line providing both General Water Service and Private Fire Service (not used for General Water Service purposes) are charged a Private Fire Facilities Charge equal to the charge for a meter the same size as the service line, plus a charge for General Water Service based on the size of the meter, plus a Water Usage Charge, plus a Public Fire Hydrant Charge, if applicable. The Private Fire Facilities Charge is as follows:

Size of Meter	Monthly Facilities Charge	Quarterly Facilities Charge
1”	$ 8.43	$ 25.29
2”	$ 29.57	$ 88.71
4”	$125.43	$ 376.29
6”	$280.47	$ 841.41
8”	$498.95	$ 1,496.85

b) Customers with a dedicated Private Fire Service line are charged a Private Fire Facilities Charge based on the meter size or, if there is no meter, based on the charge for a meter the same size as the service line, plus a Water Usage Charge, plus a Public Fire Hydrant Charge, if applicable. The Private Fire Facilities Charge is as follows:

Size of Meter	Monthly Facilities Charge	Quarterly Facilities Charge
1”	$ 8.43	$ 25.29
2”	$ 29.57	$ 88.71
4”	$125.43	$ 376.29
6”	$280.47	$ 841.41
8”	$498.95	$ 1,496.85

c) Customers applying for one service line based on meter size and who also have Private Fire Service after the meter are charged a General Water Service Charge and a Public Fire Hydrant Charge, if applicable. In each case, any water available for fire protection, but used for purposes other than fire protection, is to be metered and to be subject to a Water Consumption Charge.

TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
ELEVENTH REVISED PAGE NO. 23
CANCELING
TENTH REVISED PAGE NO. 23
NOVEMBER 25, 2013
EFFECTIVE DATE: AUGUST 19, 2014

3. TURN-OFF AND TURN-ON CHARGES:

When temporary shut-off is made at the request of a customer, or for the failure of the customer to pay past-due bills or for another reason set forth in this tariff, a service charge of $38.63 will be made. An additional charge of $38.63 will be made for turning the service back on.

There shall be no discount on these charges. These charges will apply during regular working hours, and should it be necessary to perform such work after normal hours, the charge will be $57.94.

4. SEASONAL TURN-OFF CHARGES:

Customers may request a Seasonal Turn Off by giving notice to the Company and paying the Seasonal Turn Off Charge. During the period of the Seasonal Turn Off, the customer will not be required to make payment of the Facilities Charge. The amount of the Seasonal Turn-off Charge will depend upon meter size as follows:

5/8" – ¾"	$ 175.58
1"	263.37
1-1/2"	526.73
2"	877.91
3"	1,580.24
4"	2,633.73
6"	5,267.43
8"	8,427.89

5. SERVICE CONNECTION CHARGES:

a) Service Connection Charges will be as follows:

5/8" - 3/4" service	$ 987.80
1" service	$ 1,395.27
1-1/2" service	$ 2,457.18
2" service	$ 2,778.18
3" service	$ 8,890.23
4" service	$10,458.36
6" service	$15,199.26
8" service	$23,067.03

TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
ELEVENTH REVISED PAGE NO. 24
CANCELING
TENTH REVISED PAGE NO. 24
NOVEMBER 25, 2013
EFFECTIVE DATE: AUGUST 19, 2014

b) The charge for installing ¾" metered service to existing customers having formerly paid a Service Connection Charge shall be the difference between the Service Connection Charge in effect at the time metering commences and the Service Connection Charge previously paid. No charge will be assessed to customers having paid a tapping fee which included metered service.

c) In addition to the Service Connection Charge above, customers within the franchise territory yet outside a particular service area will be charged an extension fee of $987.80 per service.

d) In addition to the Service Connection Charge above, customers within the Development of Indian River Acres will be charged a subdivision specific tariff of $2,807.71 for each service.

6. OTHER MISCELLANEOUS CHARGES:

Service call to read a meter due to change of ownership or occupancy of a dwelling unit:
Transfer charge will be $43.90.

Service call for frozen service lines or leaks that are the customer's responsibility:
The service charge will be $38.63.
After hours charge will be $57.94.

Unauthorized entry of meter pit:
The charge will be $87.79 plus cost of repair or damage for each occurrence.

Unauthorized water withdrawal from fire hydrants:
The charge will be $263.36 for each occurrence.

The Company shall charge each customer $20.00 for any returned check it receives as payment for any service, charge or deposit.

TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
THIRTY-FOURTH REVISED PAGE NO. 25
CANCELING
THIRTY-THIRD REVISED PAGE NO. 25
MARCH 31, 2021
EFFECTIVE DATE: APRIL 1, 2021

7. DISTRIBUTION SYSTEM IMPROVEMENT CHARGE:

In addition to the net charges provided for in items 1. and 2. of this Tariff Schedule of Rates, a charge of 0.00% will apply to all charges for bills rendered on or after April 1, 2021.

The above charge will be recomputed semi-annually, using the elements prescribed by Section 314 of Title 26 of the Delaware Code.

8. BULK WATER CONTRACT SALES

a) Ocean View – Under contract, the Town of Ocean View is charged $4.8024 per thousand gallons of consumption registered through the meter(s) at the interconnection with the Town of Ocean View water distribution system.

b) Dover Air Force Base – Off Base Housing – Under contract, Dover Air Force Base Housing – Eagle Meadows/Heights is charged $12.2609 per thousand gallons of consumption registered through the meter(s) at the interconnection with the Eagles Heights and Eagle Meadows Housing subdivision water distribution systems.

c) Southern Shores – Under contract, Southern Shores Water Company is charged $5.6116 per thousand gallons of consumption registered through the meter(s) at the interconnection with Southern Shores water distribution systems.

TIDEWATER UTILITIES, INC.
P.S.C. DEL. NO. 6
SECOND REVISED PAGE NO. 26
CANCELING
FIRST REVISED PAGE NO. 26
APRIL 2, 2018
EFFECTIVE DATE: MAY 8, 2018

9. CONTRIBUTION IN AID OF CONSTRUCTION (CIAC)

a) All CIAC including, but not limited to, Category 1A, Category 1B and, as defined in subsection 9.b below, Category 2, received by the Company in the form of cash or in-kind utility property, is subject to an income tax liability gross-up payment by the contributor based on the value of the CIAC, in addition to the CIAC cost payment. The income tax liability gross-up payment shall be based on the maximum Federal and Delaware income tax in effect at the time the CIAC is received by the Company. The CIAC income tax liability gross-up factor in effect on the date of this Second Revised Tariff Page No. 26 is 38.644%.

b) Pursuant to PSC Order No. 6873 (PSC Regulation Docket 15), Category 2 Costs refer to transmission, supply, treatment and/or other utility plant costs that are not directly assignable to a specific project or where the Category 1 (1A and 1B) costs have not included sufficient direct costs for transmission, supply, treatment, and/or other utility plant costs to supply water to the project. These costs will be contributed by the contractor, builder, developer, municipality, homeowner, or other project sponsor, as CIAC with no refunds. This tariff rate section applies to new customer service connections associated with water service agreements entered into after April 11, 2006.

Category 2 CIAC Charges by Service Size, including the income tax liability gross-up amount are as follows:

Service Size	
5/8" – ¾"	$2,079.66
1"	$2,162.85
1-1/2"	$2,246.04
2"	$2,474.80
3"	$4,159.33
4"	$4,783.23
6"	$6,238.99
8"	$7,902.72

10. DOVER AIR FORCE BASE (FEDERAL ENCLAVE)

PUBLIC FIRE HYDRANT CHARGES:

Each fire hydrant within the perimeter of the Dover Air Force Base (Federal Enclave) is subject to a service charge of $30.00 per quarter, or $10.00 per month.

KAW_R_PSCDR2_NUM010_070725_Attachment_24_CONFIDENTIAL FILED UNDER SEAL PURSUANT TO THE PETITION FOR CONFIDENTIAL TREATMENT FILED ON JULY 7, 2025

424B2 1 d465740d424b2.htm 424B2

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Filed Pursuant to Rule 424(b)(2)
File Number 333-253484

PROSPECTUS SUPPLEMENT
(To Prospectus dated February 25, 2021)

11,000,000 Shares

American Water Works Company, Inc.

Common Stock

American Water Works Company, Inc., which is referred to as American Water, is offering and selling an aggregate of 11,000,000 shares of American Water's common stock, par value $0.01 per share, in this offering.

American Water's common stock is listed on the New York Stock Exchange, which is referred to as the NYSE, under the symbol "AWK." On February 27, 2023, the closing price of American Water's common stock on the NYSE was $139.78 per share.

Investing in American Water's common stock involves risks. See "Risk Factors" beginning on page S-4 of this prospectus supplement to read about factors you should consider before buying American Water's common stock.

Neither the Securities and Exchange Commission nor any state securities commission or other regulatory body has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	$ 135.5000	$ 1,490,500,000
Underwriting discount	$ 2.0325	$ 22,357,500
Proceeds, before expenses, to American Water	$ 133.4675	$ 1,468,142,500

The underwriters have been granted an option to purchase up to an additional 1,650,000 shares of common stock from American Water at the public offering price, less the underwriting discount, for a period of 30 days following the date of this prospectus supplement.

The underwriters expect that the shares of American Water's common stock will be delivered against payment on or about March 3, 2023.

Joint Book-Running Managers

BofA Securities | **Wells Fargo Securities** | **RBC Capital Markets**
J.P. Morgan | **Mizuho**
Evercore ISI | **Guggenheim Securities**

Co-Managers

Scotiabank | **TD Securities** | **Truist Securities**
Huntington Capital Markets | **Regions Securities LLC**
Loop Capital Markets | **Roberts & Ryan**

Prospectus Supplement dated February 28, 2023.

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ABOUT THIS PROSPECTUS SUPPLEMENT

All references in this prospectus supplement to "American Water" and the "Company" refer to American Water Works Company, Inc. and its consolidated subsidiaries taken together as a whole, except in the sections entitled "Where You Can Find More Information," "Use of Proceeds," "Description of American Water's Capital Stock," "Underwriting," and "Legal Matters," where such terms shall refer to American Water Works Company, Inc. and not to any of its subsidiaries, in each case, unless the context otherwise requires.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and certain other matters. The second part, the accompanying prospectus, gives more general information about American Water and its securities. Generally, the reference to "this prospectus," is to both parts of this document combined. To the extent information in this prospectus supplement conflicts with information in the accompanying prospectus, you should rely on the information in this prospectus supplement.

American Water is not making an offer or sale of these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus supplement or in the accompanying prospectus is accurate only as of the date on the front cover of those documents and any information incorporated by reference is only accurate as of the date of the document incorporated by reference. American Water's business, financial condition, results of operations and prospects may have changed since the date of such information.

"American Water" and its logos are trademarks of American Water Works Company, Inc. Other service marks, trademarks and trade names referred to in this prospectus are the property of their respective owners.

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WHERE YOU CAN FIND MORE INFORMATION

American Water files annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission, which is referred to as the SEC. These SEC filings are available to the public over the Internet at the SEC's website at *https://www.sec.gov* and American Water's website at *https://www.amwater.com*. The information contained on or accessible from American Water's website does not constitute a part of this prospectus and is not incorporated by reference herein.

American Water has filed a registration statement on Form S-3 under the Securities Act of 1933, as amended, which is referred to as the Securities Act, with the SEC to register the securities offered by this prospectus supplement. This prospectus is a part of the registration statement, but does not contain all the information contained in the registration statement because certain parts of the registration statement are omitted in accordance with the rules and regulations of the SEC. The registration statement and the documents filed as exhibits to the registration statement are available to the public over the Internet at the SEC's website and American Water's website, each as described above.

American Water is "incorporating by reference" into this prospectus specific documents that it files with the SEC, which means that important information can be disclosed to you by referring you to those documents that are considered part of this prospectus. Information that American Water files subsequently with the SEC will automatically update and supersede this information. American Water incorporates by reference the documents listed below, and any future documents that it files with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, which is referred to as the Exchange Act, until the offering of the securities covered by this prospectus has been completed or terminated.

American Water is "incorporating by reference" into this prospectus the following documents filed with the SEC (excluding any portions of such documents that have been "furnished" but not "filed" for purposes of the Exchange Act):

Filings	Period Covered or Date Filed
Annual Report on Form 10-K	Year ended December 31, 2022
The portions of the Definitive Proxy Statement on Schedule 14A for American Water's 2022 Annual Meeting of Shareholders that are incorporated by reference into American Water's Annual Report on Form 10-K for the year ended December 31, 2021	Filed on March 29, 2022

American Water will provide to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request and without charge, a copy of the documents referred to above that have been incorporated in this prospectus by reference. You can request copies of such documents if you call or write American Water at the following address or telephone number: American Water Works Company, Inc., 1 Water Street, Camden, New Jersey, 08102-1658, Attention: General Counsel, (856) 955-4001.

This prospectus contains summaries of certain agreements that American Water has filed as exhibits to various SEC filings, as well as certain agreements that American Water will enter into in connection with this offering. The descriptions of these agreements contained in this prospectus or information incorporated by reference herein do not purport to be complete and are subject to, or qualified in their entirety by reference to, the definitive agreements. You can obtain copies of the definitive agreements without charge to you by making a written or oral request to American Water as described above.

American Water is only responsible for the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus or contained in any free writing prospectus prepared by or on behalf of American Water. American Water has not authorized anyone to provide you with information

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other than that contained or incorporated by reference in this prospectus supplement or in the accompanying prospectus, and American Water takes no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein, or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified and superseded, to constitute a part of this prospectus.

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FORWARD-LOOKING STATEMENTS

American Water has made statements under "Risk Factors" and in other sections of this prospectus and in the documents incorporated by reference herein that are forward-looking statements within the meaning of Section 27A of the Securities Act, Section 21E of the Exchange Act, and the Private Securities Litigation Reform Act of 1995. In some cases, these forward-looking statements can be identified by words with prospective meanings such as "intend," "plan," "estimate," "believe," "anticipate," "expect," "predict," "project," "propose," "assume," "forecast," "likely," "uncertain," "outlook," "future," "pending," "goal," "objective," "potential," "continue," "seek to," "may," "can," "should," "will" and "could" or the negative of such terms or other variations or similar expressions. Forward-looking statements may relate to, among other things: American Water's future financial performance, liquidity and cash flows; the timing and amount of rate and revenue adjustments, including through general rate case filings, filings for infrastructure surcharges and other governmental agency authorizations and proceedings, and filings to address regulatory lag; American Water's growth and portfolio optimization strategies, including the timing and outcome of pending or future acquisition activity; the ability of American Water's California subsidiary to obtain adequate alternative water supplies in lieu of diversions from the Carmel River; the amount and allocation of projected capital expenditures and related funding requirements; American Water's ability to repay or refinance debt; the future impacts of increased or increasing financing costs, inflation and interest rates; American Water's ability to execute its current and long-term business, operational and capital expenditures strategies; American Water's ability to finance current operations, capital expenditures and growth initiatives by accessing the debt and equity capital markets; the outcome and impact on American Water of governmental and regulatory proceedings and related potential fines, penalties and other sanctions; the ability to meet or exceed American Water's stated environmental and sustainability goals, including its greenhouse gas ("GHG") emission reduction, water delivery efficiency and water system resiliency goals; the ability to complete, and the timing and efficacy of, the design, development, implementation and improvement of technology and other strategic initiatives; the impacts to American Water of the ongoing COVID-19 pandemic; the ability to capitalize on existing or future utility privatization opportunities; trends in the water and wastewater industries in which American Water operates, including macro trends with respect to American Water's efforts related to customer, technology and work execution; regulatory, legislative, tax policy or legal developments; and impacts that future significant tax legislation may have on American Water and on its business, results of operations, cash flows and liquidity.

Forward-looking statements are predictions based on American Water's current expectations and assumptions regarding future events. They are not guarantees or assurances of any outcomes, financial results, levels of activity, performance or achievements, and you are cautioned not to place undue reliance upon them. These forward-looking statements are subject to a number of estimates, assumptions, known and unknown risks, uncertainties and other factors. American Water's actual results may vary materially from those discussed in the forward-looking statements included in this prospectus and in the documents incorporated by reference herein. Factors that could cause actual results to differ from those discussed in forward-looking statements include, but are not limited to, the factors discussed under "Risk Factors" in this prospectus supplement and the following important factors:

- the decisions of governmental and regulatory bodies, including decisions to raise or lower customer rates;
- the timeliness and outcome of regulatory commissions' and other authorities' actions concerning rates, capital structure, authorized return on equity, capital investment, system acquisitions and dispositions, taxes, permitting, water supply and management, and other decisions;
- changes in customer demand for, and patterns of use of, water and energy, such as may result from conservation efforts, or otherwise;
- limitations on the availability of American Water's water supplies or sources of water, or restrictions on its use thereof, resulting from allocation rights, governmental or regulatory requirements and restrictions, drought, overuse or other factors;

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- a loss of one or more large industrial or commercial customers due to adverse economic conditions, or other factors;
- changes in laws, governmental regulations and policies, including with respect to the environment, health and safety, data and consumer privacy, security and protection, water quality and water quality accountability, contaminants of emerging concern, public utility and tax regulations and policies, and impacts resulting from U.S., state and local elections and changes in federal, state and local executive administrations;
- American Water's ability to collect, distribute, use, secure and store consumer data in compliance with current or future governmental laws, regulations and policies with respect to data and consumer privacy, security and protection;
- weather conditions and events, climate variability patterns, and natural disasters, including drought or abnormally high rainfall, prolonged and abnormal ice or freezing conditions, strong winds, coastal and intercoastal flooding, pandemics (including COVID-19) and epidemics, earthquakes, landslides, hurricanes, tornadoes, wildfires, electrical storms, sinkholes and solar flares;
- the outcome of litigation and similar governmental and regulatory proceedings, investigations or actions;
- the risks associated with American Water's aging infrastructure, and its ability to appropriately improve the resiliency of or maintain and replace, current or future infrastructure and systems, including its technology and other assets, and manage the expansion of its businesses;
- exposure or infiltration of American Water's technology and critical infrastructure systems, including the disclosure of sensitive, personal or confidential information contained therein, through physical or cyber attacks or other means;
- American Water's ability to obtain permits and other approvals for projects and construction of various water and wastewater facilities;
- changes in American Water's capital requirements;
- American Water's ability to control operating expenses and to achieve operating efficiencies;
- the intentional or unintentional actions of a third party, including contamination of American Water's water supplies or the water provided to its customers;
- American Water's ability to obtain and have delivered adequate and cost-effective supplies of pipe, equipment (including personal protective equipment), chemicals, power and other fuel, water and other raw materials, and to address or mitigate supply chain constraints that may result in delays or shortages in, as well as increased costs of, supplies, products and materials that are critical to or used in American Water's business operations;
- American Water's ability to successfully meet its operational growth projections, either individually or in the aggregate, and capitalize on growth opportunities, including, among other things, with respect to:
    - acquiring, closing and successfully integrating regulated operations;
    - American Water's Military Services Group entering into new military installation contracts, price redeterminations, and other agreements and contracts, with the U.S. government; and
    - realizing anticipated benefits and synergies from new acquisitions;
- risks and uncertainties following the completion of the sale of American Water's Homeowner Services Group ("HOS"), including:
    - American Water's ability to receive any contingent consideration provided for in the HOS sale, as well as amounts due, payable and owing to American Water under the seller note when due; and
    - the ability of American Water to redeploy successfully and timely the net proceeds of this transaction into American Water's Regulated Businesses (as defined in this prospectus supplement);

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- risks and uncertainties associated with contracting with the U.S. government, including ongoing compliance with applicable government procurement and security regulations;
- cost overruns relating to improvements in or the expansion of American Water's operations;
- American Water's ability to successfully develop and implement new technologies and to protect related intellectual property;
- American Water's ability to maintain safe work sites;
- American Water's exposure to liabilities related to environmental laws and similar matters resulting from, among other things, water and wastewater service provided to customers;
- the ability of energy providers, state governments and other third parties to achieve or fulfill their GHG emission reduction goals, including without limitation through stated renewable portfolio standards and carbon transition plans;
- changes in general economic, political, business and financial market conditions;
- access to sufficient debt and/or equity capital on satisfactory terms and as needed to support operations and capital expenditures;
- fluctuations in inflation or interest rates, and American Water's ability to address or mitigate the impacts thereof;
- the ability to comply with affirmative or negative covenants in the current or future indebtedness of American Water or any of its subsidiaries, or the issuance of new or modified credit ratings or outlooks by credit rating agencies with respect to American Water or any of its subsidiaries (or any current or future indebtedness thereof), which could increase financing costs or funding requirements and affect American Water's or its subsidiaries' ability to issue, repay or redeem debt, pay dividends or make distributions;
- fluctuations in the value of, or assumptions and estimates related to, its benefit plan assets and liabilities, including with respect to its pension and other post-retirement benefit plans, that could increase expenses and plan funding requirements;
- changes in federal or state general, income and other tax laws, including (i) future significant tax legislation, and (ii) the availability of, or American Water's compliance with, the terms of applicable tax credits and tax abatement programs;
- migration of customers into or out of American Water's service territories and changes in water and energy consumption resulting therefrom;
- the use by municipalities of the power of eminent domain or other authority to condemn the systems of one or more of American Water's utility subsidiaries, or the assertion by private landowners of similar rights against such utility subsidiaries;
- any difficulty or inability to obtain insurance for American Water, its inability to obtain insurance at acceptable rates and on acceptable terms and conditions, or its inability to obtain reimbursement under existing or future insurance programs and coverages for any losses sustained;
- the incurrence of impairment charges, changes in fair value and other adjustments related to American Water's goodwill or the value of its other assets;
- labor actions, including work stoppages and strikes;
- American Water's ability to retain and attract highly qualified and skilled employees and/or diverse talent;
- civil disturbances or unrest, or terrorist threats or acts, or public apprehension about future disturbances, unrest, or terrorist threats or acts; and
- the impact of new, and changes to existing, accounting standards.

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These forward-looking statements are qualified by, and should be read together with, the risks and uncertainties set forth above, and the risk factors discussed under “Risk Factors” beginning on page S-4 of this prospectus supplement and the risk factors and other statements contained in the documents incorporated by reference in this prospectus and investors should refer to such risks, uncertainties, risk factors and other statements in evaluating such forward-looking statements. Any forward-looking statements made by American Water speak only as of the date of such statements. Except as required by the federal securities laws, American Water does not have any obligation, and American Water specifically disclaims any undertaking or intention to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changed circumstances or otherwise. New factors emerge from time to time, and it is not possible for American Water to predict all such factors. Furthermore, it may not be possible to assess the impact of any such factor on American Water’s businesses, either viewed independently or together, or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statement. The foregoing factors should not be construed as exhaustive.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained elsewhere in this prospectus or in the documents incorporated by reference herein. It may not contain all the information that is important to you. You should carefully read this prospectus and the documents incorporated by reference herein in their entirety before making an investment decision.

The Company

American Water Works Company, Inc. is the largest and most geographically diverse, publicly-traded water and wastewater utility company in the United States, as measured by both operating revenues and population served. As a holding company, American Water conducts substantially all of its business through its subsidiaries. American Water employs approximately 6,500 professionals who provide drinking water, wastewater and other related services to over 14 million people in 24 states.

In 2022 and 2021, American Water generated $3,792 million and $3,930 million, respectively, in total consolidated operating revenues and $820 million and $1,263 million, respectively, in net income attributable to common shareholders.

American Water conducts the majority of its business through a reportable segment which is referred to in this prospectus as the Regulated Businesses segment, which includes regulated utilities that provide water and wastewater services to residential, commercial, industrial, public authority, fire service and sale for resale customers, and sales to public authorities and other utilities and community water systems under bulk contracts for the supply of water or the treatment of wastewater for their own customers. American Water also operates market-based businesses that provide water and wastewater services to the U.S. government on military installations, as well as municipalities. Individually, these businesses do not meet the criteria of a reportable segment in accordance with generally accepted accounting principles in the United States. In this prospectus, Other refers to these market-based businesses, together with corporate costs that are not allocated to the Company's Regulated Businesses segment, interest income related to the seller promissory note and income from the revenue share agreement (each arising out of the sale of HOS), eliminations of inter-segment transactions and fair value adjustments related to acquisitions that have not been allocated to the Regulated Businesses segment.

For 2022, American Water's Regulated Businesses segment generated $3,505 million in operating revenues, which accounted for 92% of American Water's total consolidated operating revenues. For the same period, American Water's Other segment generated $287 million in operating revenues, which accounted for 8% of American Water's total consolidated operating revenues.

Executive Offices

American Water is a corporation incorporated under the laws of Delaware. American Water's principal executive offices are located at 1 Water Street, Camden, New Jersey 08102-1658 and the telephone number is (856) 955-4001. American Water's website address is *https://www.amwater.com*. The information contained on or accessible from American Water's website does not constitute a part of this prospectus and is not incorporated by reference herein.

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THE OFFERING

Issuer	American Water Works Company, Inc.
Shares of Common Stock Offered by American Water	11,000,000 shares of common stock.
Option to Purchase Additional Shares of Common Stock	American Water has granted the underwriters an option to purchase up to 1,650,000 additional shares of common stock. This option is exercisable, in whole or in part, for a period of 30 days following the date of this prospectus supplement.
Shares of Common Stock to be Outstanding Immediately After the Offering (1)	192,966,530 shares of American Water's common stock (or 194,616,530 shares if the underwriters exercise in full their option to purchase additional shares of common stock).
Use of Proceeds	American Water estimates that it will receive net proceeds from this offering, after deducting the underwriting discount and estimated offering expenses, of approximately $1,467.4 million (or $1,687.7 million if the underwriters exercise in full their option to purchase additional shares of common stock). American Water currently intends to use the net proceeds from this offering: • to repay short-term commercial paper obligations of American Water Capital Corp., its wholly owned finance subsidiary, which is referred to as AWCC; and • for general corporate purposes. See "Use of Proceeds."
NYSE Symbol	American Water's common stock is listed on the NYSE under the symbol "AWK."
Risk Factors	Investing in American Water's common stock involves risks. See "Risk Factors" beginning on page S-4 of this prospectus supplement.
Conflicts of Interest	Certain of the underwriters and their affiliates may hold a portion of the commercial paper of AWCC that may be repaid using the net proceeds from this offering. In such event, it is possible that one or more of the underwriters or their affiliates could receive at least 5% of the net proceeds from the offering and, in that case, such underwriter would be deemed to have a conflict of interest under Rule 5121 of the Financial Industry Regulatory Authority, Inc., which is referred to as FINRA. In the event of any such conflict of interest, such underwriter would be required to conduct the distribution of the common stock in accordance with FINRA Rule 5121. If the distribution is conducted in accordance with FINRA Rule 5121, such underwriter would not be permitted to confirm a sale to an account over which it exercises discretionary authority without first receiving specific written approval from the account holder.

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(1) The number of shares of American Water's common stock to be outstanding after this offering is based on 181,966,530 shares of American Water's common stock outstanding as of February 23, 2023, which does not include 610,165 shares of American Water's common stock reserved for issuance upon vesting of outstanding restricted stock units and performance stock units (assuming maximum performance is achieved).

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RISK FACTORS

An investment in American Water's common stock involves risks. This prospectus does not describe all of these risks. You should carefully consider the risks described below and the risks described in Part I, Item 1A., "Risk Factors," in American Water's Annual Report on Form 10-K for the year ended December 31, 2022, as well as the other information included or incorporated by reference in this prospectus, before making an investment decision. American Water's business, financial condition or results of operations could be materially adversely affected by any of these risks.

American Water's management will have broad discretion over the use of the net proceeds from this offering and might not apply such proceeds in ways that increase the value of your investment.

American Water intends to use the net proceeds from this offering to repay short-term commercial paper obligations of AWCC, and for general corporate purposes. See "Use of Proceeds" on page S-6 of this prospectus supplement. However, American Water's management will have broad discretion over the use of the net proceeds from this offering, and you will be relying on the judgment of management regarding the application of these proceeds. American Water's management may not apply the net proceeds of this offering in ways that increase the value of your investment. The amounts and timing of American Water's actual expenditures will depend on numerous factors, including the factors described under "Risk Factors" in this prospectus supplement and accompanying prospectus, and in the documents incorporated by reference herein and therein, as well as the amount of cash used in American Water's business operations. American Water may find it necessary or advisable to use the net proceeds for other purposes, and management will have significant flexibility in applying the net proceeds from this offering.

American Water's shareholders may experience dilution as a result of this offering and they may experience further dilution if American Water issues additional common stock in future offerings.

The issuance of any common stock by American Water to the underwriters will have a dilutive effect on American Water's earnings per share. Any additional future issuances of American Water's common stock will reduce the percentage of American Water's common stock owned by investors purchasing shares in this offering who do not participate in future issuances. In most circumstances, as is the case here, shareholders will not be entitled to vote on whether or not American Water issues additional common stock. In addition, depending on the terms and pricing of an additional offering of American Water's common stock, American Water's shareholders may experience dilution in both the book value and fair value of their shares.

Future sales of American Water's shares of common stock or preferred stock could adversely affect the market price of American Water's common stock.

Future sales of substantial amounts of American Water common stock in the public market following this offering, whether by American Water or its existing shareholders, or the perception that such sales could occur, may adversely affect the market price of its common stock, which could decline significantly. Sales by American Water's existing shareholders might also make it more difficult for American Water to raise equity capital by selling new common stock at a time and price that it deems appropriate. American Water may also raise capital by issuing shares of preferred stock that have super voting, special approval, dividend or other rights or preferences that are senior to its common stock. Shares of preferred stock may also be convertible into shares of American Water's common stock, which may dilute the value of its common stock. American Water's board of directors may authorize the issuance of preferred stock from time to time in one or more series, without shareholder approval. See "Description of American Water's Capital Stock" beginning on page S-7 of this prospectus supplement.

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The price of American Water's common stock may fluctuate significantly.

The market price of American Water's common stock may fluctuate significantly. You may not be able to resell your shares at or above the offering price due to fluctuations in the market price of American Water's common stock caused by changes in American Water's operating performance or prospects and other factors, including broad market fluctuations. Some specific factors that may have a significant effect on the market price of American Water's common stock, in addition to those set forth under "Forward-Looking Statements" in this prospectus supplement, include:

- actual or anticipated variations in American Water's operating results or future prospects;
- the public's and the financial markets' reaction to American Water's press releases, its other public announcements and its filings with the SEC;
- strategic actions by American Water or its competitors, such as acquisitions, dispositions or restructurings;
- changes in accounting standards, policies, guidance, interpretations or principles;
- price and volume fluctuations in the overall equity capital markets from time to time;
- adverse conditions in the financial markets or general economic conditions, including those resulting from war, incidents of terrorism and responses to such events;
- future sales of common stock by American Water or its directors or executive officers; and
- changes in securities analyst estimates, projections or recommendations regarding American Water or its common stock or other securities, other comparable companies or their securities, or the water and wastewater industries generally.

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USE OF PROCEEDS

American Water estimates that it will receive net proceeds from this offering, after deducting the underwriting discount and estimated offering expenses, of approximately $1,467.4 million (or $1,687.7 million if the underwriters exercise in full their option to purchase additional shares of common stock).

American Water currently intends to use the net proceeds from this offering:

- to repay short-term commercial paper obligations of AWCC; and
- for general corporate purposes.

On December 31, 2022, AWCC had $1,177 million in aggregate principal amount of commercial paper outstanding, with a weighted-average maturity of 13 days and a weighted-average interest rate of 4.41%.

This expected use of the net proceeds from this offering represents American Water's intentions based upon American Water's current plans and business conditions. The amounts and timing of any actual expenditures may vary significantly depending on numerous factors, including the factors described under "Risk Factors" in this prospectus supplement and accompanying prospectus and in the documents incorporated by reference herein and therein. American Water may find it necessary or advisable to use the net proceeds for other purposes, and American Water's management will have significant flexibility in applying the net proceeds from this offering.

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DESCRIPTION OF AMERICAN WATER'S CAPITAL STOCK

The following description of American Water's common stock and preferred stock is not intended to be complete. For more information regarding American Water's common stock and preferred stock, please refer to American Water's restated certificate of incorporation, which is referred to below as American Water's "certificate of incorporation," and American Water's amended and restated bylaws, which is referred to below as American Water's "bylaws." The certificate of incorporation and bylaws are incorporated by reference as exhibits to the registration statement of which this prospectus is a part. The terms of these securities also may be affected by the General Corporation Law of the State of Delaware, which is referred to below as the DGCL.

General

American Water's authorized capital stock consists of 500,000,000 shares of common stock, par value $0.01 per share, and 50,000,000 shares of preferred stock. As of February 23, 2023, there were 181,966,530 shares of common stock outstanding and no shares of preferred stock outstanding.

Common Stock

Voting Rights

Other than with respect to director elections, except as otherwise required by law, all matters to be voted on by American Water's shareholders must be approved by a majority of the shares present in person or proxy at such meeting and entitled to vote on the subject matter. With respect to uncontested director elections, American Water's bylaws require that in order to be elected, a director nominee must receive a majority of the votes cast (for this purpose, a majority of the votes cast means that the number of shares voted "for" a director nominee must exceed the number of votes cast "against" that nominee). For contested director elections where the number of nominees exceeds the number of directors to be elected, American Water's bylaws require that the directors shall be elected by the vote of a plurality of the shares represented in person or by proxy at any such meeting and entitled to vote on the election of directors.

Dividends

Holders of common stock will share equally in any dividend declared by American Water's board of directors, subject to the rights of the holders of any outstanding preferred stock.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution or winding up of American Water's affairs, holders of American Water's common stock would be entitled, after payment of the liquidation preference to all holders of any outstanding preferred stock, to share ratably in American Water's assets that are legally available for distribution to shareholders after payment of liabilities. American Water must pay the applicable distribution to any holders of its preferred stock before it may pay distributions to the holders of its common stock.

Other Rights

American Water's shareholders have no preemptive or other rights to subscribe for additional shares.

Preferred Stock

American Water's board of directors may authorize the issuance of preferred stock from time to time in one or more series, without shareholder approval. Subject to the limits imposed by the DGCL, the board of directors is authorized to fix for any series of preferred stock the number of shares of such series and the voting powers

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(if any), designation, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions of such series. American Water's board of directors is also authorized to increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by American Water's shareholders.

American Water's board of directors may authorize the issuance of preferred stock with voting or conversion rights that affect adversely the voting power or other rights of American Water's common shareholders. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of delaying, deferring or preventing a change in control, causing the market price of a share of American Water's common stock to decline, or impairing the voting and other rights of the holders of American Water's common stock.

Certain Anti-Takeover Provisions of American Water's Certificate of Incorporation and Bylaws, and the DGCL

The following provisions of American Water's certificate of incorporation and bylaws could deter, delay or prevent a third party from acquiring American Water, even if doing so would benefit American Water's shareholders.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for American Water's board of directors to authorize the issuance of preferred stock with super voting, special approval, dividend or other rights or preferences on a discriminatory basis that could impede the success of any attempt to acquire American Water. These and other provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of American Water.

Requirements for Advance Notification of Shareholders Meetings, Nominations and Proposals

American Water's bylaws provide that special meetings of shareholders may be called only upon the request of the majority of the members of American Water's board of directors, upon request of American Water's Board Chair, or by American Water's Secretary upon request of shareholders holding at least 15% of American Water's outstanding common stock. American Water's bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting.

American Water's bylaws establish advance notice procedures with respect to shareholder proposals for annual meetings and the nomination of candidates for election as directors, other than nominations made by or at the direction of American Water's board of directors or a committee of the board of directors. A shareholder who wishes to bring a matter before a meeting or submit candidates for nomination as directors must comply with American Water's advance notice requirements and provide American Water with certain information and, if applicable under the bylaws, provide to American Water certain agreements and undertakings. Additionally, vacancies and newly created directorships may be filled only by a vote of a majority of the members of American Water's board of directors then in office, even though less than a quorum, or by shareholders. These provisions may defer, delay or discourage a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of American Water.

Shareholder Action by Written Consent

As permitted by Section 228 of the DGCL, American Water's certificate of incorporation states that any action required or permitted to be taken by American Water's shareholders must be effected at a duly called annual or special meeting of American Water's shareholders and may not be effected by consent in writing by such shareholders.

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Approval of Acquisition of Control by Public Utility Commission

A significant number of American Water's regulated subsidiaries are subject to economic regulation by state public utility commissions. Some of these states have enacted laws that require regulatory approval for the acquisition of "control" of any regulated utility. In those states, obtaining "control" of the parent or any other company that controls a regulated utility also requires prior regulatory approval. The threshold for a change in control is a fact-specific inquiry that varies by state. For example, in some states, a presumption of control will arise when an acquiring party acquires more than 9.9% of the voting securities of the regulated utility or the controlling entity. In addition to ownership, other states may analyze the degree of influence or control an acquiror may exert over American Water. Any person acquiring American Water's common stock in an offering or in any other purchase of American Water's common stock in an amount sufficient to trigger a change in control under state law would need the prior approval of the applicable state public utility commission.

Certain Other Provisions of American Water's Certificate of Incorporation and Bylaws and the DGCL

Board of Directors

American Water's certificate of incorporation provides that the number of directors is fixed in the manner provided in American Water's bylaws. American Water's bylaws provide that the number of directors will be fixed from time to time by American Water's board of directors.

Business Combinations under the DGCL

American Water is subject to Section 203 of the DGCL, which prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the time the shareholder became an "interested stockholder," subject to certain exceptions, including if, prior to such time, the board of directors approved the business combination or the transaction which resulted in the shareholder becoming an "interested stockholder." "Business combinations" include mergers, asset sales and other transactions resulting in a financial benefit to the "interested stockholder." Subject to various exceptions, an "interested stockholder" is a person who, together with his or her affiliates and associates, owns, or within the prior three years did own, 15% or more of the corporation's outstanding voting stock. These restrictions generally prohibit or delay the accomplishment of mergers or other takeover or change-in-control attempts that are not approved by a company's board of directors.

Limitations of Liability and Indemnification of Directors and Officers

The DGCL authorizes corporations to limit or eliminate the personal liability of directors and officers of corporations and their shareholders for monetary damages for breaches of directors' fiduciary duties. American Water's certificate of incorporation includes a provision that eliminates the personal liability of directors (but not officers) for monetary damages for actions taken as a director to the fullest extent authorized by the DGCL. The DGCL does not permit exculpation for liability:

- for breach of the duty of loyalty;
- for acts or omissions not in good faith or involving intentional misconduct or knowing violation of law;
- under Section 174 of the DGCL (relating to unlawful dividends or stock repurchases); or
- for transactions from which the director derived an improper personal benefit.

American Water's certificate of incorporation and bylaws provide that American Water will indemnify its directors and officers to the fullest extent permitted by law. American Water's bylaws also expressly authorize American Water to carry directors' and officers' insurance providing indemnification for American Water's directors, officers and certain employees and agents for certain liabilities.

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The limitation of liability and indemnification provisions in American Water's certificate of incorporation and bylaws may discourage shareholders from bringing a lawsuit against American Water's directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against American Water's directors and officers, even though such an action, if successful, might otherwise benefit American Water and its shareholders. In addition, your investment in American Water's common stock may be adversely affected to the extent American Water pays the costs of settlement and damage awards against directors and officers in accordance with these indemnification provisions.

Proxy Access

American Water's bylaws permit an eligible shareholder or group of shareholders to include up to a specified number of director nominees in American Water's proxy materials for an annual meeting of shareholders. To qualify, the shareholders (or group of up to 20 shareholders) must have continuously owned for at least three years 3% or more of American Water's outstanding common stock. The maximum number of shareholder nominees permitted under this proxy access provision is the greater of (i) two or (ii) 20% of the total number of directors on American Water's board of directors as of the last day on which a proxy access notice may be submitted, rounded down to the nearest whole number.

Transfer Agent and Registrar

American Stock Transfer & Trust Company, LLC serves as the registrar and transfer agent for American Water's common stock.

New York Stock Exchange Listing

American Water's common stock is listed on the New York Stock Exchange under the trading symbol "AWK."

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CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion summarizes certain U.S. federal income tax considerations relevant to the acquisition, ownership and disposition of shares of American Water's common stock, and does not purport to be a complete analysis of all potential U.S. federal income tax considerations. This discussion only applies to shares of American Water's common stock that are held as capital assets, within the meaning of section 1221 of the Internal Revenue Code of 1986, as amended (the "Code"), and that are purchased in this offering by Non-U.S. Holders (as defined below). This summary is based on the Code, administrative pronouncements, judicial decisions and regulations of the Treasury Department as of the date of this prospectus supplement, changes to any of which subsequent to the date of this prospectus supplement may affect the tax consequences described herein. This discussion does not describe all of the U.S. federal income tax considerations that may be relevant to Non-U.S. Holders in light of their particular circumstances or to Non-U.S. Holders subject to special rules, such as certain financial institutions, tax-exempt organizations, insurance companies, traders or dealers in securities or commodities, persons holding shares of American Water's common stock as part of a hedge or other integrated transaction, accrual method taxpayers subject to special tax accounting rules as a result of their use of financial statements or certain former citizens or residents of the United States. This discussion does not address any U.S. federal income tax consequences for U.S. taxpayers who purchase shares of American Water's common stock. Persons considering the purchase of shares of American Water's common stock are urged to consult their tax advisors with regard to the application of the U.S. federal income tax laws to their particular situations as well as any tax consequences arising under the laws of any state, local or foreign taxing jurisdiction. Furthermore, this discussion does not describe the effect of U.S. federal estate and gift tax laws or the effect of any applicable foreign, state or local laws.

American Water has not and will not seek any rulings or opinions from the Internal Revenue Service (the "IRS") with respect to the matters discussed below. There can be no assurance that the IRS will not take a different position concerning the tax consequences of the acquisition, ownership or disposition of shares of its common stock or that any such position would not be sustained.

Prospective investors should consult their own tax advisors with regard to the application of the U.S. federal income tax considerations discussed below to their particular situations as well as the application of any state, local, foreign or other tax laws, including gift and estate tax laws.

For purposes of this summary, a "Non-U.S. Holder" means a beneficial owner of shares of American Water's common stock that, for U.S. federal income tax purposes, is not (i) an individual that is a citizen or resident of the United States; (ii) a corporation or other entity treated as a corporation for U.S. federal income tax purposes that is created or organized under the laws of the United States, any state thereof or the District of Columbia; (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or (iv) a trust if (A) a court within the United States is able to exercise primary supervision over its administration and one or more United States persons (as defined in the Code) have the authority to control all substantial decisions of such trust, or (B) the trust has made an election under the applicable Treasury regulations to be treated as a United States person.

If a partnership, or other entity or arrangement treated as a partnership for U.S. federal income tax purposes, holds shares of American Water's common stock, the tax treatment of a partner in such a partnership will generally depend upon the status of the partner and the activities of the partnership. Partners in a partnership holding shares of American Water's common stock should consult their tax advisor as to the particular U.S. federal income tax considerations relevant to the acquisition, ownership and disposition of such shares of American Water's common stock applicable to them.

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Distributions

In general, a distribution that American Water makes to a Non-U.S. Holder with respect to shares of its common stock will constitute a dividend for U.S. federal income tax purposes to the extent paid out of American Water's current or accumulated earnings and profits as determined under the Code. To the extent the amount of a distribution exceeds American Water's current and accumulated earnings and profits, such excess will constitute a return of capital and will first reduce the Non-U.S. Holder's adjusted tax basis in American Water's common stock, but not below zero, and then will be treated as gain from the sale of American Water's common stock (see "—Sale or Other Taxable Disposition of Common Stock" below). Subject to the discussions below under "—Information Reporting and Backup Withholding" and "—Foreign Account Tax Compliance Act," dividends paid to a Non-U.S. Holder that are not effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States will generally be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (unless such dividend is eligible for a reduced rate under an applicable income tax treaty). In order to obtain a reduced rate of withholding, a Non-U.S. Holder is generally required to provide to the applicable withholding agent an IRS Form W-8BEN, IRS Form W-8BEN-E (or a suitable substitute form) or other applicable certification properly certifying such Non-U.S. Holder's eligibility for the reduced rate. Non-U.S. Holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced withholding rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty and the timing and manner of claiming the benefits.

Subject to the discussions below under "—Information Reporting and Backup Withholding" and "—Foreign Account Tax Compliance Act," dividends that are effectively connected with a Non-U.S. Holder's conduct of a trade or business in the United States and, if an applicable income tax treaty so requires, are attributable to a permanent establishment maintained by the Non-U.S. Holder in the United States, are taxed on a net-income basis at the regular graduated rates and in the manner applicable to U.S. persons. The Non-U.S. Holder is generally required to provide to the applicable withholding agent a properly executed IRS Form W-8ECI (or a suitable substitute form) in order to claim an exemption from, or reduction in, U.S. federal withholding. In addition, a "branch profits tax" may be imposed at a 30% rate (or a reduced rate under an applicable income tax treaty) on a foreign corporation's effectively connected earnings and profits for the taxable year, as adjusted for certain items.

Sale or Other Taxable Disposition of Common Stock

Subject to the discussions below under "—Information Reporting and Backup Withholding" and "—Foreign Account Tax Compliance Act," a Non-U.S. Holder generally will not be subject to U.S. federal withholding tax with respect to gain, if any, recognized on the sale or other taxable disposition of shares of American Water's common stock. A Non-U.S. Holder will also generally not be subject to U.S. federal income tax with respect to such gain, unless (i) the gain is effectively connected with the conduct by such Non-U.S. Holder of a trade or business within the United States, and, if an applicable income tax treaty so requires, is attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder within the United States, (ii) in the case of a Non-U.S. Holder that is a nonresident alien individual, such Non-U.S. Holder is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are satisfied, or (iii) American Water's common stock constitutes a U.S. real property interest by reason of American Water's status as a U.S. real property holding corporation (a "USRPHC") for U.S. federal income tax purposes.

In the case described in (i) above, gain or loss recognized on the disposition of shares of American Water's common stock generally will be subject to U.S. federal income taxation in the same manner as if such gain or loss were recognized by a United States person, and, in the case of a Non-U.S. Holder that is a foreign corporation, may also be subject to the branch profits tax at a rate of 30% (or a lower applicable treaty branch profits tax rate). In the case described in (ii) above, the Non-U.S. Holder will be subject to a 30% tax (or a lower

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applicable treaty rate) on any capital gain recognized on the disposition of shares of American Water's common stock (after being offset by certain U.S.-source capital losses). In the case described in (iii) above, American Water has not determined whether it is a USRPHC; however, even if it is a USRPHC, so long as shares of its common stock continue to be regularly traded on an established securities market in the United States, within the meaning of applicable Treasury regulations, a Non-U.S. Holder will not be subject to U.S. federal income tax on the disposition of shares of American Water's common stock if the Non-U.S. Holder has not held more than 5% (actually or constructively) of American Water's total outstanding common stock at any time during the shorter of the five-year period preceding the date of disposition, or such Non-U.S. Holder's holding period. If a Non-U.S. Holder exceeds the limits described in the last sentence with respect to common stock and American Water is a USRPHC, the Non-U.S. Holder generally will be subject to U.S. federal income tax at the regular graduated rates applicable to U.S. persons upon its disposition at a gain. In such a case, a Non-U.S. Holder that exceeds such limits generally would also be subject to such tax with respect to any distribution on such common stock to the extent such distribution would not be treated as a dividend if such Non-U.S. Holder were a U.S. person. If a Non-U.S. Holder is subject to the tax described in the preceding sentences, the Non-U.S. Holder will be required to file a U.S. federal income tax return with the IRS.

Non-U.S. Holders should consult their tax advisors regarding the U.S. federal income tax consequences of investing in shares of American Water's common stock if American Water were to be treated as a USRPHC. Non-U.S. Holders should also consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Information returns will be filed annually with the IRS in connection with any dividends paid on American Water's common stock to a Non-U.S. Holder. Copies of these information returns may also be made available under the provisions of a specific tax treaty or other agreement to the tax authorities of the country in which the Non-U.S. Holder resides. Unless the Non-U.S. Holder complies with certification procedures to establish that it is not a United States person (by providing a valid IRS Form W-8BEN, W-8BEN-E, or other applicable certification), information returns may be filed with the IRS in connection with the proceeds from a sale or other disposition, and the Non-U.S. Holder may be subject to backup withholding (currently at a rate of 24%) on dividends paid on American Water's common stock or on the proceeds from a sale or other disposition of shares of American Water's common stock. Backup withholding is not an additional tax. The amount of any backup withholding from a payment to a Non-U.S. Holder generally will be allowed as a credit against the Non-U.S. Holder's U.S. federal income tax liability and may entitle the Non-U.S. Holder to a refund, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act

Under sections 1471 to 1474 of the Code and related IRS guidance (commonly referred to as the Foreign Account Tax Compliance Act ("FATCA")), a 30% U.S. withholding tax is imposed on dividends paid on American Water's common stock and on gross proceeds from the sale or other disposition (including redemption) of shares of American Water's common stock in each case if paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code) (including, in some cases, when such foreign financial institution or entity is acting as an intermediary), unless (i) in the case of a foreign financial institution, such institution undertakes certain diligence and reporting obligations, (ii) in the case of a non-financial foreign entity, such entity either certifies that it does not have any "substantial United States owners" (as defined in the Code) or provides the withholding agent with a certification identifying each direct and indirect substantial United States owner of the entity, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules and provides appropriate documentation. Under proposed Treasury regulations promulgated by the Treasury Department on December 13, 2018, which state that taxpayers may rely on the proposed Treasury regulations until final Treasury regulations are issued, this withholding tax will not apply to the gross proceeds from the sale or disposition of shares of American Water's common stock. If the

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payee is a foreign financial institution and is subject to the diligence and reporting requirements in (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts and withhold 30% on payments to non-compliant foreign financial institutions and certain other account holders. Certain Non-U.S. Holders located in a jurisdiction with an intergovernmental agreement with the United States governing FATCA may be subject to different rules. American Water will not be obligated to make any "gross up" or additional payments in respect of amounts withheld on shares of its common stock if American Water determines that it must so withhold in order to comply with FATCA in respect of the amounts described above. Prospective investors should consult their own tax advisors regarding FATCA and whether it may be relevant to the ownership and disposition of shares of American Water's common stock.

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UNDERWRITING

Subject to the terms and conditions set forth in an underwriting agreement dated the date of this prospectus supplement between American Water and the underwriters named below, for whom BofA Securities, Inc., Wells Fargo Securities, LLC and RBC Capital Markets, LLC are acting as representatives, American Water has agreed to sell to each of the underwriters, and each of the underwriters has severally agreed to purchase from American Water, the number of shares of American Water's common stock shown opposite its name below:

Underwriter	Number of Shares
BofA Securities, Inc.	2,475,000
Wells Fargo Securities, LLC	2,475,000
RBC Capital Markets, LLC	2,475,000
J.P. Morgan Securities LLC	825,000
Mizuho Securities USA LLC	825,000
Evercore Group L.L.C.	330,000
Guggenheim Securities, LLC	330,000
Scotia Capital (USA) Inc.	275,000
TD Securities (USA) LLC	275,000
Truist Securities, Inc.	275,000
Huntington Securities, Inc.	165,000
Regions Securities LLC	165,000
Loop Capital Markets LLC	55,000
Roberts & Ryan Investments Inc.	55,000
Total	11,000,000

The offering of the shares of American Water's common stock by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part. The underwriting agreement provides that the underwriters are obligated to purchase all of the shares of common stock in the offering if any are purchased.

The underwriters have advised American Water that they propose initially to offer the shares of American Water's common stock in this offering at the price to public set forth on the cover of this prospectus supplement. If all of such shares of common stock are not sold at the price to public set forth on the cover page of this prospectus supplement, the offering price and other selling terms may be changed by the underwriters.

Option to Purchase Additional Shares

American Water has granted the underwriters an option to purchase from American Water directly up to an additional 1,650,000 shares of common stock. The shares purchased under this option will be purchased at the public offering price, less the underwriting discount. The underwriters may exercise this option at any time, in whole or in part, for a period of 30 days from the date of this prospectus supplement. If any additional shares of American Water's common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

If the underwriters exercise their option, each underwriter will be obligated, subject to the conditions contained in the underwriting agreement, to purchase a number of additional shares of common stock in approximately the same proportion as shown in the table above.

Discount

The underwriting discount is equal to the public offering price per share of common stock less the amount paid by the underwriters to American Water per share of common stock. The following table shows the per share

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and total underwriting discount to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share	Without Option Exercise	With Full Option Exercise
Public offering price	$ 135.5000	$ 1,490,500,000	$ 1,714,075,000
Underwriting discount	$ 2.0325	$ 22,357,500	$ 25,711,125
Proceeds, before expenses, to American Water	$ 133.4675	$ 1,468,142,500	$ 1,688,363,875

Expenses and Indemnification

American Water estimates that the total expenses of the offering, including registration, listing and printing fees and legal and accounting expenses but excluding the underwriting discount, will be approximately $700,000.

American Water has agreed to indemnify the underwriters against liabilities relating to this offering, including liabilities under the Securities Act, or contribute to payments that the underwriters may be required to make in that respect.

Conflicts of Interest

Certain of the underwriters and their affiliates may hold a portion of the commercial paper of AWCC that may be repaid using the net proceeds from this offering. In such event, it is possible that one or more of the underwriters or their affiliates could receive at least 5% of the net proceeds from the offering and, in that case, such underwriter would be deemed to have a conflict of interest under FINRA Rule 5121. In the event of any such conflict of interest, such underwriter would be required to conduct the distribution of the common stock in accordance with FINRA Rule 5121. If the distribution is conducted in accordance with FINRA Rule 5121, such underwriter would not be permitted to confirm a sale to an account over which it exercises discretionary authority without first receiving specific written approval from the account holder.

Price Stabilization and Short Positions

Until the distribution of the shares of common stock is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing American Water's common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell American Water's common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of American Water's common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of American Water's common stock made by the underwriters in the open market prior to the completion of the offering.

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Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of American Water's common stock or preventing or retarding a decline in the market price of American Water's common stock. As a result, the price of American Water's common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the New York Stock Exchange, in the over-the-counter market or otherwise.

Neither American Water nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of American Water's common stock. In addition, neither American Water nor any of the underwriters make any representation that the representatives of the underwriters will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Lock-Up Agreement

American Water has agreed that, subject to certain limited exceptions, without the prior written consent of the representatives of the underwriters, American Water will not directly or indirectly during the period commencing on the date hereof and ending 90 days after the date hereof (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file with, or submit to, the SEC a registration statement under the Securities Act relating to any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition, submission or filing or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or any such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

Furthermore, American Water's directors and executive officers have agreed that, subject to certain limited exceptions, without the prior written consent of the representatives of the underwriters, they will not, directly or indirectly, during the period commencing on the date hereof and ending 60 days after the date hereof (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock, or publicly disclose the intention to make any offer, sale, pledge or disposition, (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (3) make any demand for or exercise any right with respect to the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The representatives of the underwriters, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time with or without notice. When determining whether or not to release the common stock and other securities from lock-up agreements, the representatives of the underwriters will consider, among other factors, the holder's reasons for requesting the release, the number of shares or other securities for which the release is being requested and market conditions at the time.

NYSE Symbol

American Water's common stock is listed on the NYSE under the symbol "AWK."

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Selling Restrictions

No action has been taken in any jurisdiction (except in the United States) that would permit a public offering of the shares of American Water's common stock, or the possession, circulation or distribution of this prospectus or any other material relating to American Water or the shares of its common stock in any jurisdiction where action for that purpose is required. Accordingly, the shares of American Water's common stock may not be offered or sold, directly or indirectly, and neither this prospectus nor any other offering material or advertisements in connection with the shares of the common stock may be distributed or published, in or from any country or jurisdiction except in compliance with any applicable rules and regulations of any such country or jurisdiction.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares of American Water's common stock may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares of common stock applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Canada

The shares of American Water's common stock may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement and the accompanying prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

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Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts ("NI 33-105"), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area

Prohibition of Sales to European Economic Area Retail Investors

In relation to each Member State of the European Economic Area (each a "Relevant State"), no shares of American Water's common stock have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that the shares of common stock may be offered to the public in that Relevant State at any time: (a) to any legal entity which is a qualified investor as defined under Article 2 of the Prospectus Regulation; (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation, provided that no such offer of the shares of common stock shall require American Water or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the shares of common stock in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of common stock, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

United Kingdom

Prohibition of Sales to UK Retail Investors

No shares of American Water's common stock have been offered or will be offered pursuant to the offering to the public in the United Kingdom ("UK") prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the Financial Conduct Authority, except that the shares of common stock may be offered to the public in the UK at any time: (a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation; (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or (c) in any other circumstances falling within Section 86 of the Financial Services and Markets Act 2000 (the "FSMA") provided that no such offer of the shares of common stock shall require American Water or any underwriter to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the shares of common stock in the UK means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of common stock and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Other Regulatory Restrictions

In the UK, this offering document is only being distributed to and is only directed at persons (i) who fall within Article 19(5) ("investment professionals") of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 as amended (the "Financial Promotion Order") or (ii) who fall within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order (all such persons together being referred to as "relevant persons").

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In the UK, any investment or investment activity to which this offering document relates, including the shares of common stock, is available only to relevant persons and will be engaged in only with relevant persons. In the UK, this offering document must not be acted on or relied on by persons who are not relevant persons.

Each underwriter has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the shares of common stock in circumstances in which Section 21(1) of the FSMA does not apply to American Water; and
- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of common stock in, from or otherwise involving the UK.

Hong Kong

The shares of American Water's common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares of common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Japan

The shares of American Water's common stock have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the shares of American Water's common stock were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock, has not been circulated or distributed, nor will it be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the "SFA")) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

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Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law; or

(d) as specified in Section 276(7) of the SFA.

Switzerland

The shares of American Water's common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, American Water, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA ("FINMA"), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Taiwan

The shares of American Water's common stock have not been, and will not be, registered with the Financial Supervisory Commission of Taiwan, the Republic of China ("Taiwan") pursuant to applicable securities laws and regulations. No person or entity in Taiwan is authorized to distribute or otherwise intermediate the offering of the shares of common stock or the provision of information relating to the offering of the common stock, including, but not limited to, this prospectus supplement and the accompanying prospectus. The shares of common stock may be made available for purchase outside Taiwan by investors residing in Taiwan (either directly or through properly licensed Taiwan intermediaries acting on behalf of such investors), but may not be issued, offered or sold in Taiwan.

Dubai Financial Centre

This prospectus supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus supplement is intended for distribution only

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to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The shares of common stock to which this prospectus supplement relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement, you should consult an authorized financial advisor.

Certain Relationships

The underwriters and their affiliates have engaged, and may in the future engage, in transactions with, and from time to time have performed services for American Water and its affiliates in the ordinary course of business, for which they have received and will receive customary compensation. Affiliates of certain of the underwriters are also lenders under AWCC's revolving credit facility and dealers under its commercial paper program.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve American Water securities and/or instruments or the securities and/or instruments of its affiliates. If any of the underwriters or their affiliates have a lending relationship with American Water or its affiliates, certain of those underwriters or their affiliates routinely hedge, and certain other of those underwriters may hedge, their credit exposure to American Water or its affiliates consistent with their customary risk management policies. Typically, these underwriters and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in American Water's securities or the securities of its affiliates, including potentially its common stock. Any such credit default swaps or short positions could adversely affect future trading prices of its common stock. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

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LEGAL MATTERS

Certain legal matters in connection with this offering, including the validity of the common stock, will be passed upon for American Water by Morgan, Lewis & Bockius LLP, New York, New York. Certain legal matters in connection with this offering will be passed upon for American Water by Jeffrey M. Taylor, American Water's Vice President, Chief SEC Counsel and Secretary. Sullivan & Cromwell LLP, New York, New York, has acted as counsel for the underwriters. As of February 23, 2023, Mr. Taylor owned 1,686 shares of American Water's common stock, 1,973 unvested performance stock units (at target) and 603 unvested restricted stock units.

EXPERTS

The consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus supplement by reference to American Water Works Company, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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American Water Works Company, Inc.

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American Water Capital Corp.

Debt Securities

The securities covered by this prospectus may be sold by American Water Works Company, Inc., or American Water, from time to time, independently or together with American Water Capital Corp., or AWCC, a wholly-owned subsidiary of American Water Works Company, Inc. Any debt securities issued by AWCC will have the benefit of a support agreement from American Water. In addition, selling security holders who may be named in a prospectus supplement may offer and sell from time to time securities in such amounts as set forth in such prospectus supplement. We may, and any selling security holder may, offer the securities independently or together in any combination for sale directly to purchasers or through underwriters, dealers or agents to be designated at a future date. We may, and any selling security holder may, offer and sell these securities in amounts, at prices and on terms determined at the time of the offering. Unless otherwise set forth in a prospectus supplement, we will not receive any proceeds from the sale of securities by any selling security holders.

When we offer securities, a prospectus supplement will describe the specific terms of the specific issue of securities. Prospectus supplements may also add, update or change the information in this prospectus. You should carefully read this prospectus and the prospectus supplement relating to the specific issue of securities, together with the documents incorporated by reference, before you decide to invest in any of these securities.

American Water Works Company, Inc. common stock is listed on the New York Stock Exchange under the symbol "AWK." The mailing address of our principal executive offices is 1 Water Street, Camden, New Jersey 08102-1658, and the telephone number is (856) 955-4001.

Investing in these securities involves certain risks. See "Risk Factors" on page i of this prospectus. You should carefully review the risks and uncertainties described under the heading "Risk Factors" contained in this prospectus and any risk factors set forth in each applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The securities may be offered and sold to or through underwriters, dealers, agents or other third parties as designated from time to time, or directly to one or more other purchasers or through a combination of such methods on a continuous or delayed basis. See "Plan of Distribution" on page 31. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names, and any applicable purchase price, fee, commission or discount arrangements between or among them, will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement.

The date of this prospectus is February 25, 2021.

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RISK FACTORS

An investment in our securities involves risk. Before you invest in securities issued by us, you should carefully consider the risks involved. Accordingly, you should carefully consider:

- the information contained in or incorporated by reference into this prospectus;
- the information contained in or incorporated by reference into any prospectus supplement relating to specific offerings of securities;
- the risks described in American Water's Annual Report on Form 10-K for its most recent fiscal year and in any Quarterly Report on Form 10-Q which American Water has filed since its most recent Annual Report on Form 10-K, each of which is incorporated by reference into this prospectus; and
- other risks and other information that may be contained in, or incorporated by reference from, other filings we make with the SEC, including in any prospectus supplement relating to specific offerings of securities.

The discussion of risks related to our business contained in or incorporated by reference into this prospectus or into any prospectus supplement comprises material risks of which American Water or AWCC is aware. If any of the events or developments described actually occurs, our business, financial condition or results of operations would likely suffer.

You should also be aware that new risks may emerge in the future at any time, and we cannot predict such risks or estimate the extent to which they may affect our business, financial condition or results of operations. The prospectus supplement applicable to each type or series of securities we offer may contain a discussion of additional risks applicable to an investment in us and the particular type of securities we are offering under that prospectus supplement.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that American Water and AWCC filed with the Securities and Exchange Commission, or the SEC, using a "shelf" registration process. Under this shelf registration process, we, or certain of our security holders, may sell the securities described in this prospectus in one or more offerings from time to time. Each time we, or, under certain circumstances, certain of our security holders, sell securities under this shelf registration, we will provide a prospectus supplement that will contain specific information about the terms of the offering. The prospectus supplement may also add to, modify or supersede the information contained in this prospectus. You should read both this prospectus and the applicable prospectus supplement together with the additional information referred to under "Where You Can Find More Information." If there is any inconsistency between the information in the prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement.

The prospectus supplement will describe: the terms of the securities offered, any initial public offering price, any price paid to us for the securities, the net proceeds to us, if any, the manner of distribution and any underwriting compensation and the other specific material terms related to the offering of the applicable securities. For more detail on the terms of the securities, you should read the exhibits filed with or incorporated by reference in our registration statement of which this prospectus forms a part.

The term "American Water" refers to American Water Works Company, Inc. The term "AWCC" refers to American Water Capital Corp. All references in this prospectus to "we," "our" and "us" generally refer to:

- American Water, specifically with respect to securities issued by American Water;
- American Water and AWCC, specifically with respect to debt securities issued by AWCC;
- American Water or American Water and AWCC, together, as the context requires, in the section entitled "Plan of Distribution"; and
- American Water and its consolidated subsidiaries in the sections entitled "Forward-Looking Statements," "Risk Factors" and "American Water Works Company, Inc.", and otherwise in descriptions of American Water's operations.

References to "securities" include any security that we or our security holders might sell under this prospectus or any prospectus supplement.

This prospectus contains summaries of certain provisions contained in some of the documents described herein. Please refer to the actual documents for complete information. All of the summaries are qualified in their entirety by reference to the actual documents. Copies of the documents referred to herein have been filed, or will be filed or incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described under "Where You Can Find More Information."

We have not authorized anyone to provide you with information other than that contained or incorporated by reference in this prospectus or any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The distribution of this prospectus and sale of these securities in certain jurisdictions may be restricted by law. You should inform yourself about and observe any such restrictions. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only and any information we have incorporated by reference is only accurate as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since that date.

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FORWARD-LOOKING STATEMENTS

This prospectus and any prospectus supplement, the documents incorporated by reference or any other written or oral statements made by or on behalf of us may include statements that reflect current views with respect to future events. These statements are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, which is referred to as the "Securities Act," Section 21E of the Securities Exchange Act of 1934, as amended, which is referred to as the "Exchange Act," and the Private Securities Litigation Reform Act of 1995. In some cases, these forward-looking statements can be identified by words with prospective meanings such as "intend," "plan," "estimate," "believe," "anticipate," "expect," "predict," "project," "propose," "assume," "forecast," "likely," "uncertain," "outlook," "future," "pending," "goal," "objective," "potential," "continue," "seek to," "may," "can," "should," "will" and "could" or the negative of such terms or other variations or similar expressions.

Forward-looking statements are predictions based on our current expectations and assumptions regarding future events. Accordingly, these forward-looking statements are qualified by, and should be read together with, the risk factors and other cautionary statements contained in American Water's Annual Report on Form 10-K for the year ended December 31, 2020, and its other filings with the SEC, which are incorporated by reference into this prospectus, and you should refer to such risks, uncertainties and risk factors in evaluating such forward-looking statements. Any forward-looking statements we make speak only as of the date of the document in which they are contained. Except as required by the federal securities laws, we do not have any obligation, and we specifically disclaim any undertaking or intention, to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changed circumstances or otherwise. New factors emerge from time to time, and it is not possible for us to predict all such factors. Furthermore, it may not be possible to assess the impact of any such factor on our businesses, either viewed independently or together, or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statement. The foregoing factors should not be construed as exhaustive.

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AMERICAN WATER WORKS COMPANY, INC.

We are the largest and most geographically diverse, publicly-traded water and wastewater utility company in the United States, as measured by both operating revenues and population served. As a holding company, American Water conducts substantially all of its business operations through its subsidiaries. We employ approximately 7,000 employees to provide an estimated 15 million people with drinking water, wastewater and other water-related services in 46 states.

American Water conducts the majority of its business through its Regulated Businesses reportable segment, which includes the ownership of utilities that are generally subject to regulation and that provide water and wastewater services. American Water also operates businesses that provide a broad range of related water and wastewater services in non-regulated markets that individually do not meet the criteria of a reportable segment in accordance with generally accepted accounting principles in the United States, which are collectively referred to in this prospectus as its Market-Based Businesses.

American Water's principal executive offices are located at 1 Water Street, Camden, New Jersey 08102-1658 and its telephone number is (856) 955-4001.

AMERICAN WATER CAPITAL CORP.

American Water's financing activities include, among other things, the issuance of long-term and short-term debt, primarily through AWCC, its wholly owned finance subsidiary. AWCC has no significant assets or operations other than as associated with these financing activities. AWCC loans all of the net proceeds of its long-term debt financings to American Water's operating subsidiaries in its Regulated Businesses segment, as well as to American Water. AWCC also provides liquidity to the Regulated Businesses segment and American Water through AWCC's revolving credit facility and commercial paper program. AWCC may also perform other ancillary services directly related to these financing activities, including cash management activities and hedging of interest-rate and other market risk exposures associated with its indebtedness. The proceeds of all of AWCC's long-term debt have been loaned to subsidiaries in American Water's Regulated Businesses segment, which debt is evidenced by promissory notes issued to AWCC by such subsidiaries or American Water, as applicable.

AWCC's principal executive offices are located at 1 Water Street, Camden, New Jersey 08102-1658 and its telephone number is (856) 955-4001.

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USE OF PROCEEDS

Unless otherwise set forth in a prospectus supplement, the net proceeds from the sale of AWCC debt securities will be used to repay certain of AWCC's outstanding indebtedness or loaned to American Water and/or the subsidiaries in its Regulated Businesses segment, and American Water and/or such subsidiaries may use the proceeds of such loans, and American Water may use the net proceeds from the sale of securities issued by American Water, for the following purposes:

- the repayment of, or the the funding of sinking fund payments with respect to, long-term or short-term indebtedness incurred by American Water or one or more subsidiaries in American Water's Regulated Businesses segment;
- the repurchase of capital stock of American Water or one or more subsidiaries in its Regulated Businesses segment;
- acquisitions; and/or
- general corporate purposes, including without limitation for working capital, operation and maintenance expenses, infrastructure improvements and other capital expenditures.

Unless otherwise set forth in a prospectus supplement, we will not receive any proceeds from any sales of securities by any selling security holder who may be named in a prospectus supplement.

SELLING SECURITY HOLDERS

We may register securities covered by this prospectus for re-offer and resale by any selling security holder who may be named in a prospectus supplement. We may add secondary sales of securities by any selling security holder by filing a prospectus supplement with the SEC. We may register these securities to permit selling security holders to resell their securities when they deem appropriate. A selling security holder may resell all, a portion or none of their securities at any time and from time to time. We may register reoffers and resales of those securities through an underwriter or other plan of distribution as set forth in a prospectus supplement. See "Plan of Distribution."

Selling security holders may also sell, transfer or otherwise dispose of some or all of their securities in transactions exempt from the registration requirements of the Securities Act. We may pay all expenses incurred with respect to the registration of the securities owned by the selling security holders, other than underwriting fees, discounts or commissions, which will be borne by the selling security holders. A prospectus supplement may name the selling security holders and specify the amount of securities to be registered and sold and any other terms of the securities that may be sold by a selling security holder. The applicable prospectus supplement will also disclose whether any of the selling security holders has held any position or office with, has been employed by or otherwise has had a material relationship with us during the three years prior to the date of the applicable prospectus supplement.

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DESCRIPTION OF CAPITAL STOCK

The following description of American Water's common stock and preferred stock is not intended to be complete. For more information regarding the common stock and preferred stock that may be offered by this prospectus, please refer to American Water's restated certificate of incorporation, which is referred to below as American Water's "certificate of incorporation," and American Water's amended and restated bylaws, which is referred to below as American Water's "bylaws." The certificate of incorporation and bylaws are incorporated by reference as exhibits to the registration statement of which this prospectus is a part. The terms of these securities also may be affected by the General Corporation Law of the State of Delaware, is referred to below as the DGCL.

General

American Water's authorized capital stock consists of 500,000,000 shares of common stock, par value $0.01 per share, and 50,000,000 shares of preferred stock. As of February 19, 2021, there were 181,439,255 shares of common stock outstanding and no shares of preferred stock outstanding.

Common Stock

Voting Rights

Other than with respect to director elections, except as otherwise required by law, all matters to be voted on by American Water's shareholders must be approved by a majority of the shares present in person or proxy at such meeting and entitled to vote on the subject matter. With respect to uncontested director elections, American Water's bylaws require that in order to be elected, a director nominee must receive a majority of the votes cast (for this purpose, a majority of the votes cast means that the number of shares voted "for" a director nominee must exceed the number of votes cast "against" that nominee). For contested director elections where the number of nominees exceeds the number of directors to be elected, American Water's bylaws require that the directors shall be elected by the vote of a plurality of the shares represented in person or by proxy at any such meeting and entitled to vote on the election of directors.

Dividends

Holders of common stock will share equally in any dividend declared by American Water's board of directors, subject to the rights of the holders of any outstanding preferred stock.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution or winding up of American Water's affairs, holders of American Water's common stock would be entitled, after payment of the liquidation preference to all holders of any outstanding preferred stock, to share ratably in American Water's assets that are legally available for distribution to shareholders after payment of liabilities. American Water must pay the applicable distribution to any holders of its preferred stock before it may pay distributions to the holders of its common stock.

Other Rights

American Water's shareholders have no preemptive or other rights to subscribe for additional shares.

Preferred Stock

American Water's board of directors may authorize the issuance of preferred stock from time to time in one or more series, without shareholder approval. Subject to the limits imposed by the DGCL, the board of directors

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is authorized to fix for any series of preferred stock the number of shares of such series and the voting powers (if any), designation, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions of such series. American Water's board of directors is also authorized to increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by American Water's shareholders.

American Water's board of directors may authorize the issuance of preferred stock with voting or conversion rights that affect adversely the voting power or other rights of American Water's common shareholders. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of delaying, deferring or preventing a change in control, causing the market price of American Water's common stock to decline, or impairing the voting and other rights of the holders of American Water's common stock. Any restriction on the repurchase or redemption of shares of preferred stock while dividends on such shares are in arrears shall be set forth in the applicable prospectus supplement. You should read both this prospectus and the applicable prospectus supplement together with the additional information referred to under "Where You Can Find More Information."

For any series of preferred stock that American Water may issue, American Water's board of directors will determine and the prospectus supplement relating to such series will describe:

- the number of shares constituting such series and the distinctive designation of the series;
- the dividend rate on the shares of the series, the conditions and dates upon which dividends thereon shall be payable, the extent, if any, to which dividends thereon shall be cumulative, and the relative rights of preference, if any, of payment of dividends thereon;
- whether or not the shares of the series are redeemable and, if redeemable, the time or times during which they shall be redeemable and the amount per share payable on redemption thereof, which amount may, but need not, vary according to the time and circumstances of such redemption;
- the amount payable in respect of the shares of the series, in the event of any liquidation, dissolution or winding up of American Water, which amount may, but need not, vary according to the time or circumstances of such action, and the relative rights of preference, if any, of payment of such amount;
- any requirement as to a sinking fund for the shares of the series, or any requirement as to the redemption, purchase or other retirement by American Water of the shares of the series;
- whether or not the shares of the series will have priority over or be on a parity with or be junior to the shares of any other series or class of stock in any respect, or will be entitled to the benefit of limitations restricting the issuance of shares of any other series or class of stock, restricting the payment of dividends on or the making of other distributions in respect of shares of any other series or class of stock ranking junior to the shares of the series as to dividends or assets, or restricting the purchase or redemption of the shares of any such junior series or class, and the terms of any such restriction;
- the right, if any, to exchange or convert shares of the series into other securities or property, and the rate or basis, time, manner and condition of exchange or conversion;
- the voting rights, if any, to which the holders of shares of the series shall be entitled in addition to the voting rights provided by law; and
- any other term, condition or provision with respect to the series not inconsistent with the provisions of American Water's certificate of incorporation or any resolution adopted by the board of directors pursuant thereto.

Certain Anti-Takeover Provisions of American Water's Certificate of Incorporation and Bylaws, and the DGCL

The following provisions of American Water's certificate of incorporation and bylaws could deter, delay or prevent a third party from acquiring American Water, even if doing so would benefit American Water's shareholders.

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Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for American Water's board of directors to authorize the issuance of preferred stock with super voting, special approval, dividend or other rights or preferences on a discriminatory basis that could impede the success of any attempt to acquire American Water. These and other provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of American Water.

Requirements for Advance Notification of Shareholder Meetings, Nominations and Proposals

American Water's bylaws provide that special meetings of shareholders may be called only upon the request of the majority of the members of American Water's board of directors, upon request of the Chairman of American Water's board of directors, or by American Water's Secretary upon request of shareholders holding at least 15% of American Water's outstanding common stock. American Water's bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting.

American Water's bylaws establish advance notice procedures with respect to shareholder proposals for annual meetings and the nomination of candidates for election as directors, other than nominations made by or at the direction of American Water's board of directors or a committee of the board of directors. A shareholder who wishes to bring a matter before a meeting must comply with American Water's advance notice requirements and provide American Water with certain information. Additionally, vacancies and newly created directorships may be filled only by a vote of a majority of the members of American Water's board of directors then in office, even though less than a quorum, or by shareholders. These provisions may defer, delay or discourage a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of American Water.

Shareholder Action by Written Consent

As permitted by Section 228 of the DGCL, American Water's certificate of incorporation states that any action required or permitted to be taken by American Water's shareholders must be effected at a duly called annual or special meeting of American Water's shareholders and may not be effected by consent in writing by such shareholders.

Acquisitions of Control of a Regulated Public Utility

A significant number of the subsidiaries in our Regulated Businesses segment are subject to economic regulation by state public utility commissions. Some of these states have enacted laws that require regulatory approval for the acquisition of "control" of any regulated utility. In those states, obtaining "control" of the parent or any other company that controls a regulated utility also requires prior regulatory approval. The threshold for a change in control is a fact-specific inquiry that varies by state. For example, in some states, a presumption of control will arise when an acquiring party acquires more than 9.9% of the voting securities of the regulated utility or the controlling entity. In addition to ownership, other states may analyze the degree of influence or control an acquiror may exert over the company. Any person acquiring American Water's common stock in an offering or in any other purchase of American Water's common stock in an amount sufficient to trigger a change in control under state law would need to obtain the prior approval of the applicable state public utility commission.

Certain Other Provisions of American Water's Certificate of Incorporation and Bylaws and the DGCL

Board of Directors

American Water's certificate of incorporation provides that the number of directors is fixed in the manner provided in American Water's bylaws. American Water's bylaws provide that the number of directors will be fixed from time to time by American Water's board of directors.

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Business Combinations Under the DGCL

American Water is subject to Section 203 of the DGCL, which prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the time a shareholder became an interested stockholder, subject to certain exceptions, including if, prior to such time, the board of directors approved the business combination or the transaction which resulted in the shareholder becoming an interested stockholder. "Business combinations" include mergers, asset sales and other transactions resulting in a financial benefit to the "interested stockholder." Subject to various exceptions, an "interested stockholder" is a person who, together with his or her affiliates and associates, owns, or within the prior three years did own, 15% or more of the corporation's outstanding voting stock. These restrictions generally prohibit or delay the accomplishment of mergers or other takeover or change-in-control attempts that are not approved by a company's board of directors.

Limitations of Liability and Indemnification of Directors and Officers

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their shareholders for monetary damages for breaches of directors' fiduciary duties. American Water's certificate of incorporation includes a provision that eliminates the personal liability of directors for monetary damages for actions taken as a director to the fullest extent authorized by the DGCL. The DGCL does not permit exculpation for liability:

- for breach of the duty of loyalty;
- for acts or omissions not in good faith or involving intentional misconduct or knowing violation of law;
- under Section 174 of the DGCL (relating to unlawful dividends or stock repurchases); or
- for transactions from which the director derived improper personal benefit.

American Water's certificate of incorporation and bylaws provide that it will indemnify its directors and officers to the fullest extent permitted by law. American Water's bylaws also expressly authorize American Water to carry directors' and officers' insurance providing indemnification for American Water's directors, officers and certain employees and agents for certain liabilities.

The limitation of liability and indemnification provisions in American Water's certificate of incorporation and bylaws may discourage shareholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit American Water and its shareholders. In addition, your investment may be adversely affected to the extent American Water pays the costs of settlement and damage awards against directors and officers in accordance with these indemnification provisions.

Proxy Access

American Water's bylaws permit an eligible shareholder or group of shareholders to include up to a specified number of director nominees in American Water's proxy materials for an annual meeting of shareholders. To qualify, the shareholders (or group of up to 20 shareholders) must have continuously owned for at least three years 3% or more of American Water's outstanding common stock. The maximum number of shareholder nominees permitted under this proxy access provision is the greater of (i) two or (ii) 20% of the total number of directors on American Water's board of directors as of the last day on which a proxy access notice may be submitted, rounded down to the nearest whole number.

Transfer Agent and Registrar

American Stock Transfer & Trust Company, LLC serves as the registrar and transfer agent for American Water's common stock.

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New York Stock Exchange Symbol

American Water's common stock is listed on the New York Stock Exchange under the trading symbol "AWK."

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DESCRIPTION OF AWCC DEBT SECURITIES AND AMERICAN WATER SUPPORT AGREEMENT

The following description of the terms of the debt securities sets forth certain general terms and provisions of the debt securities to which any prospectus supplement may relate. The particular terms of the debt securities offered by any prospectus supplement will be described in the prospectus supplement relating to those debt securities. Accordingly, for a description of the terms of a particular issue of debt securities, reference must be made to both the prospectus supplement relating thereto and to the following description.

AWCC may issue debt securities from time to time in one or more series. The debt securities will be general obligations of AWCC. Any debt securities issued by AWCC will have the benefit of a support agreement from American Water. In the event that any series of debt securities will be subordinated to other indebtedness that AWCC has outstanding or may incur, the terms of the subordination will be set forth in the prospectus supplement relating to the subordinated debt securities. Each series of debt securities offered by this prospectus will be issued under an indenture dated as of December 4, 2009, between AWCC and Wells Fargo Bank, National Association, as trustee, as the same may be amended or supplemented from time to time. The indenture and the form of supplemental indenture or other instrument establishing the debt securities of a particular series are filed as exhibits to, or will be subsequently incorporated by reference into, the registration statement of which this prospectus is a part. There is no requirement under the indenture that future issuances of AWCC's debt securities be issued exclusively under the indenture, and we will be free to employ other indentures or documentation, containing provisions different from those included in the indenture or applicable to one or more issuances of debt securities in connection with future issuances of other debt securities.

The following discussion of certain provisions of the indenture is a summary only and should not be considered a complete description of the terms and provisions of the indenture. Accordingly, the following discussion is qualified in its entirety by reference to the provisions of the indenture, including the definition of certain terms used below.

General

The debt securities represent direct, unsecured, general obligations of AWCC and:

- may rank equally with other unsubordinated debt or may be subordinated to other debt AWCC has or may incur;
- may be issued in one or more series with the same or various maturities;
- may be issued at a price of 100% of their principal amount or at a premium or discount;
- may be issued in registered or bearer form and certificated or uncertificated form;
- may be represented by one or more global securities registered in the name of a designated depositary's nominee; and
- will have the benefit of a support agreement, dated June 22, 2000, and amended on July 26, 2000, between AWCC and American Water, which is referred to as the "support agreement."

The aggregate principal amount of debt securities that AWCC may authenticate and deliver under the indenture is unlimited. The debt securities may be issued in one or more series as may be authorized from time to time. We will include some or all of the following information about a particular series of debt securities in a prospectus supplement relating to that particular series of debt securities:

(1) the title of the debt securities of the series (which shall distinguish the debt securities of that particular series from the debt securities of any other series);

(2) the price or prices of the debt securities of the series;

(3) any limit upon the aggregate principal amount of the debt securities of the series which may be authenticated and delivered under the indenture (except for debt securities authenticated and

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delivered upon registration of transfer of, or in exchange for, or in lieu of, other debt securities of the series and except for any debt securities which are deemed never to have been authenticated and delivered);

(4) the person to whom any interest on a debt security of the series shall be payable, if other than the person in whose name that debt security (or one or more predecessor securities) is registered at the close of business on the regular record date for such interest;

(5) the date or dates on which the principal and premium of any debt securities of the series are payable;

(6) the rate or rates (which may be fixed or variable) at which any debt securities of the series shall bear interest (if any), or the method of determining such rate or rates, the date or dates from which any such interest shall accrue, the interest payment dates on which any such interest shall be payable, and the regular record date for any such interest payable on any interest payment date;

(7) the period or periods within which, the price or prices at which and the terms and conditions upon which any debt securities of the series may be redeemed, in whole or in part, at the option of AWCC (including without limitation the number of basis points specified for such series for purposes of determining any make-whole amount in respect thereof, and any reference treasury dealers for such series) and, if other than by a board resolution, the manner in which any election by AWCC to redeem the debt securities shall be evidenced;

(8) the obligation, if any, of AWCC to redeem or purchase any debt securities of the series at the option of the holder thereof, or at the option of any other person, and the period or periods within which, the price or prices at which and the terms and conditions upon which any debt securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(9) if other than the currency of the United States of America, the currency, currencies or currency units in which the principal of or any premium or interest on any debt securities of the series shall be payable and the manner of determining the equivalent thereof in the currency of the United States of America for any purpose, and such other or additional provisions (including, without limitation, in respect of defeasance and covenant defeasance) as shall be necessary and desirable in connection therewith;

(10) if other than the entire principal amount thereof, the portion of the principal amount of any debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;

(11) if the principal amount payable at the stated maturity of any debt securities of the series will not be determinable as of any one or more dates prior to the stated maturity, the amount which shall be deemed to be the principal amount of such debt securities as of any such date for any purpose thereunder or hereunder, including the principal amount thereof which shall be due and payable upon any maturity other than the stated maturity or which shall be deemed to be outstanding as of any date prior to the stated maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined);

(12) if applicable, that any debt securities of the series shall be issuable in whole or in part in the form of one or more debt securities in registered, global form without interest coupons, which are referred to as “global securities,” and, in such case, the respective depositaries for such global securities, the form of any legend or legends which shall be borne by any such global security, whether such global securities shall be in the form of registered securities, restricted securities or Regulation S securities and any circumstances in which any such global security may be exchanged in whole or in part for debt securities registered, and any transfer of such global security in whole or in part may be registered, in the name or names of persons other than the depositary for such global security or a nominee thereof;

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(13) the terms, if any, upon which the debt securities of the series may be convertible into or exchanged for AWCC's other debt securities or other securities of any kind and the terms and conditions upon which such conversion or exchange shall be effected, including the initial conversion or exchange price or rate, the conversion or exchange period and any other additional provisions;

(14) if other than denominations of $1,000 and any integral multiple thereof, the denominations in which the debt securities of the series shall be issuable;

(15) if the amount of principal, premium or interest with respect to the debt securities of the series may be determined with reference to an index or pursuant to a formula, the manner in which such amounts will be determined;

(16) any changes or additions to the provisions of the indenture dealing with defeasance;

(17) the terms, if any, of the transfer, mortgage, pledge or assignment as security for the debt securities of the series of any properties, assets, moneys, proceeds, securities or other collateral, including whether certain provisions of the Trust Indenture Act of 1939, as amended, or the "Trust Indenture Act", are applicable and any corresponding changes to provisions of the indenture as then in effect;

(18) any addition to or change in the events of default with respect to any debt securities of the series and any change in the right of the trustee or the holders of such series of debt securities to declare the principal, premium and interest, if any, on such series of debt securities due and payable;

(19) any trustee, authenticating agent, paying agent, transfer agent or registrar;

(20) the applicability of, and any addition to or change in, the covenants and definitions set forth in the indenture which applies to the debt securities;

(21) the subordination, if any, of the debt securities of the series pursuant to the indenture and any changes or additions to the provisions of the indenture relating to subordination;

(22) with regard to debt securities of the series that do not bear interest, the dates for certain required reports to the trustee;

(23) any material U.S. federal income tax consequences applicable to the debt securities; and

(24) any other terms of the series.

All debt securities of one series need not be issued at the same time, and a series may be re-opened for issuances of additional debt securities of such series. This means that AWCC may from time to time, without notice to, or the consent of any existing holders of the previously-issued debt securities of a particular series, create and issue additional debt securities of such series. Such additional debt securities will have the same terms as the previously-issued debt securities of such series in all respects except for the issue date and, if applicable, the initial interest payment date. The additional debt securities will be consolidated and form a single series with the previously-issued debt securities of such series.

Support Agreement

AWCC's indebtedness (including debt securities) has the benefit of the support agreement. The support agreement, which, under the circumstances described below, is the functional equivalent of a guarantee, provides, among other things, that:

- American Water owns, and during the term of the support agreement shall continue to own, all of the voting stock of AWCC free and clear of any lien, security interest or other charge or encumbrance;
- American Water will provide to AWCC, at its request or the request of any lender (including any holder of debt securities), funds in the form of cash or liquid assets (as equity or, if American Water

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and AWCC agree, as a loan subordinated to any and all indebtedness, whether or not that indebtedness is outstanding at the time of the loan) as required if AWCC is unable to make timely payment of interest, principal or premium, if any, on any indebtedness issued by it;

- American Water will cause AWCC to have at all times a positive tangible net worth (total assets less liabilities less intangible assets), as determined in accordance with generally accepted accounting principles; and
- if AWCC fails or refuses to take timely action to enforce certain rights under the support agreement or if AWCC defaults in the timely payment of interest, principal or premium, if any, owed to a lender (including any holder of debt securities) when due, that lender may proceed directly against American Water to enforce such rights or to obtain payment of the defaulted interest, principal or premium, if any, owed to that lender.

No amendment to the support agreement that adversely affects the rights of any lender (including any holder of debt securities) and no termination of the support agreement will be effective until such time as all indebtedness of AWCC shall have been irrevocably paid in full and all commitments for indebtedness have been terminated, unless the lenders (including holders of debt securities or the trustee acting on behalf of debt security holders) holding all of the aggregate principal amount of debt outstanding and (to the extent not outstanding) committed to consent in writing thereto. Notwithstanding the foregoing sentence, any amendment to the support agreement for the purposes of (i) increasing the minimum net worth as provided in the support agreement, (ii) establishing or increasing a minimum interest coverage ratio, (iii) establishing or reducing a maximum amount of debt leverage, (iv) increasing the aggregate principal amount of debt outstanding whose holders are required to consent to the termination or amendment of the support agreement, or (v) any combination of clauses (i), (ii), (iii) and (iv) of this sentence, shall be effective without the consent of any lender (including any holder of debt securities or trustee acting on behalf of such holder). In addition, nothing in the prior two sentences shall derogate from, or override, any provision in an instrument, indenture, agreement or other document pursuant to which indebtedness is or will be issued that requires the written consent of the holders of a specified amount or percentage of that indebtedness to consent to an amendment or termination of the support agreement.

Certain Covenants

Unless otherwise provided in the prospectus supplement for a particular series of debt securities, the indenture, as supplemented for a particular series of debt securities, will contain the following covenants for the benefit of the holders of such series of debt securities, which will be applicable (unless waived or amended) so long as any of the debt securities of such series are outstanding:

Restrictions on Liens

AWCC will not, and will not allow American Water, as the support provider, or any of its subsidiaries, as defined below, to, create, incur, issue or assume any liens, as defined below, on American Water's or its subsidiaries' respective property to secure debt, as defined below, where the debt secured by those liens would exceed an amount equal to 15% of our consolidated tangible total assets, as defined below (calculated to exclude debt secured by permitted liens). This restriction does not apply to the following permitted liens:

(a) liens existing, or created pursuant to the terms of agreements existing, on the date of the indenture;

(b) liens consisting of (i) pledges or deposits in the ordinary course of business to secure obligations under workmen's compensation laws or similar legislation, (ii) deposits in the ordinary course of business to secure or in lieu of surety, appeal or customs bonds to which AWCC, American Water or any of its subsidiaries is a party, (iii) liens created by or resulting from any litigation or legal proceeding which is currently being contested in good faith by appropriate proceedings diligently conducted, (iv) pledges or deposits in the ordinary course of business to secure performance in connection with bids, tenders or contracts (other than contracts for the payment of money) or

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(v) materialmen's, mechanics', carriers', workmen's repairmen's or other like liens incurred in the ordinary course of business for sums not yet due or currently being contested in good faith by appropriate proceedings diligently conducted;

(c) liens created to secure tax-exempt debt, in connection with the financing or refinancing of the purchase, lease or construction of properties;

(d) any lien on any asset of any person existing at the time the person is merged or consolidated with or into, or such asset is acquired by AWCC, American Water or any of its subsidiaries and not created in contemplation of such event;

(e) liens created to secure sales of accounts receivable and other receivables;

(f) licenses of intellectual property granted by AWCC, American Water or any of its subsidiaries in the ordinary course of business and not interfering in any material respect with the ordinary conduct of business;

(g) liens of landlords arising under real property leases to the extent those liens arise in the ordinary course of business and do not secure any past due obligation for the payment of money;

(h) any interest or title of a lessor or sublessor under any lease permitted by the indenture;

(i) liens securing debt which has neither been assumed by AWCC, American Water or any of its subsidiaries nor upon which AWCC, American Water or any of its subsidiaries customarily pay interest charges, existing upon real property, or rights in or relating thereto, which real property or rights were acquired for right-of-way purposes;

(j) zoning laws and ordinances;

(k) any leases required to be capitalized on a balance sheet of the lessee in accordance with generally accepted accounting principles;

(l) easements, rights-of-way, restrictions, conditions and other similar encumbrances, minor defects or irregularities of title, and alleys, streets and highways, which in the aggregate do not materially impair the usefulness of the mortgaged property in the present business of AWCC, American Water or any of its subsidiaries;

(m) leases of the properties of AWCC, American Water or any of its subsidiaries, in each case entered into in the ordinary course of business and that do not, individually or in the aggregate, (i) interfere in any material respect with the ordinary course of business or (ii) materially impair the value of the property subject thereto;

(n) liens arising out of conditional sale, title retention, consignment or similar arrangements for the sale of goods entered into by AWCC, American Water or any of its subsidiaries in the ordinary course of business in accordance with the past practices of AWCC, American Water or such subsidiary;

(o) bankers' liens, right of setoff and other similar liens (including deposits required by interest rate swap agreements) existing solely with respect to cash and cash equivalents on deposit in one or more accounts maintained by AWCC, American Water or any of its subsidiaries, in each case granted in the ordinary course of business in favor of the financial institutions with which such accounts are maintained, securing amounts owing to such financial institutions with respect to cash management and operating account arrangements, including those involving pooled accounts and netting arrangements; provided that, unless such liens are non- consensual and arise by operation of law, in no case shall any such liens secure (either directly or indirectly) the repayment of any debt;

(p) liens for taxes, assessments or governmental charges or levies not yet delinquent and which may subsequently be paid without interest or penalties and liens for taxes, assessments or governmental

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charges or levies which are being contested in good faith by appropriate proceedings for which reserves have been established to the extent required by generally accepted accounting principles;

(q) any lien on any property of AWCC, American Water or any of its subsidiaries securing obligations not exceeding in the aggregate $100 million outstanding any time;

(r) liens on any property, acquired, constructed or improved by AWCC, American Water or any of its subsidiaries after the date of the indenture, and any improvements thereon, accessions thereto or other property acquired or constructed for use in connection therewith or related thereto, which are created or assumed prior to or contemporaneously with, or within 180 days after, such acquisition or completion of such construction or improvement, or within one year thereafter pursuant to a firm commitment for financing arranged with a lender or investor within such 180-day period, to secure or provide for the payment of all or any part of the purchase price of such property or the cost of such construction or improvement incurred after the date of the indenture or liens on any property existing at the time of acquisition thereof; *provided*, that the liens shall not extend to any property theretofore owned by AWCC, American Water or any of its subsidiaries other than, in the case of any such construction or improvement, (i) unimproved real property on which the property so constructed or the improvement is located, (ii) other property (or improvement thereon) which is an improvement to or is acquired or constructed for use in connection therewith or related thereto, (iii) any right and interest under any agreement or other documents relating to the property being so constructed or improved or such other property and (iv) the stock of any subsidiary of American Water created or maintained for the primary purpose of owning the property so constructed or improved;

(s) liens on property securing debt if, prior to or concurrently with the issuance, assumption or guarantee of such debt, the debt securities (together with, if AWCC shall so determine, (i) any other debt of or guaranteed by AWCC ranking equally with the debt securities or (ii) any debt of American Water or any of its subsidiaries then existing or thereafter created) are secured by such property equally and ratably with (or prior to) such debt (for so long as such debt is secured by such liens);

(t) liens securing the debt securities;

(u) liens securing debt owed to AWCC, American Water or any of its subsidiaries; and

(v) liens created for the sole purpose of refinancing, extending, renewing or replacing in whole or in part debt or other obligations secured by any lien referred to in the foregoing subsections (a) through (t); *provided*, *however*, that the principal amount of debt or obligations secured thereby shall not exceed the principal amount of debt or obligations so secured at the time of such refinancing, extension, renewal or replacement *plus* the amount of any premiums required to be paid thereon and reasonable fees and expenses associated therewith and that such refinancing, extension, renewal or replacement, as the case may be, shall be limited to all or a part of the property that secured the lien or mortgage so refinanced, extended, renewed or replaced (and any improvements on such property).

"Debt" means, for any person (without duplication), all (i) indebtedness for borrowed money, (ii) obligations evidenced by bonds, debentures, notes or other similar instruments, (iii) obligations to pay the deferred purchase price of property or service (other than trade payables not overdue by more than 90 days incurred in the ordinary course of business and long term water purchase contracts), (iv) obligations under capital leases, (v) indebtedness of the type referred to in clauses (i) through (iv) above secured by (or for which the holder of such indebtedness has an existing right, contingent or otherwise, to be secured by), any lien or encumbrance on, or security interest in, property (including, without limitation, accounts and contract rights) owned by such person, even though such person has not assumed or become liable for the payment of such indebtedness, and (vi) all obligations of such person for indebtedness or obligations of others of the kinds referred to in clauses (i) through (iv) above under direct or indirect guarantees, excluding, in all cases,

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(i) advances for construction and contributions in aid of construction as set forth on the consolidated balance sheet of American Water and its subsidiaries, (ii) reimbursement obligations (contingent or otherwise) in respect of outstanding letters of credit and (iii) attributable debt in respect of sale and leaseback transactions, as defined below.

"Lien" means any mortgage, lien, pledge, charge, security interest or other encumbrance, or any interest or title of any vendor, lessor, lender or other secured party to or of such person under any conditional sale or other title retention agreement or capital lease, upon or with respect to any property or asset of such person.

"Subsidiary" means a corporation more than 50% of the outstanding voting stock of which is owned, directly or indirectly, by American Water or by one or more other subsidiaries, or by American Water and one or more other subsidiaries.

Restrictions on Sales and Leasebacks

AWCC will not, and will not allow American Water or any of its subsidiaries to, enter into any sale and leaseback transaction without effectively providing that the debt securities will be secured equally and ratably with or prior to the sale and leaseback transaction, unless:

- the aggregate amount of the attributable debt of AWCC, American Water and its subsidiaries in respect of sale and leaseback transactions then outstanding would not exceed an amount equal to 15% of consolidated tangible total assets, as defined below, or
- AWCC, American Water or any of its subsidiaries, within 12 months of the sale and leaseback transaction, retire an amount of secured debt which is not subordinate to the debt securities in an amount equal to the greater of (1) the net proceeds of the sale or transfer of the property or other assets that are the subject of the sale and leaseback transaction or (2) the fair market value of the property leased.

A "sale and leaseback transaction" is an arrangement between AWCC, American Water or any of its subsidiaries and a bank, insurance company or other lender or investor where AWCC, American Water or any of its subsidiaries leases property for an initial term of three years or more that was or will be sold by AWCC, American Water, or such subsidiary to that lender or investor for a sale price of $1 million or its equivalent or more.

"Attributable debt" means the lesser of (1) the fair market value of the asset subject to the sale and leaseback transaction and (2) the present value, determined in accordance with generally accepted accounting principles (discounted at a rate equal to the rate of interest implicit in such transaction), of the obligations of the lessee for the net rental payments (excluding amounts on account of maintenance and repairs, insurance, taxes, assessments and similar charges and contingent rents) during the term of the lease.

"Consolidated tangible total assets" means, as at any applicable time of determination, consolidated total assets less, without duplication, all intangible assets such as goodwill, trademarks, trade names, patents and unamortized debt discount and expense carried as an asset, in each case as set forth in American Water's most recent consolidated balance sheet.

"Consolidated total assets" means, as at any applicable time of determination, the consolidated total assets of American Water and its subsidiaries as set forth in American Water's most recent consolidated financial statements.

Merger, Consolidation or Sale of Assets

Neither AWCC nor American Water will consolidate with or merge into any other person or convey, transfer or lease its properties and assets substantially as an entirety to any person, unless:

(i) the successor formed by a consolidation or the survivor of a merger or the person that acquires by conveyance, transfer or lease all or substantially all of the assets of AWCC or American Water as an

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entirety, as the case may be, is a person organized and existing under the laws of the United States or any State thereof (including the District of Columbia), and expressly assumes, in the case of AWCC, the due and punctual payment of the principal of and any premium and interest on all the debt securities and the performance or observance of every covenant of the indenture on the part of AWCC to be performed or observed, and, in the case of American Water, all the obligations under the support agreement to be performed or observed, and such person shall have caused to be delivered to the trustee an officers' certificate and an opinion of counsel to the effect that such consolidation, merger, conveyance, transfer or lease complies with this covenant; and

(ii) immediately before and immediately after giving effect to such transaction, no event of default, and no event which, after notice or lapse of time or both, would become an event of default, has occurred and is continuing.

Upon any consolidation by AWCC or American Water with or merger by AWCC or American Water into any other person or any conveyance, transfer or lease of either AWCC's or American Water's properties and assets substantially as an entirety in accordance with this covenant, the successor person formed by such consolidation or into which it is merged or to which such conveyance, transfer or lease is made will succeed to, and be substituted for, and may exercise every right and power of, AWCC or American Water, as applicable, under the indenture and the support agreement with the same effect as if such successor person had been named as AWCC or American Water, as applicable, therein, and thereafter, except in the case of a lease, the predecessor person will be relieved of all obligations and covenants, in the case of AWCC under the indenture, the debt securities and, in the case of American Water, under the support agreement.

Support Agreement

American Water may not (a) cancel or terminate the support agreement or (b) amend or otherwise modify the terms of the support agreement, except in accordance with the support agreement. See "Support Agreement."

Subordination

A series of debt securities may be subordinated, which are referred to as "subordinated debt securities," to senior indebtedness (as would be defined in the applicable prospectus supplement) to the extent set forth in the prospectus supplement relating thereto. To the extent American Water conducts its operations through subsidiaries, the holders of debt securities (whether or not subordinated debt securities) will be structurally subordinated to the creditors of American Water's subsidiaries with respect to American Water's obligations under the support agreement, except to the extent such subsidiary is a guarantor of such series of debt securities.

Events of Default

Each of the following constitutes an event of default under the indenture with respect to any series of debt securities:

(1) default for 30 days in the payment when due of interest on any debt security of that series;

(2) default in the payment when due of the principal of, or premium, if any, on any debt security of that series;

(3) default in the deposit of any sinking fund payment, when and as due by the terms of debt securities of that series;

(4) failure by AWCC or American Water to comply with the provisions described under the caption "—Certain Covenants—Merger, Consolidation or Sale of Assets";

(5) default in the performance, or breach by AWCC or American Water, as applicable, of any other covenant or warranty in the indenture or the support agreement for 60 days after (i) AWCC and American Water receive written notice of such default or breach from the trustee or (ii) AWCC,

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American Water and the trustee receive written notice of such default or breach from the holders of at least 25% in principal amount of the debt securities of that series; provided, however, that except with respect to defaults under or breaches of the covenant described under "—Certain Covenants—Restrictions on Liens," holders of a series of debt securities will be deemed to have agreed to an extension of such 60-day period to 120 days so long as corrective action is initiated by AWCC or American Water within such 60-day period unless such corrective action is no longer being diligently pursued;

(6) default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness for money borrowed by AWCC or American Water (or the payment of which is guaranteed by AWCC or American Water), if that default is caused by a failure to pay principal at its stated maturity after giving effect to any applicable grace period, or results in the acceleration of such indebtedness prior to its stated maturity and, in each case, the principal amount of any such indebtedness, together with the principal amount of any other indebtedness under which there has been a payment default after stated maturity or the maturity of which has been so accelerated, aggregates $100 million or more;

(7) failure by AWCC or American Water to pay final judgments aggregating (to the extent not paid or insured) in excess of $100 million, which judgments are not, within 60 days after entry thereof, bonded, discharged or stayed pending appeal, or are not discharged within 60 days after the expiration of such stay;

(8) except as permitted by the indenture, the support agreement shall cease for any reason to be in full force or effect or American Water, or any person acting on behalf of American Water, shall deny or disaffirm American Water's obligations under the support agreement; and

(9) certain events of bankruptcy or insolvency described in the indenture with respect to AWCC or American Water.

Any addition to or changes in the foregoing events of default may be described in the prospectus supplement for a particular series of debt securities.

In the case of an event of default arising from certain events of bankruptcy or insolvency, with respect to AWCC or American Water, all outstanding debt securities of such series will become due and payable immediately without further action or notice. If any other event of default occurs and is continuing, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of such series may declare the principal amount of all the securities of that series to be due and payable immediately. After any such acceleration, but before a judgment or decree based on acceleration is obtained by the trustee, the holders of a majority in aggregate principal amount of the outstanding debt securities of such series may, under certain circumstances, rescind and annul such acceleration and waive such event of default if all events of default, other than the nonpayment of accelerated principal have been cured or waived as provided for in the indenture.

Holders of debt securities of a series may not enforce the indenture or such debt securities except as provided in the indenture. Subject to certain limitations, holders of a majority in principal amount of the then outstanding debt securities of a series may direct the trustee in its exercise of any trust or power. The trustee may withhold from holders of a series of debt securities notice of any continuing default if it determines that withholding notice is in their interest, except a default relating to the payment of principal or interest.

Subject to the provisions of the indenture relating to the duties of the trustee, in case an event of default shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request or direction of any of the holders of a series of debt securities, unless such holders shall have offered to the trustee reasonable indemnity or security against any loss, liability or expense. Subject to such provisions for indemnification of the trustee, the holders of a majority in principal amount of a series of debt securities then outstanding will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to such series of outstanding debt securities.

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The holders of a majority in aggregate principal amount of debt securities of a series then outstanding may, on behalf of the holders of all debt securities of such series, waive any past default and its consequences under the indenture except a default in the payment of interest on, or the principal of, debt securities of such series (other than the non-payment of principal of or interest on debt securities of such series that became due solely because of the acceleration of debt securities of such series) or a covenant or provision of the indenture that cannot be modified or amended without the consent of each holder of each debt security of such series affected.

AWCC is required to deliver to the trustee within 90 days after the end of each fiscal year a statement regarding compliance with the indenture during that fiscal year. Promptly (and in any event within 5 business days) upon a responsible officer, as defined below, of AWCC becoming aware of any default or event of default, AWCC is required to deliver to the trustee a statement specifying that default.

“Responsible officer” means the chief executive officer, chief operating officer, general counsel, any senior financial officer and any other officer of AWCC with responsibility for the administration of the indenture.

“Senior financial officer” means the chief financial officer, principal accounting officer, treasurer or controller of AWCC.

Modification or Waiver

Except as provided below, AWCC and the trustee may supplement and amend the indenture with the consent of the holders of not less than a majority in principal amount of the outstanding debt securities. The consent of the holder of each outstanding debt security affected is required to:

- change the stated maturity of the principal of, or any installment of interest on, the debt securities;
- reduce the principal amount or the rate of interest on, or any premium payable upon the redemption of, the debt securities;
- change the place or currency of payment of principal of, interest on, or premium, if any, on, the debt securities;
- impair the right to institute suit for the enforcement of any such payment on or after the stated maturity of the debt securities or any redemption date for the debt securities;
- reduce the percentage of outstanding debt securities necessary to modify or amend the indenture or to consent to any waiver under the indenture;
- modify provisions related to waivers of past defaults or waivers of certain covenants, other than to increase the percentage of outstanding debt securities necessary for such waivers; or
- modify any of the above requirements.

AWCC and the trustee may supplement and amend the indenture without the consent of any holder for the following purposes:

- to evidence the succession of another entity to AWCC as obligor under the indenture and the debt securities;
- to add to the covenants of AWCC, American Water or a subsidiary of American Water for the benefit of the holders of the debt securities or to surrender any right or power conferred upon AWCC, American Water or any subsidiary of American Water;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities (provided that the uncertificated debt securities are issued in registered form for purposes of Section 163(f) of the Internal Revenue Code, or in a manner such that the uncertificated debt securities are described in Section 163(f)(2)(B) of the Internal Revenue Code);

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- to secure the debt securities or add guarantees with respect to the debt securities;
- to establish the form or terms of debt securities as permitted by the indenture;
- to provide for the acceptance of appointment by a successor trustee;
- to cure any ambiguity, defect or inconsistency in the indenture or to make any other change that does not adversely affect the rights of any holder of the debt securities;
- to effect the assumption of the indenture by American Water; or
- to comply with any requirement of the SEC in connection with the qualification of the indenture under the Trust Indenture Act.

The consent of the holders of the debt securities is not necessary under the indenture to approve the particular form of any proposed amendment or supplemental indenture. It is sufficient if such consent approves the substance of the proposed amendment or supplemental indenture.

Prescription Period

Any money that AWCC deposits with the trustee or any paying agent for the payment of principal, premium, if any, or interest on any debt security that remains unclaimed for two years after the date upon which the principal, premium, if any, and interest are due and payable will be repaid to AWCC upon AWCC's request unless otherwise required by mandatory provisions of any applicable unclaimed property law. After that time, unless otherwise required by mandatory provisions of any unclaimed property law, the holder of any debt security will be able to seek any payment to which that holder may be entitled only from AWCC.

No Personal Liability of Directors, Officers, Employees and Shareholders

No director, officer, employee, incorporator or shareholder of AWCC or American Water, will have any liability for any obligations of AWCC or American Water under the debt securities, the indenture or the support agreement, or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each holder of a debt security by accepting such debt security waives and releases all such liability. The waiver and release are part of the consideration for issuance of the debt securities. The waiver may not be effective to waive liabilities under the federal securities law and it is the view of the SEC that such waiver is against public policy.

Defeasance

At any time, AWCC may terminate all its obligations under debt securities of a series and the indenture with respect to such debt securities, which is referred to as "legal defeasance," except for certain obligations, including those respecting the defeasance trust and obligations to register the transfer or exchange of debt securities of such series, to replace mutilated, destroyed, lost or stolen debt securities of such series and to maintain a registrar and paying agent in respect of the debt securities of such series.

In addition, at any time AWCC may terminate its obligations under certain specified covenants with respect to a series of debt securities.

AWCC may exercise its legal defeasance option with respect to a series of debt securities notwithstanding its prior exercise of its covenant defeasance option with respect to such series of debt securities. If AWCC exercises its legal defeasance option with respect to a series of debt securities, payment of the debt securities of such series may not be accelerated because of an event of default with respect thereto. If AWCC exercises its covenant defeasance option with respect to a series of debt securities, payment of the debt securities of such series may not be accelerated because of a default related to the specified covenants.

In order to exercise either defeasance option with respect to debt securities of a series, AWCC must irrevocably deposit in trust, which is referred to as the "defeasance trust," with the trustee money or U.S. Government obligations, or both, in an amount deemed sufficient in the opinion of a nationally recognized firm

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of independent public accountants for the payment of principal and premium, if any, and interest on such debt securities to maturity, and must comply with certain other conditions, including delivery to the trustee of an opinion of counsel to the effect that holders of the debt securities of such series will not recognize gain or loss for U.S. federal income tax purposes as a result of such deposit and defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such deposit and defeasance had not occurred (and, in the case of legal defeasance only, such opinion of counsel must be based on a ruling of the Internal Revenue Service or change in applicable U.S. federal income tax law).

Discharge

When (i) AWCC delivers to the trustee all outstanding debt securities of a series (other than any debt securities replaced because of mutilation, loss, destruction or wrongful taking) for cancellation or (ii) all outstanding debt securities of such series have become due and payable, or are by their terms due and payable within one year whether at maturity or are to be called for redemption within one year under arrangements reasonably satisfactory to the trustee, and in the case of clause (ii) AWCC irrevocably deposits with the trustee funds sufficient to pay at maturity or upon redemption all outstanding debt securities of such series, including interest thereon, and if in either case AWCC pays all other sums related to the applicable series of debt securities payable under the indenture by AWCC, then the indenture shall, subject to certain surviving provisions, cease to be of further effect with respect to such series. The trustee shall acknowledge satisfaction and discharge of the indenture with respect to the applicable series of debt securities on request of AWCC accompanied by an officers' certificate and an opinion of counsel of AWCC.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York, without regard to conflicts of laws principles thereof.

Book-Entry, Delivery and Form

Except as set forth in the applicable prospectus supplement, each series of debt securities will be issued in registered, global form and will be represented by one or more global securities. Upon issuance, each of the global securities will be deposited with the trustee as custodian for The Depository Trust Company, which is referred to as "DTC," in New York, New York, and registered in the name of DTC or its nominee, in each case for credit to an account of a direct or indirect participant in DTC as described below.

Except as set forth below, the global securities may be transferred, in whole and not in part, only to another nominee of DTC or to a successor of DTC or its nominee. Beneficial interests in the global securities may not be exchanged for definitive debt securities in registered certificated form, which is referred to as "certificated debt securities," except in the limited circumstances described below. See "—Exchanges of Global Securities for Certificated Debt Securities." Except in the limited circumstances described below, owners of beneficial interests in the global securities will not be entitled to receive physical delivery of the debt securities in certificated form.

Transfers of beneficial interests in the global securities will be subject to the applicable rules and procedures of DTC and its direct or indirect participants, which may change from time to time.

Exchanges of Global Securities for Certificated Debt Securities

A beneficial interest in a global security may not be exchanged for a debt security in certificated form unless (i) DTC (x) notifies AWCC that it is unwilling or unable to continue as depository for such global security or (y) has ceased to be a clearing agency registered under the Exchange Act, or (ii) there shall have occurred and be continuing an event of default with respect to the debt securities. In all cases, certificated debt securities delivered in exchange for any global security or beneficial interests therein will be registered in the names, and issued in approved denominations, requested by or on behalf of DTC (in accordance with its customary procedures).

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Depository Procedures

The following description of the operations and procedures of DTC is provided solely as a matter of convenience. These operations and procedures are solely within the control of the respective settlement systems and are subject to changes by them from time to time. American Water and AWCC take no responsibility for these operations and procedures and urge investors to contact the system or their participants directly to discuss these matters.

Upon the issuance of the global securities, DTC will credit, on its internal system, the respective principal amount of the individual beneficial interests represented by such global securities to the accounts with DTC, which are referred to as "participants," or persons who hold interests through participants. Ownership or beneficial interests in the global securities will be shown on, and the transfer of that ownership will be effected only through, records maintained by DTC or its nominee (with respect to interests of participants) and the records of participants (with respect to interest of persons other than participants).

As long as DTC, or its nominee, is the registered holder of a global security, DTC or such nominee, as the case may be, will be considered the sole owner and holder of the debt securities represented by such global security for all purposes under the indenture and the debt securities. Except in the limited circumstances described above under "—Exchanges of Global Securities for Certificated Debt Securities," owners of beneficial interests in a global security will not be entitled to have portions of such global security registered in their names, will not receive or be entitled to receive physical delivery of debt securities in definitive form and will not be considered the owners or holders of the global security (or any debt securities presented thereby) under the indenture or the debt securities. In addition, no beneficial owner of an interest in a global security will be able to transfer that interest except in accordance with DTC's applicable procedures, in addition to those under the indenture referred to herein.

Investors may hold their interests in the global securities directly through DTC, if they are participants in such system, or indirectly through organizations which are participants in such system. All interests in a global security may be subject to the procedures and requirements of DTC.

The laws of some jurisdictions may require that certain persons take physical delivery in definitive form of securities that they own. Consequently, the ability to transfer beneficial interests in a global security to such persons may be limited to that extent. Because DTC can act only on behalf of participants, which in turn act on behalf of indirect participants and certain banks, the ability of a person having beneficial interests in a global security to pledge such interests to persons or entities that do not participate in the DTC system, or otherwise take action in respect of such interests, may be affected by the lack of a physical certificate evidencing such interests.

Payments of the principal of and interest on global securities will be made to DTC or its nominee as the registered holder thereof. Neither AWCC, the trustee nor any of their respective agents will have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests in the global securities or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

AWCC expects that DTC or its nominee, upon receipt of any payment of principal or interest in respect of a global security representing any debt securities held by it or its nominee, will immediately credit participants' accounts with payment in amounts proportionate to their respective beneficial interests in the principal amount of such debt securities as shown on the records of DTC or its nominee. AWCC also expects that payments by participants to owners of beneficial interests in such global securities held through such participants will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers registered in "street name." Such payments will be the responsibility of such participants.

Transfers between participants in DTC will be effected in accordance with DTC's procedures.

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DTC has advised AWCC that DTC will take any action permitted to be taken by a holder of debt securities (including the presentation of debt securities for exchange as described below) only at the direction of one or more participants to whose account with DTC interests in the global securities are credited and only in respect of such portion of the aggregate principal amount of the debt securities as to which such participant or participants has or have given such direction. However, if there is an event of default under the debt securities, DTC reserves the right to exchange the global securities for legended debt securities in certificated form, and to distribute such debt securities to its participants.

DTC has advised AWCC that DTC is:

- a limited purpose trust company organized under the New York Banking Law,
- a "banking organization" within the meaning of the New York Banking Law,
- a member of the Federal Reserve System,
- a "clearing corporation" within the meaning of the New York Uniform Commercial Code, as amended, and
- a "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act.

DTC was created to hold securities for its participants and facilitate the clearance and settlement of securities transactions between participants through electronic book-entry changes in accounts of its participants, thereby eliminating the need for physical transfer and delivery of certificates. Participants include securities brokers and dealers, banks, trust companies and clearing corporations and may include certain other organizations. DTC is partially owned by some of these participants or their representatives. Indirect access to the DTC system is available to other entities such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a participant, either directly or indirectly, which we refer to as indirect participants.

Although DTC has agreed to the foregoing procedures in order to facilitate transfers of beneficial ownership interests in the global securities among participants of DTC, it is under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued at any time. None of AWCC, the trustee nor any of their respective agents will have any responsibility for the performance by DTC or its participants or indirect participants of its respective obligations under the rules and procedures governing its operations, including maintaining, supervising or reviewing the records relating to, or payments made on account of, beneficial ownership interests in global securities.

Settlement and Payment

AWCC will make payments in respect of the debt securities represented by the global securities (including principal, premium, if any, and interest) by wire transfer of immediately available funds to the accounts specified by the global security holder. AWCC will make all payments of principal, interest and premium, if any, with respect to certificated debt securities by wire transfer of immediately available funds to the accounts specified by the holders of the certificated debt securities or, if no such account is specified, by mailing a check to each such holder's registered address.

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DESCRIPTION OF DEPOSITARY SHARES

The following summary of certain provisions of the depositary shares does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the depositary agreement that will be filed with the SEC in connection with the offering of such depositary shares.

American Water may offer fractional shares of preferred stock, rather than full shares of preferred stock. If American Water decides to offer fractional shares of preferred stock, American Water will issue receipts for depositary shares. Each depositary share will represent a fraction of a share of a particular series of preferred stock, and the prospectus supplement will indicate that fraction. The shares of preferred stock represented by depositary shares will be deposited under a depositary agreement between American Water and a depositary that is a bank or trust company that meets certain requirements and is selected by American Water. The depositary will be specified in the applicable prospectus supplement. Each owner of a depositary share will be entitled to all of the rights and preferences of the preferred stock represented by the depositary share. The depositary shares will be evidenced by depositary receipts issued pursuant to the depositary agreement. Depositary receipts will be distributed to those persons purchasing the fractional shares of preferred stock in accordance with the terms of the offering.

American Water has summarized selected provisions of the depositary agreement and the depositary receipts, but the summary is qualified in its entirety by reference to the provisions of the depositary agreement and the depositary receipts. The particular terms of any series of depositary shares will be described in the applicable prospectus supplement. If so indicated in the prospectus supplement, the terms of any such series may differ from the terms set forth below.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received by it in respect of the preferred stock to the record holders of depositary shares relating to such preferred shares in proportion to the numbers of depositary shares held on the relevant record date. The amount made available for distribution will be reduced by any amounts withheld by the depositary or American Water on account of taxes.

In the event of a distribution other than in cash, the depositary will distribute securities or property received by it to the record holders of depositary shares in proportion to the numbers of depositary shares held on the relevant record date, unless the depositary determines that it is not feasible to make such distribution. In that case, the depositary may make the distribution by such method as it deems equitable and practicable. One such possible method is for the depositary to sell the securities or property and then distribute the net proceeds from the sale as provided in the case of a cash distribution.

Withdrawal of Shares

Upon surrender of depositary receipts representing any number of whole shares at the depositary's office, unless the related depositary shares previously have been called for redemption, the holder of the depositary shares evidenced by the depositary receipts will be entitled to delivery of the number of whole shares of the related series of preferred stock and all money and other property, if any, underlying such depositary shares. However, once such an exchange is made, the preferred stock cannot thereafter be redeposited in exchange for depositary shares. Holders of depositary shares will be entitled to receive whole shares of the related series of preferred stock on the basis set forth in the applicable prospectus supplement. If the depositary receipts delivered by the holder evidence a number of depositary shares representing more than the number of whole shares of preferred stock of the related series to be withdrawn, the depositary will deliver to the holder at the same time a new depositary receipt evidencing the excess number of depositary shares.

Redemption of Depositary Shares

Whenever American Water redeems shares of the preferred stock, the depositary will redeem a number of depositary shares representing the same number of shares of preferred stock so redeemed. If fewer than all of the

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depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot, pro-rata or by any other equitable method as the depositary may determine.

Voting of Underlying Shares

Upon receipt of notice of any meeting at which the holders of the preferred stock of any series are entitled to vote, the depositary will mail the information contained in the notice of the meeting to the record holders of the depositary shares relating to that series of preferred shares. Each record holder of the depositary shares on the record date will be entitled to instruct the depositary as to the exercise of the voting rights represented by the number of shares of preferred stock underlying the holder's depositary shares. The depositary will endeavor, to the extent it is practical to do so, to vote the number of whole shares of preferred stock underlying such depositary shares in accordance with such instructions. American Water will agree to take all action that the depositary may deem reasonably necessary in order to enable the depositary to do so. To the extent the depositary does not receive specific instructions from the holders of depositary shares relating to such preferred shares, it will abstain from voting such shares of preferred stock.

Amendment and Termination of Depositary Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the applicable depositary agreement may at any time be amended by agreement between American Water and the depositary. American Water may, with the consent of the depositary, amend the depositary agreement from time to time in any manner that American Water desires. However, if the amendment would materially and adversely alter the rights of the existing holders of depositary shares, the amendment would need to be approved by the holders of at least a majority of the depositary shares then outstanding.

The depositary agreement may be terminated by American Water or the depositary if:

- all outstanding depositary shares have been redeemed; or
- there has been a final distribution in respect of the shares of preferred stock of the applicable series in connection with American Water's liquidation, dissolution or winding up and such distribution has been made to the holders of depositary receipts.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us notice of its election to do so. American Water may remove a depositary at any time. Any resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of appointment.

Charges of Depositary

American Water will pay all transfer and other taxes and governmental charges arising solely from the existence of any depositary arrangements. American Water will pay all charges of each depositary in connection with the initial deposit of the preferred shares of any series, the initial issuance of the depositary shares, any redemption of such preferred shares and any withdrawals of such preferred shares by holders of depositary shares. Holders of depositary shares will be required to pay any other transfer taxes.

Notices

Each depositary will forward to the holders of the applicable depositary shares all notices, reports and communications from American Water which are delivered to such depositary and which are required to be furnished to the holders of the preferred shares.

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Limitation of Liability

The depositary agreement will contain provisions that limit American Water's liability and the liability of the depositary to the holders of depositary shares. Both the depositary and American Water will also be entitled to an indemnity from the holders of the depositary shares prior to bringing, or defending against, any legal proceeding. American Water or any depositary may rely upon written advice of counsel or accountants, or information provided by persons presenting preferred shares for deposit, holders of depositary shares or other persons believed by American Water to be competent and on documents believed by American Water or them to be genuine.

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DESCRIPTION OF STOCK PURCHASE CONTRACTS AND STOCK PURCHASE UNITS

The following summary of certain provisions of the stock purchase contracts and stock purchase units does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the stock purchase contract or stock purchase unit, as applicable, that will be filed with the SEC in connection with the offering of such securities.

American Water may issue stock purchase contracts, including contracts obligating holders to purchase from American Water, and obligating American Water to sell to the holders, a specified number of shares of common stock or other securities at a future date or dates, which are referred to as "stock purchase contracts." The price per share of the securities and the number of shares of the securities may be fixed at the time the stock purchase contracts are issued or may be determined by reference to a specific formula set forth in the stock purchase contracts. The stock purchase contracts may be issued separately or as part of units consisting of a stock purchase contract and debt securities, preferred securities, warrants or debt obligations of third parties, including U.S. treasury securities, securing the holders' obligations to purchase the securities under the stock purchase contracts, which are referred to as "stock purchase units." The stock purchase contracts may require holders to secure their obligations under the stock purchase contracts in a specified manner. The stock purchase contracts also may require American Water to make periodic payments to the holders of the stock purchase units or vice versa, and those payments may be unsecured or refunded on some basis.

The applicable prospectus supplement will describe the terms of the stock purchase contracts or stock purchase units. The description in the prospectus supplement will not necessarily be complete, and reference will be made to the stock purchase contracts, and, if applicable, collateral or depositary arrangements, relating to the stock purchase contracts or stock purchase units, which will be filed with the SEC each time American Water issues stock purchase contracts or stock purchase units. Material U.S. federal income tax considerations applicable to the stock purchase units and the stock purchase contracts will also be discussed in the applicable prospectus supplement.

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DESCRIPTION OF SUBSCRIPTION RIGHTS

The following summary of certain provisions of the subscription rights does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the certificate evidencing the subscription rights that will be filed with the SEC in connection with the offering of such subscription rights.

General

American Water may issue subscription rights to purchase common stock, preferred stock, depositary shares or warrants to purchase preferred stock, common stock or depositary shares. Subscription rights may be issued independently or together with any other offered security and may or may not be transferable by the person purchasing or receiving the subscription rights. In connection with any subscription rights offering to American Water's shareholders, American Water may enter into a standby underwriting arrangement with one or more underwriters pursuant to which such underwriters will purchase any offered securities remaining unsubscribed for after such subscription rights offering. In connection with a subscription rights offering to American Water's shareholders, American Water will distribute certificates evidencing the subscription rights and a prospectus supplement to American Water's shareholders on or about the record date that American Water sets for receiving subscription rights in such subscription rights offering.

The applicable prospectus supplement will describe the following terms of subscription rights in respect of which this prospectus is being delivered:

- the title of such subscription rights;
- the securities for which such subscription rights are exercisable;
- the exercise price for such subscription rights;
- any provisions for changes to or adjustments in the exercise price for such subscription rights;
- the number of such subscription rights each shareholder will be entitled to receive, on a per share basis;
- the extent to which such subscription rights are transferable;
- if applicable, a discussion of the material U.S. federal income tax considerations applicable to the issuance or exercise of such subscription rights;
- the date on which the right to exercise such subscription rights shall commence, and the date on which such rights shall expire (subject to any extension);
- the extent to which such subscription rights include an over-subscription privilege with respect to unsubscribed securities;
- if applicable, the material terms of any standby underwriting or other purchase arrangement that American Water may enter into in connection with the subscription rights offering; and
- any other terms of such subscription rights, including terms, procedures and limitations relating to the exchange and exercise of such subscription rights.

Exercise of Subscription Rights

Each subscription right will entitle the holder of the subscription right to purchase for cash such amount of shares of preferred stock, depositary shares, common stock, warrants or any combination thereof, at such exercise price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the subscription rights offered thereby. Subscription rights may be exercised at any time up to the close of business on the expiration date for such subscription rights set forth in the prospectus supplement. After the close of business on the expiration date, all unexercised subscription rights will become void.

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Subscription rights may be exercised as set forth in the prospectus supplement relating to the subscription rights offered thereby. Upon receipt of payment and the subscription rights certificate properly completed and duly executed at the corporate trust office of the subscription rights agent or any other office indicated in the prospectus supplement, American Water will forward, as soon as practicable, the shares of preferred stock or common stock, depositary shares or warrants purchasable upon such exercise. American Water may determine to offer any unsubscribed offered securities directly to persons other than shareholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as set forth in the applicable prospectus supplement.

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DESCRIPTION OF WARRANTS

The following summary of certain provisions of the warrants does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the warrant agreement that will be filed with the SEC in connection with the offering of such warrants.

General

American Water may issue warrants for the purchase of debt securities, preferred stock, depositary shares or common stock. Warrants may be issued independently or together with debt securities, preferred stock, depositary shares or common stock offered by any prospectus supplement and may be attached to or separate from any such offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between American Water and a bank or trust company, as warrant agent. The warrant agent will act solely as American Water's agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants.

Debt Warrants

The prospectus supplement relating to a particular issue of debt warrants will describe the terms of such debt warrants, including the following:

- the title of such debt warrants;
- the offering price for such debt warrants, if any;
- the aggregate number of such debt warrants;
- the designation and terms of the debt securities purchasable upon exercise of such debt warrants;
- if applicable, the designation and terms of the debt securities with which such debt warrants are issued and the number of such debt warrants issued with each such debt security;
- if applicable, the date from and after which such debt warrants and any debt securities issued therewith will be separately transferable;
- the principal amount of debt securities purchasable upon exercise of a debt warrant and the price at which such principal amount of debt securities may be purchased upon exercise (which price may be payable in cash, securities, or other property);
- the date on which the right to exercise such debt warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such debt warrants that may be exercised at any one time;
- whether the debt warrants represented by the debt warrant certificates or debt securities that may be issued upon exercise of the debt warrants will be issued in registered or bearer form;
- information with respect to book-entry procedures, if any;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material U.S. federal income tax considerations;
- the antidilution provisions of such debt warrants, if any;
- the redemption or call provisions, if any, applicable to such debt warrants;
- any provisions for changes to or adjustments in the exercise price for the debt warrants; and
- any additional terms of such debt warrants, including terms, procedures, and limitations relating to the exchange and exercise of such debt warrants.

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Stock Warrants

The prospectus supplement relating to any particular issue of warrants for preferred stock, depositary shares or common stock will describe the terms of such warrants, including the following:

- the title of such warrants;
- the offering price for such warrants, if any;
- the aggregate number of such warrants;
- the designation and terms of the preferred stock, depositary shares or common stock purchasable upon exercise of such warrants;
- if applicable, the designation and terms of the offered securities with which such warrants are issued and the number of such warrants issued with each such offered security;
- if applicable, the date from and after which such warrants and any offered securities issued therewith will be separately transferable;
- the number of shares of preferred or common stock, or the number of depositary shares, purchasable upon exercise of a warrant, and the price at which such shares may be purchased upon exercise;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material U.S. federal income tax considerations;
- the antidilution provisions of such warrants, if any;
- the redemption or call provisions, if any, applicable to such warrants;
- any provisions for changes to or adjustments in the exercise price for the stock warrants; and
- any additional terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

PLAN OF DISTRIBUTION

We and any selling security holder may offer and sell the securities covered by this prospectus from time to time, in one or more transactions, at market prices prevailing at the time of sale, at prices related to market prices, at a fixed price or prices subject to change, at varying prices determined at the time of sale or at negotiated prices, by a variety of methods, including the following:

- through agents;
- to or through underwriters;
- through brokers or dealers;
- directly by us or any selling security holders to purchasers, including through a specific bidding, auction or other process; or
- through a combination of any of these foregoing methods of sale.

Registration of the securities covered by this prospectus does not mean that those securities necessarily will be offered or sold.

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In effecting sales, brokers or dealers engaged by us may arrange for other brokers or dealers to participate. Broker-dealer transactions may include:

- purchases of the securities by a broker-dealer as principal and resales of the securities by the broker-dealer for its account pursuant to this prospectus;
- ordinary brokerage transactions; or
- transactions in which the broker-dealer solicits purchasers.

In addition, we and any selling security holder may sell any securities covered by this prospectus in private transactions or under Rule 144 of the Securities Act rather than pursuant to this prospectus.

In connection with the sale of securities covered by this prospectus, broker-dealers may receive commissions or other compensation from us in the form of commissions, discounts or concessions. Broker-dealers may also receive compensation from purchasers of the securities for whom they act as agents or to whom they sell as principals or both. Compensation as to a particular broker-dealer may be in excess of customary commissions or in amounts to be negotiated. In connection with any underwritten offering, underwriters may receive compensation in the form of discounts, concessions or commissions from us or from purchasers of the securities for whom they act as agents. Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. Any underwriters, broker-dealers, agents or other persons acting on our behalf that participate in the distribution of the securities may be deemed to be “underwriters” within the meaning of the Securities Act, and any profit on the sale of the securities by them and any discounts, commissions or concessions received by any of those underwriters, broker-dealers, agents or other persons may be deemed to be underwriting discounts and commissions under the Securities Act.

In connection with the distribution of the securities covered by this prospectus or otherwise, we or any selling security holder may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of our securities in the course of hedging the positions they assume with us or any selling security holder. We or any selling security holder may also sell securities short and deliver the securities offered by this prospectus to close out short positions. We or any selling security holder may also enter into option or other transactions with broker-dealers or other financial institutions, which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus, as supplemented or amended to reflect such transaction. We or any selling security holder may also from time to time pledge our securities pursuant to the margin provisions of customer agreements with brokers. Upon a default, the broker may offer and sell such pledged securities from time to time pursuant to this prospectus, as supplemented or amended to reflect such transaction.

At any time a particular offer of the securities covered by this prospectus is made, a prospectus supplement, or, if required, a revised prospectus, will be distributed which will set forth the aggregate amount of securities covered by this prospectus being offered and the terms of the offering, including the name or names of any underwriters, dealers, brokers or agents, any discounts, commissions, concessions and other items constituting compensation from us and any discounts, commissions or concessions allowed or reallowed or paid to dealers. Such prospectus supplement, and, if necessary, a post-effective amendment to the registration statement of which this prospectus is a part, will be filed with the SEC to reflect the disclosure of additional information with respect to the distribution of the securities covered by this prospectus. In order to comply with the securities laws of certain states, if applicable, the securities sold under this prospectus may only be sold through registered or licensed broker-dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from registration or qualification requirements is available and is complied with.

We may solicit offers to purchase directly. Offers to purchase securities also may be solicited by agents designated by us from time to time. Any such agent involved in the offer or sale of the securities in respect of which

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this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth, in the applicable prospectus supplement. Unless otherwise indicated in such prospectus supplement, any such agent will be acting on a reasonable best efforts basis for the period of its appointment. Any such agent may be deemed to be an underwriter, as that term is defined in the Securities Act, of the securities so offered and sold.

American Water may offer its equity securities into an existing trading market on the terms described in the applicable prospectus supplement. Underwriters, dealers and agents who may participate in any at-the-market offerings will be described in the prospectus supplement relating thereto.

Securities may also be offered and sold, if so indicated in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more firms acting as principals for their own accounts or as agents, which are referred to as "remarketing firms." Any remarketing firm will be identified and the terms of its agreement, if any, with us and its compensation will be described in the applicable prospectus supplement. Remarketing firms may be deemed to be underwriters, as that term is defined in the Securities Act, in connection with the securities remarketed thereby.

If so indicated in the applicable prospectus supplement, we may authorize agents, dealers or underwriters to solicit offers by certain institutions to purchase securities from us at the public offering price set forth in the applicable prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the applicable prospectus supplement. Such delayed delivery contracts will be subject to only those conditions set forth in the applicable prospectus supplement. A commission indicated in the applicable prospectus supplement will be paid to underwriters and agents soliciting purchases of securities pursuant to delayed delivery contracts accepted by us.

In connection with an underwritten offering, we and any selling security holder would execute an underwriting agreement with an underwriter or underwriters. Unless otherwise indicated in the revised prospectus or applicable prospectus supplement, such underwriting agreement would provide that the obligations of the underwriter or underwriters are subject to certain conditions precedent, and that the underwriter or underwriters with respect to a sale of the covered securities will be obligated to purchase all of the covered securities, if any such securities are purchased. We or any selling security holder may grant to the underwriter or underwriters an option to purchase additional securities at the public offering price, less any underwriting discount, as may be set forth in the revised prospectus or applicable prospectus supplement. If we or any selling security holder grants any such option, the terms of that option will be set forth in the revised prospectus or applicable prospectus supplement.

Underwriters, agents, brokers or dealers may be entitled, pursuant to relevant agreements entered into with us, to indemnification by us or any selling security holder against certain civil liabilities, including liabilities under the Securities Act that may arise from any untrue statement or alleged untrue statement of a material fact, or any omission or alleged omission to state a material fact in this prospectus, any supplement or amendment hereto, or in the registration statement of which this prospectus forms a part, or to contribution with respect to payments which the underwriters, agents, brokers or dealers may be required to make.

LEGAL MATTERS

The validity of the securities offered in this prospectus and any related prospectus supplement and certain legal matters will be passed upon for us by Morgan, Lewis & Bockius LLP, New York, New York, and/or counsel named in the applicable prospectus supplement. If the securities are being distributed in an underwritten offering, certain legal matters will be passed upon for the underwriters by counsel identified in the related prospectus supplement.

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EXPERTS

The consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2020, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

American Water files annual, quarterly and current reports, proxy statements and other information with the SEC. These SEC filings are available to the public via the Internet at the SEC's website at http://www.sec.gov and our website at https://amwater.com. The information contained on or accessible from our website does not constitute a part of this prospectus and is not incorporated by reference herein.

American Water is "incorporating by reference" into this prospectus specific documents that it files with the SEC, which means that important information can be disclosed to you by referring you to those documents that are considered part of this prospectus. Information that American Water files subsequently with the SEC will automatically update and supersede this information. American Water incorporates by reference the documents listed below, and any future documents that it files with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, until the termination of the offerings of all of the securities covered by this prospectus. This prospectus is part of a registration statement filed with the SEC.

American Water is incorporating by reference into this prospectus the following documents filed with the SEC (excluding any portions of such documents that have been "furnished" but not "filed" for purposes of the Exchange Act):

Filings	Period Covered or Date Filed
Annual Report on Form 10-K	Year ended December 31, 2020, as filed with the SEC on February 24, 2021
Current Reports on Form 8-K (other than the portions not deemed to be filed)	Filed on February 18, 2021
Amendment No. 1 to Registration Statement on Form 8-A/A for a description of American Water's common stock, par value $0.01 per share	Filed on May 1, 2018, including any amendments or reports filed to update such description

American Water will provide to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request and without charge, a copy of the documents referred to above that are incorporated in this prospectus by reference. You can request copies of such documents if you write or call to American Water at the following address or telephone number: American Water Works Company, Inc., 1 Water Street, Camden, New Jersey 08102-1658, Attention: Secretary, (856) 955-4001, or such other address and telephone number as may be provided in a prospectus supplement.

This prospectus, any accompanying prospectus supplement or information incorporated by reference herein or therein, contains summaries of certain agreements that we have filed as exhibits to various SEC filings, as well as certain agreements that we will enter into in connection with the offering of securities covered by any particular accompanying prospectus supplement. The descriptions of these agreements contained in this prospectus, any accompanying prospectus supplement or information incorporated by reference herein or therein do not purport to be complete and are subject to, and qualified in their entirety by reference to, the definitive agreements. Copies of the definitive agreements will be made available without charge to you by making a written or oral request to us.

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We have not authorized anyone to provide you with information other than that contained or incorporated by reference in this prospectus or any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should not assume that the information appearing in this prospectus is accurate as of any date other than the date on the front cover of this prospectus.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein, in any other subsequently filed document which also is or is deemed to be incorporated by reference herein or in any accompanying prospectus supplement, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified and superseded, to constitute a part of this prospectus.

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11,000,000 Shares

AMERICAN WATER

American Water Works Company, Inc.

Common Stock

PROSPECTUS SUPPLEMENT

Joint Book-Running Managers

BofA Securities
Wells Fargo Securities
RBC Capital Markets
J.P. Morgan
Mizuho
Evercore ISI
Guggenheim Securities

Co-Managers

Scotiabank
TD Securities
Truist Securities
Huntington Capital Markets
Regions Securities LLC
Loop Capital Markets
Roberts & Ryan

February 28, 2023

KAW_R_PSCDR2_NUM010_070725_Attachment_29_CONFIDENTIAL FILED UNDER SEAL PURSUANT TO THE PETITION FOR CONFIDENTIAL TREATMENT FILED ON JULY 7, 2025

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Ann Bulkley

11. Refer to the Bulkley Direct Testimony, page 19. For both the natural gas companies and the electric companies in the proxy group, explain how the operational risk, business risk, and the current and future environmental requirements specifically compare to the regulated water industry.

Response:

In developing the proxy group, it is essential to balance the relative risk of the companies included in the proxy group with the overall size of the group. Therefore, given the small number of water utilities that can be included in the proxy group, Ms. Bulkley considered the inclusion of electric and natural gas utilities. Ms. Bulkley required that each natural gas and electric utility included in the proxy group derive a majority of their operating income from regulated operations. Further, electric utilities were required to: (1) own water operations and (2) have operations that were primarily transmission and distribution only and thus own limited generation.[1] Thus, Ms. Bulkley's screening criteria resulted in the inclusion of electric and natural gas utilities that were generally comparable to KAWC.

Furthermore, as discussed on page 20, line 24 through page 21, line 26 of Ms. Bulkley's Direct Testimony, several regulatory commissions including the Massachusetts Department of Public Utilities, the Florida Public Service Commission and the Illinois Commerce Commission have considered the results of a proxy group that included both water and natural gas companies when determining the ROE for a water utility. Additionally, as shown in Figure 4 of Ms. Bulkley's Direct Testimony, over the past 10 years, the annual average authorized returns for water, natural gas and transmission and distributing only ("T&D") electric utilities have been generally comparable indicating that the risk of these utilities is also generally comparable.

Finally, it is always the case that the proxy companies do not have exactly the same risk profile as the subject company, KAWC. This is true for not only the electric and natural gas utilities but also for the water utilities included in Ms. Bulkley's proxy group. Therefore, Ms. Bulkley did not specifically compare the risks of the electric and natural gas utilities to the risks of the regulated water industry but instead more appropriately evaluated the relative risks of the proxy group companies and KAWC to determine how the Company's risk profile compares with the group to determine the appropriate placement of the ROE within the range of results established using the proxy group companies. Please see Section VII (pages 35-48) of Ms. Bulkley's Direct Testimony for a discussion of the specific regulatory, business, and financial risks faced by KAWC as compared with the proxy group. Additionally, the analyses presented by Ms. Bulkley related to the relative business, financial and overall investment risk of KAWC as

compared to the proxy group are presented in Exhibit AEB-7, Exhibit AEB-8 and Exhibit AEB-9.

[1] As discussed on page 18, lines 14-15 of Ms. Bulkley's Direct Testimony, while Ms. Bulkley considered electric companies for potential inclusion in the proxy group, none of the electric companies met the screening criteria that she specified.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Ann Bulkley

12. Refer to the Bulkley Direct Testimony, page 28, lines 11-13.

    a. Provide support for the use of S&P Capital IQ consensus analysts' forecasts of earnings growth in the DCF analyses.

    b. Provide a comparison of Yahoo! Finance and S&P Capital IQ as sources of analysts' forecasts for growth.

Response:

a. Similar to the projected 3 to 5-year EPS growth rates reported by Zacks and those previously reported by Yahoo! Finance, S&P Capital IQ Pro provides consensus estimates of the projected 3 to 5-year EPS growth rates (*i.e.,* reflect the views of multiple brokerage analysts). S&P Capital IQ is a leading data source for market information on the utilities sector, therefore, it is reasonable to expect that investors consider the projected 3 to 5-year EPS growth provided by S&P Capital IQ Pro.

   Further, as discussed on page 28, lines 11-13 of Ms. Bulkley's Direct Testimony, Ms. Bulkley previously relied on projected EPS growth rates from Yahoo! Finance, Value Line and Zacks; however, because Yahoo! Finance no longer reports projected 3 to 5-year EPS growth rates, Ms. Bulkley has replaced the consensus estimates previously relied upon from this source with the S&P Capital IQ data estimates to maintain three data sources, two of which are consensus estimates.

b. As discussed on page 28, lines 11-13 of Ms. Bulkley's Direct Testimony, Yahoo! Finance no longer reports projected 3 – 5-year projected EPS growth rates; therefore, Ms. Bulkley is unable to develop the requested comparison.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Ann Bulkley

13. Refer to the Bulkley Direct Testimony, page 29, lines 19-20. Confirm that Kentucky-American did not exclude any other outliers in the return on equity evaluation. If Kentucky-American did exclude other outliers, identify all excluded outliers, and explain why they were excluded.

Response:

Confirmed. Ms. Bulkley did not exclude any projected EPS growth rates from her constant growth DCF analysis. Instead, as discussed on page 30, lines 1-5 of Ms. Bulkley's Direct Testimony, Ms. Bulkley relied on the median of the proxy group as opposed to the mean when conducting her constant growth DCF analysis since the median is the measure of central tendency that is not significantly affected by the presence of outliers.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00122
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Ann Bulkley

14. Refer to the Bulkley Direct Testimony, page 32, lines 8-17.

    a. Explain the time and which stock indices serve as the basis for the Value Line and Bloomberg beta coefficients.

    b. Explain the time and basis for Yahoo! Finance beta calculations and why they could not also be included in the analysis.

    c. Provide an update to the calculation found on page 35 of the Bulkley Direct Testimony including adjusted Yahoo! Finance beta values. If Yahoo! Finance beta values are unadjusted, provide the formula for adjusting the beta values.

Response:

a. As discussed on page 32, lines 11-12 of Ms. Bulkley's Direct Testimony, the Bloomberg Beta coefficients were calculated using ten years of weekly returns relative to S&P 500 as of March 31, 2025. Additionally, as discussed on page 32, lines 12-14 of Ms. Bulkley's Direct Testimony, the Value Line beta coefficients are calculated using five years of weekly returns against the New York Stock Exchange Composite Index. Ms. Bulkley relied on the beta coefficients calculated by Value Line and provided in the individual Value Line reports for each of the companies in her proxy group; therefore, the Value Line beta coefficients for the companies classified as "Water Utilities" that were included in Ms. Bulkley's proxy group were as of January 3, 2025, while the Value Line beta coefficients for the companies classified as "Natural Gas Distribution Utilities" that were included in Ms. Bulkley's proxy group were as of February 21, 2025.

b. Yahoo! Finance calculates raw betas using monthly returns for the past five years. However, Yahoo! Finance does not specify the market index that is relied on to calculate beta. Further, Ms. Bulkley did not rely on the betas published by Yahoo! Finance because the calculation is based on monthly returns as opposed to weekly returns. Betas based on weekly returns are better predictors of forward returns than those based on monthly returns which is important in the current proceeding where the cost of equity is being estimated for KAWC for the future period when rates will be in effect. For example, in 2022, Agrrawal, Gilbert, and Harkins conducted a study (provided as KAW_R_PSCDR2_NUM014_070725_Attachment 1) that examined betas calculated using daily, weekly, and monthly returns over periods of 1 to 5 years

to determine which methodology was most appropriate for predicting returns over the next day, week, and month and concluded the following:

> In this paper, we have empirically considered whether the standard 60-month window length for calculating CAPM betas for portfolios is optimal for all trading interval lengths. Considering the condensed output of 540 cells (of portfolios TE's [Tracking Error]) from this study, over the period 2000 to 2021 (three rectangular matrices of 180 cells), we find that forecast interval lengths matched to daily or weekly return-based betas are more likely to lead to the lowest tracking errors. When considering the plurality of options for all types of market capitalizations (large, mid and small), the weekly return frequency performs best in producing the lowest TE for 1-period forward returns.
>
> ***
>
> Thus, while there is no optimal combination, the analysis leans towards shorter return intervals (daily or weekly but not monthly) and longer estimation periods (four or five years of returns). This combination can be very intense on computing time, but is nothing compared to the scale of crypto mining and blockchain authentication (Lei et al. 2021; Verhoeven et al. 2018). Results indicate that the generally witnessed practice of utilizing monthly interval betas (over a 60-month estimation period) to estimate next day or next week portfolio returns, or to control for portfolio risk in a market-neutral setting, may not be optimal and is likely a vestige of legacy issues that are no longer relevant (in an era of cloud computing, high frequency data, machine readable data and AI). Agrrawal (2009) demonstrated that pricing data for new firms could be programmatically harvested from the web much before they get archived in a machine-readable format from the larger data providers (WRDS 2022).

Of the methodologies examined, weekly betas vastly outperformed monthly betas at predicting one period forward returns. Thus, Agrrawal, Gilbert and Harkins noted that their analysis supported the use of either daily or weekly returns over periods of 4 to 5 years which most closely approximates the approach relied on by Value line to calculate beta (*i.e.*, 5 years of weekly returns). Moreover, the authors stated that the use of monthly returns over the period of 5 years to estimate beta (*i.e.*, the approach employed by Yahoo! Finance) "may not be optimal and is likely a vestige of legacy issues that are no longer relevant".

c. Ms. Bulkley did not rely on the betas published by Yahoo! Finance for the reasons discussed in PSC 14, part b; therefore, Ms. Bulkley has not developed a version of her CAPM analysis that relies on the betas from Yahoo! Finance.

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Time Dependence of CAPM Betas on the Choice of Interval Frequency and Return Timeframes: Is There an Optimum?

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Abstract: AbstractsThe traditional CAPM beta is almost exclusively calculated over a return period that spans a window length of 60-months, at one-month return frequencies. It is one of the most utilized models in the asset management industry to assess systematic risk. Yet there is limited evidence to suggest that these estimation parameters are optimal. Utilizing data between January 2000 and December 2021 for the Russell 1000 index, we test daily, weekly, and monthly beta estimations to calculate tracking errors (TE) for the use of these betas in predicting subsequent performance over daily, weekly, and monthly timeframes. We identify that daily CAPM betas are best for predicting subsequent period daily returns and that weekly CAPM betas are strongly correlated with forward weekly and monthly period returns. Leveraging the significant advances in computing resources and the increasing utilization of high frequency trading strategies, we argue that additional window length and return interval-based CAPM betas should be calculated for estimating the systematic risk embedded in diversified portfolios.

Keywords: CAPM; beta; estimation; intervalling; intervaling; frequency; window-length; timeframes; beta drift; stationarity; tracking error; portfolio beta hedging; multi-asset investing; systematic risk; fintech

JEL Classification: G11; G17; C10; C18; B41

check for updates

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1. Introduction

The assertion that there is a relation between portfolio beta and the market return has been analyzed and debated for decades. The Sharpe-Linter-Black CAPM model (1964) supports this theory and states that the expected return is a positive linear function of beta, the risk free rate and the expected market return, while other researchers question the usefulness of the beta in predicting the expected return. More recently, Lin (2021) tested the consistency of a five-factor process as applied to an intertemporal CAPM model. Fama and French (1992) asserted that there is no systematic relationship between beta and security returns. Some others agree on the relationship but introduce non-linearity in the relationship (Carroll and Wei 1988). Chen et al. (1986) argued in favor of measuring the relationship between security expected returns using several macroeconomic variables. Lakonishok and Shapiro (1986) presented the case that there is empirical evidence that security returns are affected by an unsystematic risk component. Hollstein et al. (2020), in a recent study, find that intra-day high frequency return-based betas explain the size anomaly better than the conditional betas based on daily returns.

With all these differing and evolving views on the validity of the CAPM beta, a practitioner still cannot look beyond the fact that the traditional CAPM beta remains one of the most widely used factors in the capital markets. According to Graham and Harvey (2001) in a survey of industry participants, over seventy percent of respondents always or almost always look at the traditional CAPM beta, especially when it comes to assessing the extent of systematic risk in the portfolio.

The CAPM model, however, does not give any guidance into whether the beta should be measured daily, weekly, monthly, quarterly, or annually (Roman and Terraza 2018). The beta coefficient of a security will vary across different return frequencies. The phenomenon is referred to as the intervalling (or intervaling) effect bias in beta (Hawawini 1980; Fung et al. 1985; Corhay 1992). CAPM modeling also does not indicate the optimal regression window length that should be utilized to estimate betas. With a longer estimation window (greater than, say, 24 or 60 months) there are more observations in the regression; however, going much further back could introduce issues related to a transformed company with a different set of characteristics, even though it remains under the same company name (or CUSIP number as in the CRSP Pricing database 2022); this can happen when a larger company merges with others over time.

The purpose of this study is not to argue the validity of the CAPM model or its linearity, it is rather to answer the question of what is the optimal interval period (of returns) and window-length of estimation that would yield a beta estimate, whose utilization would make the daily, weekly, or monthly estimation and forecast of systematic portfolio risk more robust. The quantitative community in the US asset management industry primarily uses vendor-supplied betas, which are based on a 60-month return calculation (monthly interval frequency combined with a 60-month window-length of estimation period). We think that there is a legacy issue here, borne out of computational and data limitations years ago (Sharpe 1964) when beta first started getting deployed en masse in industrial portfolio evaluation.[1] These considerations do not exist at the time of writing of this research. The impact of in-the-money vested options, warrants or other convertible securities on EPS dilution was first systematically documented by Goldsticker and Agrrawal (1999), subsequently Akono et al. (2019) found that Regulation FD was partially successful at curbing the influence of management incentives on analysts' research when signaling expected underperformance by way of rounding to zero the EPS estimates; nonetheless such EPS volatility then feeds into stock valuation volatility, eventually resulting in unstable betas. As will be shown in the results, stocks with higher volatility are increasingly sensitive to varying frequency and estimation window lengths.

A survey of literature did not turn up any substantial/formalized insights into what is the effect of changing the interval of returns (monthly, weekly, and daily frequency of returns) on the traditional CAPM beta calculation, or the impact of altering the window-length (apart from the traditional 60-month window) on the accuracy/stability of the CAPM beta's prediction of the forward one-day return. In particular, there appears to be no justification to employing a 60-month beta, based on monthly return intervals to indicate/estimate a one-day or one-week portfolio systematic risk. We also think that with the growth of the market-neutral hedge fund industry, the need for daily portfolio rebalancing may necessitate the use of differing interval betas, with a drift towards higher frequency information (Hollstein et al. 2020), and thus shorter intervals.

2. Literature Review

The literature on the impact of 'intervalling' and window length variation on CAPM beta estimation is somewhat intermittent, though deep. Most of the work discusses the effect of different intervals on the return distributions and dispersion of residuals. Hollstein et al. (2020), find that intra-day high frequency return-based betas explain the size anomaly better than the conditional betas based on daily returns. Hawawini (1980), in his seminal paper on the intervalling effect, demonstrated "mathematically that the skewness of securities' returns—the ratio of the third moment to the standard deviation cubed—is sensitive to the length of the differencing interval over which returns are measured." In his paper, he demonstrates that "the higher the moment's order, the more sensitive it is to the length of the differencing interval over which securities' returns are measured." Smith (1978) estimated the "characteristic lines of 200 common stocks (are examined) over the period 1950–1969. With respect to measurement, geometric mean return decreased slightly and predictably with intervalling. The dispersion of return distribu-

tions decreased with longer intervals. Return distributions exhibited positive skewness. Goodness-of-fit for characteristic lines improved with the use of longer intervals. Estimates of beta increase with intervalling for aggressive stocks." These studies apply the Gaussian distribution to the return random variable x, with the mean and standard deviation of the distribution denoted by μ, σ respectively.

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2}$$

The cumulative distribution function (CDF) of a standard normal distribution with $\mu = 0$, $\sigma = 1$ is the integral of the PDF given above from minus infinity to a value of z and is given by:

$$\Phi(z) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{x} e^{-x^2/2}\, dx$$

In the area of quantitative financial analysis, the distribution of stock prices (x) is, however, modeled as a log-normal distribution, since $x \geq 0$ with parameters μ, σ modified as:

$$\mu = \ln\left(\frac{\mu_X^2}{\sqrt{\mu_X^2 + \sigma_X^2}}\right) \text{ and } \sigma^2 = \ln\left(1 + \frac{\sigma_X^2}{\mu_X^2}\right)$$

However, when the call option writing is applied to portfolios, the single time unit portfolio returns are no longer normally distributed. Despite the asymmetry of returns introduced by option writing, Buckle (2022) shows that the long-run portfolio returns, in fact, become normally distributed, for any invariant option-adjusted portfolio. For the bivariate (x, y), standard normal distribution ($\mu = 0$, $\sigma = 1$) with correlation ρ, the joint PDF is given as:

$$f(x,y) = \frac{1}{2\pi\sigma_X\sigma_Y\sqrt{1-\rho^2}} \exp\left(-\frac{1}{2(1-\rho^2)}\left[\left(\frac{x-\mu_X}{\sigma_X}\right)^2 - 2\rho\left(\frac{x-\mu_X}{\sigma_X}\right)\left(\frac{y-\mu_Y}{\sigma_Y}\right) + \left(\frac{y-\mu_Y}{\sigma_Y}\right)^2\right]\right)$$

Hawawini and Vora (1980) find that there is a consistent pattern of leads or lags for securities' daily returns and it does not hold over monthly returns for securities traded on the NYSE and the AMEX. Girard and Sinha (2006) explore the risk premiums and time varying covariance structures in emerging markets and find that their response mechanisms are not just linked to the local risk factors. Global ETFs can be easily deployed to produce efficient portfolios in a multi-asset mean-variance optimized framework (Agrrawal 2013), who demonstrated that a multi-asset six ETF global portfolio can have 30% less systematic risk (beta) than a pure equity index, such as the S&P 500. Reilly and Wright (1988) noticed discrepancies in published betas estimated over the same five-year period and conducted a factorial analysis of variance to test whether the betas were indeed statistically different. They concluded that: "1. the main reason for observed variation between published betas is the interval effect, and 2. the security market value is a significant predictor of the magnitude and the direction of the difference." The predictive ability of the varying interval betas was, however, not explored in their paper.

Corhay (1992) studied 250 domestic securities traded on the spot market of the Brussels Stock Exchange from January 1977 through December 1985 and noted that "an important issue related to the systematic risk or beta coefficient of a security is its sensitivity to the length of the differencing interval used to measure the returns. The results indicate that an intervalling effect bias is present in the estimated security betas for short differencing intervals. The bias in the betas is very important, especially for small market value securities, and it decreases when the differencing interval used to measure the returns is lengthened. The results also demonstrate that small firms have, on average, lower beta coefficients than large firms.[2]"

Corhay and Rad (1993) finds that in a sample of 50 thinly trading Dutch stocks the "beta estimates from short intervals are on average lower than those obtained from longer intervals" and that there is variability in the coefficients for varying interval lengths. The Corhay (1992) study has its focus on the matter of asynchronous trading and the problems that such non-overlapping estimation windows introduce into robust beta estimation.[3]

Groenewold and Fraser (2000) discuss that CAPM betas are generally estimated from historical data using a "5-year rule of thumb" and explore their ability to correlate with subsequent period returns. They estimate various "time-varying beta" regression models, which are then subsequently used for forecasting. They report that, "forecasting equations have good explanatory power but that their forecasts are dominated, on average, by the 5-year rule of thumb." Levy et al. (2001) report that there is a pronounced impact on the regression and "even a shift from weekly data to quarterly data affects the regression coefficient substantially." They analyze this in a multiplicative-additive framework of creating sub-periods (intervals) from the available period. Ho and Tsay (2001) find that for small-cap stocks, the downward bias in beta estimates diminishes once options are listed on the underlying stock, indicating that the price-adjustment process mitigates the intervalling effect, which is pronounced with smaller-sized stocks. Armitage and Brzeszczynski (2011) found a downward bias in daily betas as a result of the higher idiosyncratic component in daily returns (manifesting in heteroscedasticity of the error term). Intraday volatility is an increasingly impactful factor that creates bias in risk measures (Fang et al. 2012); hence, the assumption that a single beta estimation method would be universally applicable to different portfolio styles may not yield optimally. Mantsios and Xanthopoulos (2016) found a significant intervalling effect in the outcomes of the betas of stocks traded on the Athens Stock Exchange during their 2007–2012 economic crisis. Jurdi and AlGhnaimat (2021) find that firm-level variables such as size, leverage, dividend payments, and diversification impact firm total risk and thus beta. Abate et al. (2022) utilize monthly returns in their constrained optimization models to arrive at efficient allocations. The liquidity of prominent ETFs and its primary drivers have been evaluated in Agrrawal et al. (2014).

3. Data and Methodology

For our stock universe, Russell 1000, which we examined using the test period from 1 January 2000 through 31 December 2021 (CRSP via WRDS 2022), the first beta calculations involve estimation windows that end on 31 December 2021. The top 1000 of stocks on US exchanges comprise about 92% of the total market cap of all listed stocks in the U.S. equity market. Our WRDS/CRSP dataset provided us with CRSP tracked firms incorporated in the US and listed on the NYSE, AMEX, or NASDAQ that have a CRSP share code of 10 or 11 at the beginning of month t, extracted from the WRDS/CRSP files. The survivorship bias free portfolio formation is conducted over the period of 2000–2021. Betas are endogenously calculated using the standard market model (Equations (1)–(4), next section). The results of our work are not state dependent on say a unique set of macro, geo-political, or interest rate regimes (such as pre or post the Bretton Woods currency/gold standard agreement (Eichengreen 2021)). There could be future research conducted to compare indexes, such as the Russell 3000, the Wilshire 5000 and then to the Morgan Stanley MSCI international EAFE Index and see whether there are places where the optimal Beta window is more or less pronounced while calculating the subsequent tracking errors. Extending it back in time would further indicate that the frequency effect and intervaling matching spans time. Cremers and Petajisto (2009), in their seminal paper on suggesting a modification to the Fama and French (1992) paper, use return data that is over the 1980–2003 period. Additionally, the results we find are invariant year over year, and a priori we expect they will stay that way over previous time frames, since it is only a methodological readjustment that we have introduced.

Our purpose is to determine whether different criteria employed in the calculation of the beta lead to a better predictive ability of subsequent portfolio returns. In this paper, we examine two dimensions in the computation of portfolio betas: the interval length of the

returns and the length of the estimation window. The intervals are the return periods used for the comparisons of security returns to the market portfolio. We calculate betas based on daily, weekly and monthly returns. The estimation window is the period of time over which the beta is calculated. The traditional beta calculation uses a monthly interval length and a five-year estimation window (Corhay 1992). If recent systematic risk is deemed more relevant to near term portfolio performance (hedge funds or portfolios with more of a tactical asset allocation approach), then betas with shorter estimation periods might prove more appropriate. We use estimation windows of 1 to 5 years.

Thus, for instance, the first set of betas with a 5-year estimation window were calculated with a start date of 31 December 2016, while the first beta calculations involving 1-year estimation windows had a 31 December 2020 start date. The estimation windows are then run over a loop to produce the vector of betas, with varying return frequencies (D, W, M) and estimation window lengths (1 through 5 years). There are three forward looking time periods for which the tracking errors are calculated (1 day, 1 week and 1 month). The predictive ability of the various calculated betas are then gauged for their effectiveness in explaining subsequent daily, weekly and monthly returns.

The OLS beta for individual securities is estimated with the standard market model, with additional specifications with respect to a time interval of L and a window-length of estimation T.

$$r_i = \alpha_i + \beta_i r_M + e_i \tag{1}$$

$$r_{iLT} = \alpha_{iL} + \beta_{iL} r_{MLT} + e_{iLT} \tag{2}$$

and;

r_i is the return on security i
r_M is the return on the market
β_i is the calculated beta coefficient
α_i is the intercept term, and
e_i is the residual term

For each beta interval length (frequency) and estimation window period, betas are calculated using the two pass OLS return methodology, as listed below (Cohen et al. 1983b). The OLS beta is estimated from the standard market model, with additional specifications with respect to a time interval of L days (implying that the return interval would vary from a daily beta, a weekly return-based beta and a monthly beta). Additionally, we vary the window-length of estimation T, which is sub-divided into a set of periods determined by L and is equal to a rounded integer value of T/L[4]. Both r_{iLT} and r_{MLT} are continuously compounded returns over the specified interval L, and computed as the difference between the natural logarithms of successive closing prices, adjusted for dividends and corporate action.

$$\hat{\beta}_i^{OLS} \equiv {\beta_i}^L$$

$$r_{iLT} = {}^1\alpha_{iL} + {}^1\beta_{iL} r_{MLT} + {}^1e_{iLT} \tag{3}$$

$${}^1\beta_{iL} = {}^2\alpha_i + {}^2\beta_i f_i(L) + {}^2e_{iL} \tag{4}$$

$\forall L \equiv$ interval length in days (D, W, M);
for each security $i = 1, \ldots .. N$;
and over time $T = [1, \ldots, n \text{ days}]/L \equiv$ window length.

A one-year return period will have 252 trading days.

Portfolios are then formed based on the security betas and market capitalization levels (three fractiles for Large, Mid and Small capitalization groups, since we are operating within the Russell 1000 universe) at that point in time t. EW (Equal Weighted) portfolios when aggregated would have a performance drift from the observable VW (Value Weighted) index return over the same time period [due to the small-cap risk factor manifesting, this was noted in Carhart (1997)] and also by Cremers and Petajisto (2009), who pointed out that in the Fama and French (1992) paper, the sub-portfolio returns were based on equal-

weighted returns. Hence, the sub-portfolio returns in this study are value weighted-based, based on the prior period capitalization. The beta-based fraciles are EW (CRSP via WRDS 2022). The actual portfolio returns for the subsequent period ($t + 1$) were then compared to the expected returns based on the portfolio betas and actual returns of the market. This was conducted for daily (D), weekly (W) and monthly (M) forecast lengths. Then, new betas were calculated with a window estimation period ending one month later; and new portfolio combinations formed. The interval and window-length combinations that yielded the lowest tracking error would provide the preferred beta estimate for each portfolio combination and forecast length (forward 1 day, 1 week or 1 year).

Since the CAPM is more relevant for portfolios, where unsystematic risk has been diversified away and beta is the only relevant measure of the risk in security, the analysis was conducted on a portfolio level rather than an individual security level. We formed various portfolio combinations from the Russell 1000 universe based on market capitalization, beta, as calculated above, and a combination of market capitalization and beta (Table 1 (A, B, C)).

We use the annualized tracking error of forward-looking portfolio return estimates as our measure of the explanatory power of the various beta coefficients. The annualized tracking error, TE, is derived from the standard deviation of differences between the actual and expected portfolio returns, as demonstrated below:

$$TE = \sqrt{\lambda \sum_{t=1}^{N} (r_{P,t+1} - \beta_P r_{M,t+1})} \quad (5)$$

where:

N = The total number of periods examined (our current sample has 186 periods);
λ = The number of return periods per year (when forecasting daily returns, λ = 252; for weekly returns, λ = 52; and for monthly returns, λ = 12);
β_P = The equal-weighted portfolio beta based on a given interval and estimation window;
$r_{p,t+1}$ = The actual portfolio return for the period immediately following the beta calculations and portfolio formation;
$r_{m,t+1}$ = The actual return of the Market, as proxied by the total return of the Russell 1000, for the period immediately following the beta calculations and portfolio formation.

Table 1. Annualized Tracking Error of Actual Portfolio Return vs Beta Estimated Portfolio Return—All Periods.

A. Prediction of 1 Day Forward Return

Interval Period	Estimation Window	Large Cap	Mid Cap	Small Cap	Large Cap/High Beta	Large Cap/Mid Beta	Large Cap/Low Beta	Mid Cap/High Beta	Mid Cap/Mid Beta	Mid Cap/Low Beta	Small Cap/High Beta	Small Cap/Mid Beta	Small Cap/Low Beta
Daily	1 Year	2.68	6.64	9.50	11.34	4.80	6.47	13.87	6.93	6.43	17.67	9.74	6.93
	2 Years	2.58	6.25	8.97	10.05	5.33	7.06	12.90	6.80	6.85	16.67	8.89	7.24
	3 Years	2.61	6.03	8.54	8.87	5.51	6.91	11.87	6.93	6.72	15.63	8.88	6.94
	4 Years	2.64	5.89	8.43	8.36	5.60	6.86	11.25	7.07	6.76	15.14	8.78	7.27
	5 Years	2.62	5.82	8.19	7.88	5.79	6.83	10.48	7.10	6.77	14.49	8.78	7.34
Weekly	1 Year	2.74	6.88	9.74	9.75	3.86	6.72	13.80	7.00	6.91	17.61	9.97	7.58
	2 Years	2.61	6.32	9.09	9.42	4.97	6.76	12.69	6.95	6.46	16.98	9.20	7.16
	3 Years	2.68	6.07	8.67	8.35	5.25	6.96	12.08	6.84	6.76	15.80	8.99	7.34
	4 Years	2.72	5.93	8.61	7.95	5.29	6.93	11.48	7.16	6.60	15.16	8.94	7.48
	5 Years	2.71	5.89	8.37	7.44	5.28	6.80	11.13	7.10	6.56	14.27	8.98	7.43
Monthly	1 Year	3.26	7.78	12.58	12.75	3.84	10.76	19.20	7.46	11.54	27.26	11.55	10.65
	2 Years	3.07	6.77	10.56	11.12	5.25	9.78	15.99	7.25	9.04	22.51	10.25	9.06
	3 Years	3.15	6.40	9.59	9.66	5.51	9.31	14.11	7.38	8.68	19.52	9.54	8.36
	4 Years	3.02	6.19	9.36	9.13	5.72	8.68	12.67	7.35	8.11	17.59	9.66	8.33
	5 Years	2.89	6.10	8.84	8.62	5.72	8.12	11.66	7.32	7.82	16.22	9.12	8.21
	Average	2.80	6.33	9.27	9.38	5.18	7.66	13.01	7.11	7.47	17.50	9.42	7.82

B. Prediction of 1 Week Forward Return

Interval Period	Estimation Window	Large Cap	Mid Cap	Small Cap	Large Cap/High Beta	Large Cap/Mid Beta	Large Cap/Low Beta	Mid Cap/High Beta	Mid Cap/Mid Beta	Mid Cap/Low Beta	Small Cap/High Beta	Small Cap/Mid Beta	Small Cap/Low Beta
Daily	1 Year	2.77	6.18	9.95	9.16	5.03	7.57	12.52	6.93	7.34	17.79	10.44	7.65
	2 Years	2.76	6.23	9.79	8.42	5.18	7.63	11.89	7.02	7.98	17.30	9.92	7.75
	3 Years	2.87	6.11	9.62	8.15	5.50	7.71	11.27	6.71	7.63	16.98	9.82	7.87
	4 Years	2.90	6.04	9.42	8.00	5.62	7.56	10.67	7.00	7.80	16.36	9.95	7.89
	5 Years	2.96	6.12	9.20	7.64	5.75	7.63	10.45	7.01	8.10	15.97	9.90	7.79
Weekly	1 Year	2.75	5.94	9.46	8.68	4.47	7.56	12.15	6.54	7.07	16.73	9.73	7.98
	2 Years	2.83	5.92	9.38	8.75	5.28	7.57	11.57	7.22	7.41	16.67	9.55	7.39
	3 Years	2.98	5.80	9.19	8.22	5.60	7.75	11.09	7.01	7.48	16.34	9.26	7.55
	4 Years	3.01	5.75	8.96	7.97	5.61	7.83	10.59	7.10	7.42	15.78	9.43	7.60
	5 Years	3.07	5.85	8.75	7.85	5.70	7.98	10.33	7.61	7.47	15.14	9.37	7.59

Table 1. *Cont.*

Monthly	1 Year	3.09	6.11	9.61	10.06	4.62	10.23	14.60	6.53	10.75	20.64	8.95	11.73
	2 Years	3.19	6.15	9.17	8.67	4.67	9.09	12.41	6.89	9.36	17.34	9.20	9.17
	3 Years	3.27	5.95	8.97	7.82	4.97	8.54	11.16	7.09	8.31	15.92	9.31	8.70
	4 Years	3.24	5.93	8.80	7.59	5.38	8.17	10.56	7.10	8.20	15.59	9.09	8.41
	5 Years	3.25	6.01	8.62	7.49	5.69	7.96	10.30	7.29	8.02	15.07	9.37	8.09
	Average	3.00	6.01	9.26	8.30	5.27	8.05	11.44	7.00	8.02	16.64	9.55	8.21

C. Prediction of 1 Month Forward Return

Interval Period	Estimation Window	Large Cap	Mid Cap	Small Cap	Large Cap/High Beta	Large Cap/Mid Beta	Large Cap/Low Beta	Mid Cap/High Beta	Mid Cap/Mid Beta	Mid Cap/Low Beta	Small Cap/High Beta	Small Cap/Mid Beta	Small Cap/Low Beta
Daily	1 Year	2.93	6.40	10.58	10.19	5.15	7.23	11.41	7.97	8.43	18.41	11.34	9.35
	2 Years	3.01	6.62	10.27	8.76	5.40	7.82	11.29	8.26	8.85	17.73	10.97	9.36
	3 Years	3.03	6.67	10.28	8.25	5.57	7.89	11.00	8.15	8.68	17.08	11.14	9.30
	4 Years	3.05	6.70	10.13	7.89	5.72	7.96	10.76	8.35	8.61	16.68	10.96	9.30
	5 Years	3.15	6.70	10.04	7.27	5.91	8.11	10.46	8.45	8.61	16.37	11.09	9.30
Weekly	1 Year	3.00	6.06	10.03	9.20	4.37	7.11	10.52	7.63	7.85	17.21	10.45	9.19
	2 Years	3.07	6.32	9.78	9.36	4.95	7.52	10.86	7.97	8.10	16.71	10.24	8.69
	3 Years	3.13	6.41	9.77	8.48	5.45	7.55	10.52	7.98	8.24	16.13	10.64	8.77
	4 Years	3.16	6.45	9.63	8.32	5.47	7.65	10.45	8.13	8.19	15.85	10.57	8.79
	5 Years	3.27	6.49	9.58	7.73	5.74	7.76	10.25	8.38	8.29	15.61	10.70	8.86
Monthly	1 Year	3.13	6.39	10.36	10.75	4.55	8.95	14.00	7.16	11.06	20.22	10.60	12.42
	2 Years	3.36	6.46	9.71	8.74	5.04	8.11	11.86	7.80	8.92	17.36	10.66	9.57
	3 Years	3.41	6.55	9.66	7.91	5.39	7.98	10.78	8.16	8.65	15.51	10.89	9.04
	4 Years	3.38	6.59	9.53	7.71	5.44	7.57	10.40	7.90	8.31	15.33	10.33	8.95
	5 Years	3.44	6.63	9.51	7.36	5.73	7.54	10.17	8.20	8.15	15.02	10.39	8.99
	Average	3.17	6.50	9.92	8.53	5.33	7.78	10.98	8.03	8.60	16.75	10.73	9.33

Green-Daily Beta with lowest TE; Red-Weekly Beta with lowest TE; Yellow-Month Beta with lowest TE; p-value < 0.10 for all cells.

4. Results

The estimation of tracking errors for varying time frames (window lengths and interval return frequencies) is discussed in this section. Milonas and Rompotis (2013) examined the intervalling effect bias in a sample of forty ETFs' systematic risk, as well as the relation between beta and capitalization of ETFs and also the intervalling effect bias in ETFs' tracking error. They find a positive association between the intervalling effect and tracking error, as well as the return interval. For our set of the Russell 1000 stocks, we compare the tracking errors (Chu and Xu 2021)[5] of the various combinations of estimated betas (e.g., 1 year daily, . . . , 5 year daily, 5 year weekly, 5 year monthly, etc., for a total of twelve such variations).

The following exhibits labeled as, Table 1 (A, B, C) depict forecast windows of 1 day, 1 week and 1 month, respectively (in the rows). We first establish whether there is a particular interval length (daily, weekly or monthly) that generates the highest occurrence of return prediction stability across varying forecast windows, by identifying the cells with the lowest tracking error (TE). Thereafter, the tracking errors of the different combinations of Beta-Size[6] groups (twelve such groups) are listed in the successive columns, in each of the tables. The lower the tracking TE, the higher the subsequent period return predictability. This generates a total of 3 rectangular matrices of 15 × 12 dimensions each, thus totaling 540 (180 cells times 3 sets) unique TE's. We further synthesize these three information matrices (of tracking errors) by distilling the 540 TE cells into a consolidated 3 × 3 classification matrix. That matrix will be presented and discussed after the three core tables that show the TE's associated with daily, weekly and monthly forward returns, respectively. While the three sub-panels in Table 1 look similar, they differ in the length of the forward return period. For Table 1.A, the cells demonstrate the TE's associated with a 1 *Day* forward return; for Table 1.B, the cells demonstrate the TE's associated with a 1 *Week* forward return; for Table 1.C, the cells demonstrate the TE's associated with a 1 *Month* forward return. These are a few TE horizons for institutional portfolio managers with varying risk mandates. The lowest TE (most desirable) is highlighted for each column. In each case, the TE is between the observed forward return and the estimated portfolio return based on β_P, the portfolio beta based on a given interval and estimation window. The objective is to test the efficacy of varying interval and frequency betas in estimating portfolio returns that would most closely align with next period of returns (which could be 1 Day, 1 Week or 1 Month, the results of which are in Table 1 (A, B, C) [Combined Table 1].

The tables above are highly condensed output, derived from a large set of return numbers (three different return frequencies, for 1000 stocks per year and over a twenty-year period, with overlapping window length regressions), so that the reader can focus on the core findings. In order to further distill and simplify the embedded information in Table 1, we subsequently reduce the 15 × 12 matrix comprising of 540 cells and 3 sub-matrices, into a 3 × 3 Classification matrix.[7]

This is accomplished by first flagging the minimal TE value across each Beta-Size combination *within* each forecast window—this step reduces the 180-cell matrix to a 12-element array (one minimum TE value for each column). The second step involves aggregating each of the 'minimal' TE's across one of the three interval lengths used in the beta estimation, irrespective of the window-length utilized. As an example, the 'Daily 3 Years' and the 'Daily 4 Years' beta series would be classified under 'Daily Betas' interval length (in the classification matrix shown here), and the number of minimal TE's occurring within the daily beta panel be noted. A total of 36 minimal TE occurrences are thus classified for accuracy.

Each cell lists the number of occurrences a minimum TE was observed for the beta~forecast length combination, as listed in Table 1 (A, B, C). A few inferences and deductions from Table 2 are in order. It appears that there is an observable overlap between interval length and forecast window length, particularly for the daily and the weekly settings. While the classical CAPM gives us little guidance on this matter, we do find some indications, which appear to be intuitively justified, that daily beta-based portfolio returns would be the most correlated with next period daily returns. While nine of the twelve daily forecast returns with minimum TE were attributable to daily interval betas

(3 × 3 matrix cell a1), only four of the twelve monthly forecast returns with minimum TE were attributable to monthly interval betas (cell c3). In fact, it may be possible that weekly interval betas are more robust predictors of 1-month ahead returns (6 of the 12 occurrences; cell in b2).

Table 2. 3 × 3 Classification Matrix of 'Minimum' Tracking Errors.

Interval Length Forecast Length	Daily Betas	Weekly Betas	Monthly Betas	Total TE's	%Best
1 Day	9, a1	2	1	12	75.0%, a1
1 Week	0	6, b2	6	12	50.0%, b2
1 Month	2	6	4, c3	12	33.3%, c3

For daily return forecasting, the use of betas estimated by utilizing daily returns appears to be the interval of choice; 75% (nine of the twelve TE's)[8] of the daily beta and 1 day forecast return combinations had minimal TE's when using daily betas for daily return estimation. Apart from the fact that monthly betas appear to have limited monthly return predictability, we also notice that there is only one occurrence within monthly betas that generates a minimal TE in predicting 1-day ahead returns. In other words, the use of monthly betas to forecast daily portfolio returns does not seem to be a good approach (long-short market neutral hedge funds can have very short performance attribution periods, as an example).

The diagonals on the classification matrix also indicate that for daily and weekly single period forecasts, the returns based on daily and weekly interval betas would have greater accuracy. As such, these that tables provide metrics that indicate that the generally witnessed practice of utilizing a monthly interval beta (over a 60-month estimation period) to estimate next day portfolio returns or to control for portfolio risk in a market-neutral setting, may not be optimal.

Parametric and non-parametric tests for equality of means, medians and variances reject the null hypotheses of equality between the three types of betas (daily, weekly and monthly) are presented in Table 3. Apart from the Kruskal–Wallis and Welch F-tests, we also utilize the Levene's (1960) test for group variance equality. The formulation for Levene's $W = \frac{(N-k)}{(k-1)} \cdot \frac{\sum_{i=1}^{k} N_i (Z_{i.} - Z_{..})^2}{\sum_{i=1}^{k} \sum_{j=1}^{N_i} (Z_{ij} - Z_{i.})^2}$ with $Z_{ij} = \left| Y_{ij} - \overline{Y_{i.}} \right|$ where k is the number of different groups to which the sampled cases belong, N_i is the number of cases in the ith group, N is the total number of cases in all groups, and $Y_{i,j}$ is the value of the measured variable for the jth case from the ith group. The variance increase (Armitage and Brzeszczynski 2011) can also be observed in Figure 1 and is noticeable for betas above the 2.0 level.

Table 3. Tests for equality of means and variance homogeneity (daily, weekly and monthly betas).

Test for equal means					
	Sum of Squares	df	Mean square	F	*p* (same)
Between Beta groups:	1.7319	2	0.8660	4.5720	**0.010420**
Within Beta groups:	543.8350	2871	0.1894	Permutation p (n = 99,999)	
Total:	545.5670	2873	0.0105		
Kruskal-Wallis test for equal medians			H (chi2):	6.327	
(non-parametric test)			*p* (same):	**0.04227**	
There is a significant difference betweenthe sample means and also the medians					
Levene's test for homogeneity of variance			*p* (same):	$\mathbf{4.94 \times 10^{-27}}$	
Welch F test for unequal variances: F = 5.734, df = 1857, *p* = **0.003293**					

All *p*-values indicate that the Betas for Daily, Weekly and Monthly intervals differ in means, medians and variance.

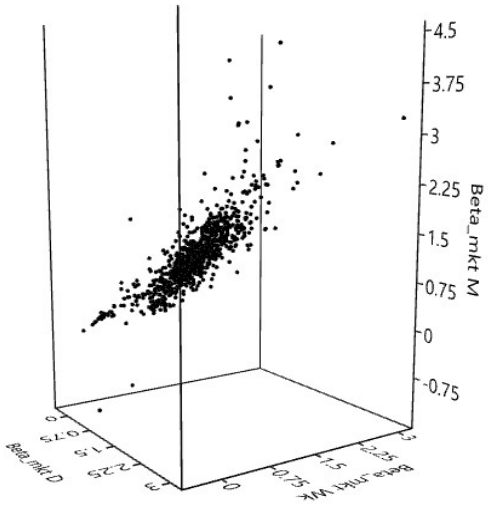

Figure 1. Scatterplot (3-D) of betas derived from daily, weekly and monthly returns (2000–2021).

Parametric and non-parametric tests for equality of means, medians and variances reject the null hypotheses of equality between the three types of betas (daily, weekly and monthly). While the Kruskal–Wallis and Welch F-test are standard tests, we utilize the Levene's (1960) test for group variance equality, given that our return series are based on varying periodicity. The variance escalation can also be observed in Figure 1 and is noticeable for betas above the 2.0 level.

The dispersion of betas is higher for the monthly frequency betas and is concentrated towards values $\beta > 2.25$. Values of $\beta < 0.5$ also show some dispersion for the weekly and daily series. This is also observed in the fat tails of the histograms shown in Figure A1, Appendix A. Figure 2 has a surface plot rendition of the varying interval beta series, below:

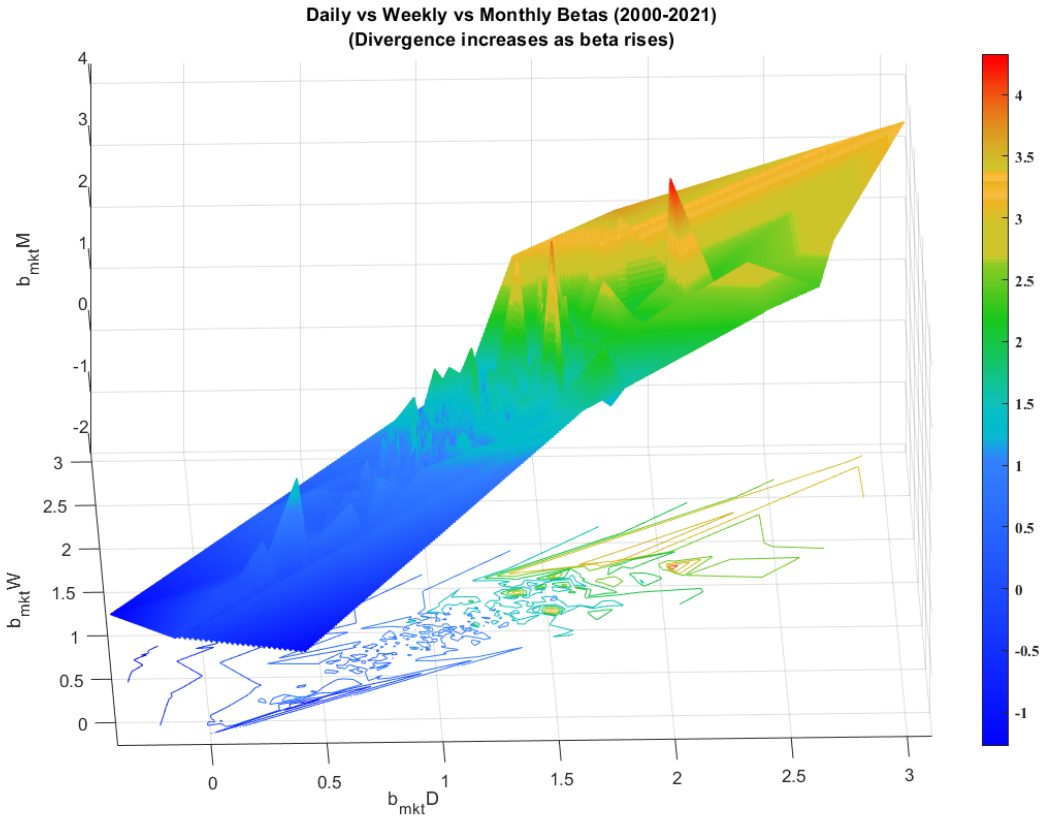

Figure 2. Surface plot of betas derived from daily, weekly and monthly returns (2000−2021).

The frequency of returns does seem to impact the estimated beta values and the 1-period forward return tracking errors. In Figure 3, we observe that of the three types of betas, the one using the weekly return frequency has, for most market capitalization groups, the lowest tracking error for 1-period forward returns (higher bars are better). The 'purple' colored bars are for the Large Cap stocks and have the highest occurrence of the lowest observed tracking errors, especially for the weekly return series and for the 3-, 4- and 5-year estimation period. The 1-year and 2-year window length estimation period yields the most unstable betas, particularly for the daily and monthly return frequencies (lowest occurrence of low TE's). The 'maroon' colored bars are for Mid Cap stocks and have the highest occurrence of the lowest observed tracking errors for the daily return series (3 and 4 year) estimation periods. Figures A1 and A2, in the Appendix A provide a visual representation of the distribution of the three beta series and their overlap densities.

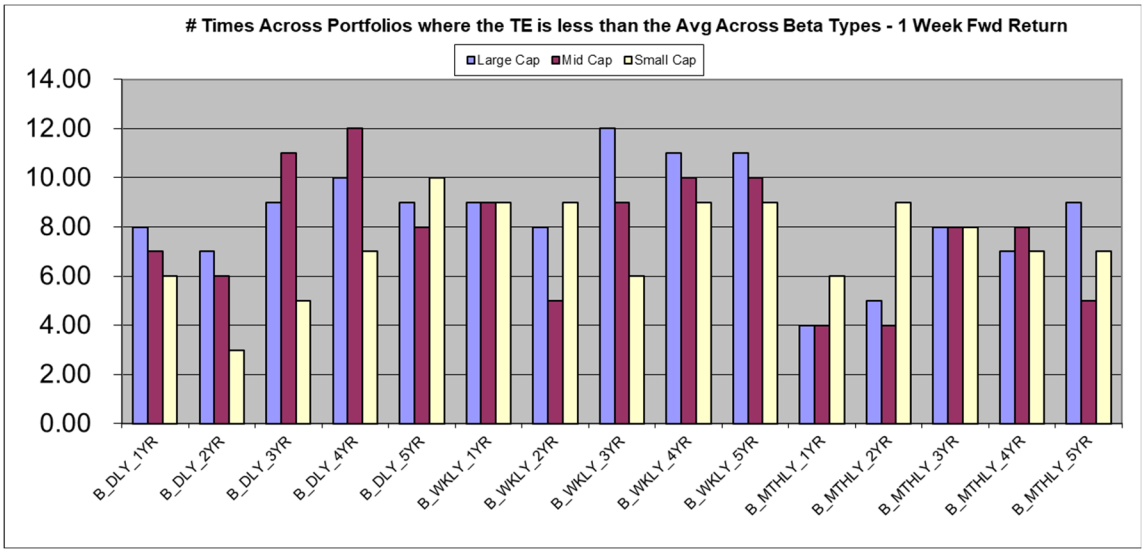

Figure 3. Weekly and daily betas have tracking errors mostly lower than monthly betas.

The primary driver for very short-term volatility is systematic risk, as most of the high frequency data pertains to market/economy wide events (Corhay 1992), while idiosyncratic risk is most likely to be triggered by low frequency events (Terraza and Roman 2021). For small-firms, the release of new information is at an even lower frequency. For short differencing intervals (daily), an overlap of the information set used to derive the beta estimates (captured at a higher frequency daily returns) with the return forecasting period, seems to yield better results (lower TE's) than cross-matched combinations (e.g., monthly forecast period vs. daily betas). Mantsios and Xanthopoulos (2016) also found a significant intervalling effect in the betas of stocks traded on the Athens Stock Exchange during their 2007–2012 economic crisis. Our study finds support for their work, and over a much longer period (2000–2021) in the US equity market.

"Wrong" or rather mismatched optimal windows of beta estimation would result in higher TE (tracking errors). Portfolio managers are likely to increase portfolio turnover with higher TE to reduce volatility with higher levels of trading, but suboptimal beta calibration for their forecast/holding period duration would mean that trading would not be effective. In a perfect world, the beta frequency and estimation window could be customized to observable portfolio holding periods and turnover ratios, to derive the lowest possible tracking errors. However, the turnover would be excessive; hence, we limit the beta frequencies to be D, W and M. We demonstrate that the TEs are higher with mismatched beta frequencies and windows and suggest additional work in the domain, in order to identify and develop mechanisms for PMs to align the beta frequencies/windows (for their risk reports) with their portfolio strategies and turnover.

5. Further Research

To identify and isolate any effect of market directionality on the relationship between interval type, window-length and subsequent period TE, this analysis could be divided into conditional dual periods based on the up and down markets (Pettengill et al. 1995; Cooper 2009).

A. Some preliminary work indicates that, in down markets, it appears that weekly betas accomplish lower TE's than daily betas. It would be interesting to explore this further, though we do think that the increased volatility witnessed during down-markets may have an association with this observation and that the use of daily betas during bear markets may be too unstable for next day forecasting (Alexeev et al. 2016). With r_i and r_{mD} as the excess returns to security i and down market excess returns, respectively, where r_m is the full market excess return, then the downside dual beta (Chong 2022) is:

$$\beta^- = \frac{Cov(r_i, r_{mD} | r_{mD} < r_m)}{Var(r_{mD} | r_{mD} < r_m)}$$

The upside dual beta would be of a similar construct but with the inequalities reversed.

B. Given the extensive amount of computational time it took to analyze the time series of returns in their various permutations and combinations, additional work could be undertaken to design an appropriate and efficient scanning mechanism to identify the optimal combinations of interval, window-lengths and the beta-size dimension.

C. The impact of varying intervals and window-lengths on the one-period ahead predictability of systematic risk can alternatively (to the tracking error, TE) be assessed by the Information Coefficient (IC); stable and robust betas will likely result in higher IC's, but the formal assessment could be a future research item (Appendix B).

6. Conclusions

In this paper, we have empirically considered whether the standard 60-month window length for calculating CAPM betas for portfolios is optimal for all trading interval lengths. Considering the condensed output of 540 cells (of portfolios TE's) from this study, over the period 2000 to 2021 (three rectangular matrices of 180 cells), we find that forecast interval lengths matched to daily or weekly return-based betas are more likely to lead to the lowest tracking errors. When considering the plurality of options for all types of market capitalizations (large, mid and small), the weekly return frequency performs best in producing the lowest TE for 1-period forward returns. Large Cap stocks have the highest occurrence of the lowest observed tracking errors, especially for the weekly return series. The 1-year and 2-year window length estimation period yields the most unstable betas, particularly for the daily and monthly return frequencies (they have the lowest occurrence of low TE's). Mid Cap stocks have the lowest tracking errors associated with daily or weekly intervals and estimation window lengths of four and five years. Thus, while there is no optimal combination, the analysis leans towards shorter return intervals (daily or weekly but not monthly) *and* longer estimation periods (four or five years of returns). This combination can be very intense on computing time, but is nothing compared to the scale of crypto mining and blockchain authentication (Lei et al. 2021; Verhoeven et al. 2018). Results indicate that the generally witnessed practice of utilizing monthly interval betas (over a 60-month estimation period) to estimate next day or next week portfolio returns, or to control for portfolio risk in a market-neutral setting, may not be optimal and is likely a vestige of legacy issues that are no longer relevant (in an era of cloud computing, high frequency data, machine readable data and AI). Agrrawal (2009) demonstrated that pricing data for new firms could be programmatically harvested from the web much before they get archived in a machine-readable format from the larger data providers (WRDS 2022).

A non-overlapping series of betas will result in a more robust tracking error estimation resulting from a matching interval frequency with the forecast period, eventually resulting

in greater portfolio stability (less churn, less portfolio turnover and fewer expenses, the benefits of which will eventually percolate to the investor). Given the advent of HFT strategies and also high-volume IPOs, many newly floated companies just do not have 60 months of inception-to-date pricing data. As such, a shorter estimation window but higher frequency (e.g., 18 months of weekly return-based betas, instead of 5-year monthly return-based betas), would still meet the Central Limit Theorem caveats and have sufficient return observations to have usable betas for portfolio risk estimation. Stable and robust betas can result in higher IC's (information coefficients) and is demonstrated in the Appendix A. That is also a future research item.

Considering the findings herein, and given how common it is for industry participants to consider CAPM betas for portfolio risk estimation, we think that additional research is needed to understand how the interplay between interval frequency and estimation period length impacts the CAPM betas and the resulting tracking errors for investment portfolios. In the age of Fintech and cloud computing, the market participants do not have to have their portfolio risk calibrated by a metric that has mostly served well, but was derived over fifty years ago (Sharpe 1964; Lintner 1965; Black 1972).

Author Contributions: Conceptualization: P.A.; methodology: P.A.; software, MATLAB code and user written VBA, P.A.; validation, P.A.; formal analysis, P.A., F.W.G. and J.H.; investigation, P.A., F.W.G. and J.H.; resources, P.A., F.W.G. and J.H.; data curation, P.A.; writing—original draft preparation, P.A.; writing—review and editing, P.A., F.W.G. and J.H.; visualization, P.A.; supervision, joint F.W.G., J.H. and P.A. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

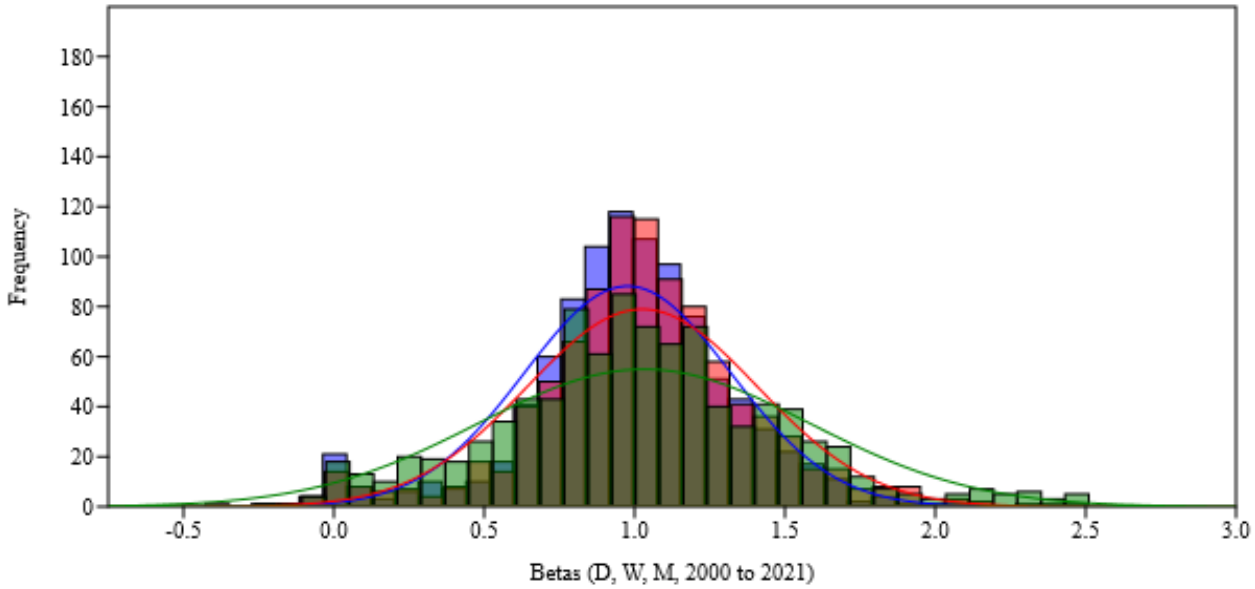

Figure A1. Histograms of betas (daily, weekly and monthly return series, 2000–2021).

The monthly betas have the relatively largest variance (flattest histogram, in green hue), while the daily betas have the lowest variance (blue histogram). A total of 99% of betas are in the [−1, +3] range. Conducting the Jarque-Bera test (Jarque and Bera 1980) for

normality $JB = \frac{n}{6}\left(S^2 + \frac{1}{4}(K-3)^2\right)$, indicates that the daily betas have more of a normal approximation than the monthly betas.

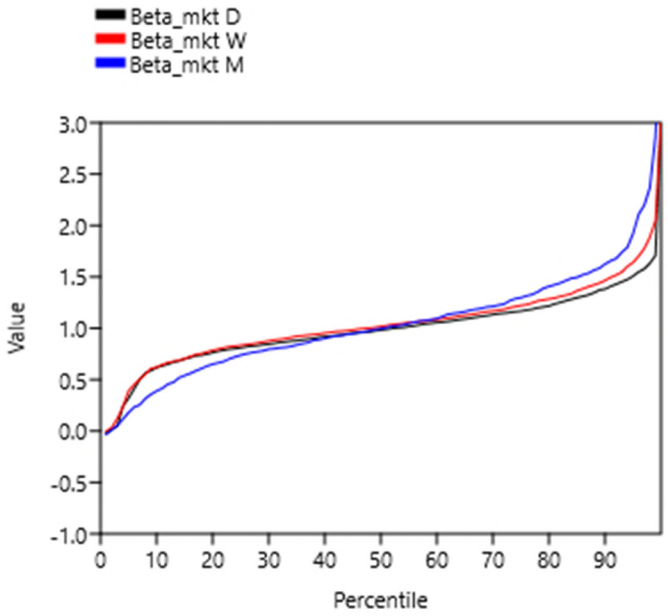

Figure A2. Percentile plot of betas (daily, weekly and monthly return series, 2000−2021).

The percentile plot or CDF (cumulative density function) for the three beta estimates are shown here. The monthly betas (blue CDF line) have a distinct separation from the daily and weekly beta CDFs. This is also observed in the histograms and from the Jarque-Bera test. Percentiles associated with the beta levels can be read directly off the X-Y point of intersection.

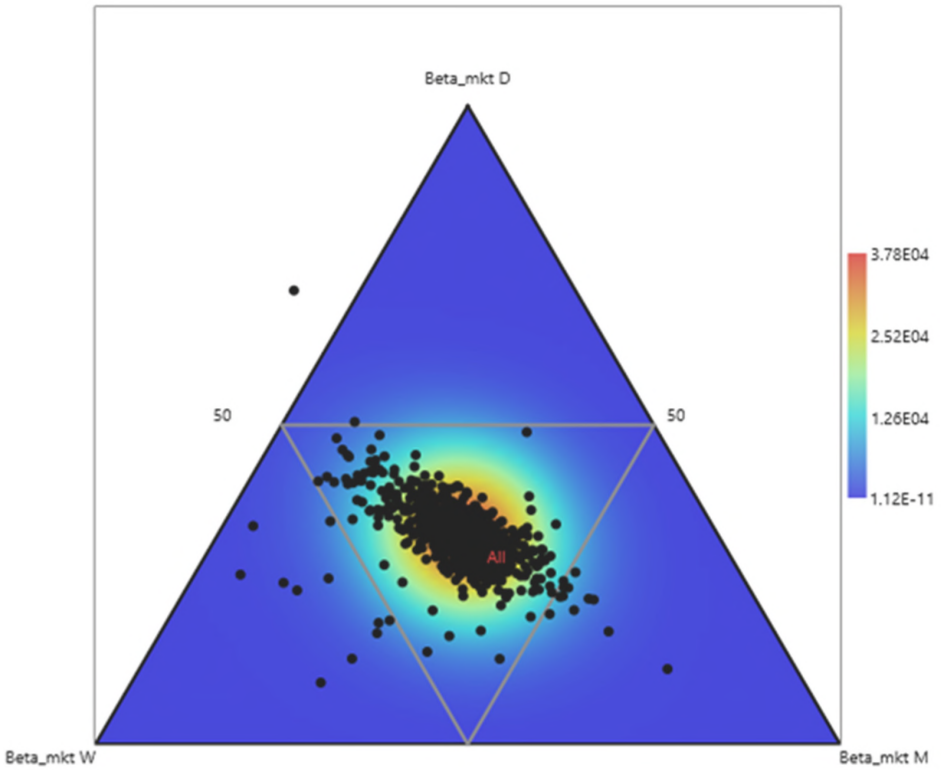

Figure A3. Ternary density plot of betas (daily, weekly and monthly return series, 2000–2021).

We utilize this plot to visually observe that while the three types of beta estimates are clustered with each other, there is a higher level of scatter for the weekly and monthly betas.

Appendix B

To capture the varying of the interval effect, Ho and Tsay, 2001 deployed the following three functional forms. Furthermore, there are varying values of n with a lower bound of zero. Cohen et al. (1983a) find that $n = 0.08$ produces the best linear fit for the power function.

The negative "n" form is essentially the inverse of the interval length (L):

$$f(L) = L^{-n}$$

and the logarithmic form:

$$f(L) = \ln\left(1 + L^{-n}\right) \text{ and } n > 0$$

and the exponential function form:

$$f(L) = e^{-L^n}$$

The above methodology (Ho and Tsay 2001), provides the distribution of betas with varying interval lengths and window-lengths of estimation.

To obtain the Spearman cross-correlations of the individual security betas for each interval length, the following will populate a symmetric triangular $\eta \times \lambda$ (where $\eta = \lambda$ return periods in the interval) matrix with all diagonal elements equaling 1.

$$\begin{bmatrix} 1 & & & - & - \\ & 1 & & & - \\ & & 1 & & \\ & \rho_S\left({\beta_i}^{L\eta}, {\beta_i}^{L\lambda}\right) & & 1 & \\ - & & & & 1 \end{bmatrix}_{\eta x \lambda} \quad \forall \eta,\ \lambda = 1, \ldots 45$$

If the betas are close to one and significant, it would be indicative of a weak intervalling impact on the ranking of betas across varying interval lengths.

The impact of varying intervals and window-lengths on the one-period ahead predictability of systematic risk can alternatively (to the tracking error, TE) be assessed by the Information Coefficient (IC); stable and robust betas will likely result in higher IC's, but a formal assessment could be a future research item.

$$\text{IC}_\text{s} = \rho_S\left({\beta_{i,t}}^{L\eta}, {r_{i,t+1}}^{L\lambda}\right)$$

where:

$$\text{For each market state } s \equiv \begin{Bmatrix} Rm > Rf \\ Rm < Rf \end{Bmatrix}$$

$\eta,\ \lambda = 1, \ldots 45$ and $\eta = \lambda$ for each T and where $t \subset T$,
t is a discrete period $1 \ldots N$ within each interval length of size T,
r_{it} is the return on each security at time t within each interval T, and
IC is the information coefficient.

Notes

1 Advent of firms such as BARRA, Berkeley, 1975 and Vestek Systems, San Francisco, 1983.

2 Does not equate with lower total risk (volatility).

3 The inverse relationship between interval length and average beta values, especially for smaller sized firms is intriguing. Perhaps there is an implicit tradeoff between a downward bias in the estimated beta and its ability to correctly provide an estimate for next period systematic risk. The idiosyncratic component of risk for small capitalization stocks is generally higher than for large

capitalization stocks, thus it is not surprising that a longer estimation interval would smooth out the variability (influential residuals canceling each other out) resulting in a reduction in the downward bias reported by Corhay (1992). It may be possible that there is information decay and loss with the increase in the estimation interval.

4 To keep the computational implications reasonable (each pass data file would be about 10 MB, with 1000 × 252 rows for just a 1 year run, with a moving window depending on the interval length), our interval length iterations have 1, 5 and 21 trading days corresponding to D, W and M return frequencies. Our window lengths vary from 1 through 5 years. While most of current literature uses a 60 monthly period window, the only other length we observe is the use of the full period for which data is available. This also meets the minimum lower bound of 30 based on the Central Limit Theorem.

5 TE is the standard deviation of the difference between the realized and CAPM based forecast return vector.

6 We are operating within the Russell 1000 universe in a long time series dimension, hence three fractiles for Large, Mid and Small capitalization groups are formed.

7 p-value < 0.10 for all cells in Table 1 (A, B, C)

8 Across Row 1, in the 3 × 3 Classification matrix.

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KENTUCKY-AMERICAN WATER COMPANY
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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Ann Bulkley

15. Refer to the Bulkley Direct Testimony, page 47, lines 20-21 and page 48, lines 1-2.

    a. Provide whether the final cost of equity results incorporated any explicit adjustments for other factors such as credit risk or size. If such adjustments were incorporated identify the adjustments and provide the size and basis for the adjustments

    b. Provide whether adjustment factors were considered in identifying a recommended ROE in addition to flotation costs. If so, explain the adjustment factors.

Response:

a. As discussed on page 2, lines 12-16 of Ms. Bulkley's Direct Testimony, Ms. Bulkley considered the relative business and financial risk of the Company as compared to the proxy group. Specifically, Ms. Bulkley evaluated the relative business and financial risk by considering the following factors: (1) capital expenditures; (2) timely cost recovery through cost recovery mechanisms; (3) flotation costs; and (4) leverage in the capital structure. However, Ms. Bulkley did not apply an "explicit" adjustment to her recommended ROE for any of the factors considered. Instead, as discussed on page 2, lines 16-18 of Ms. Bulkley's Direct Testimony, Ms. Bulkley considered the cumulative of effect of each of the factors when determining where her recommended ROE would fall within the range results produced by the constant growth DCF, CAPM and ECAPM analyses using her proxy group.

b. Please see the response to part a above.

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Witness: Ann Bulkley

16. Refer to the Bulkley Direct Testimony, Exhibit AEB-3. The projected earnings per share (EPS) growth rate values from Zacks shows 'n/a' for multiple proxy group companies. Confirm that these unavailable values were not supplemented in the Average Projected EPS Growth Rate calculation, and rather this calculation relied only on the available EPS data from Value Line and S&P Capital IQ for these companies. If not confirmed, explain.

Response:

Confirmed. For the companies included in Ms. Bulkley's proxy group where the projected EPS growth rate from Zacks was listed as "n/a", the average projected EPS growth rate was based on the projected EPS growth rates provided by Value Line and S&P Capital IQ Pro.

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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Robert Prendergast

17. Refer to the Direct Testimony of Robert Prendergast (Prendergast Direct Testimony), page 13, line 6. Explain the 6.5 percent increase applied to Purchased Power especially since Kentucky Utilities Company (KU) has filed for a rate increase.[2]

Response:

Please refer to response to KAW_R_PSCDR2_NUM005_070725.

[2] Case No. 2025-00113, *Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates and Approval of Certain Regulatory and Accounting Treatments* (May 30, 2025).

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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Michael Adams

18. Refer to the Direct Testimony of Michael Adams (Adams Direct Testimony) page 4, lines 21-22 through page 5, lines 1-2; and page 8, lines 19-23 through page 9, lines 1-2. Explain why the comparison to electric company filings is appropriate when analyzing a water service company. As part of this response, include a list of the electric utilities evaluated, the number of customers and the service territory, and an explanation of the difference between the information provided in the list on page 14 of the report.

Response:

The comparison to electric company's filings is appropriate because the filings provide a reliable source of publicly available data which is FERC Form 60. FERC Form 60 is filed by service company affiliates of utility holding companies. There is no publicly available source of data about service companies that provide services to only water utilities.
The use of electric companies as referenced in page 8, lines 19–23 through page 9, lines 1–2 of the testimony is appropriate. This is because regulated electric companies are required to file FERC Form 1, which is a reliable source of data to determine the customer account services expenses (per customer) for these companies.

Utility	State of Operation	Total Retail Electric Customers
Ameren Illinois Company	Illinois	1,226,027
Appalachian Power Company	West Virginia	965,517
Cleveland Electric Illuminating Company	Ohio	756,673
Commonwealth Edison Company	Illinois	4,130,538
Dayton Power and Light Company	Ohio	539,127
Empire District Electric Company	Missouri	183,990
Duke Energy Indiana, LLC	Indiana	894,160
Duke Energy Kentucky, Inc.	Kentucky	151,127
Duke Energy Ohio, Inc.	Ohio	752,909
Indiana Michigan Power Company	Indiana	610,647
Indianapolis Power & Light Company	Indiana	523,395
Evergy Missouri West, Inc.	Missouri	343,879
Kentucky Power Company	Kentucky	162,742
Kentucky Utilities Company	Kentucky	569,612
Kingsport Power Company	Tennessee	49,139
Louisville Gas and Electric Company	Kentucky	434,120
MidAmerican Energy Company	Illinois	820,668
Monongahela Power Company	West Virginia	396,728
Northern Indiana Public Service Company	Indiana	487,079
Ohio Edison Company	Ohio	1,069,766
Ohio Power Company	Ohio	1,523,794
Potomac Edison Company	West Virginia	441,657
Southern Indiana Gas and Electric Company	Indiana	155,182
Toledo Edison Company	Ohio	315,061
Union Electric Company	Missouri	1,254,162
Virginia Electric and Power Company	Virginia	2,752,726
Wheeling Power Company	West Virginia	41,401

The table above lists the electric utilities which Kentucky American Water Company ("KAWC") customers account services expenses were compared with.

The list included in the table on page 14 of the report lists all the utility holding companies whose affiliates provide retail service and whose service companies filed a FERC Form 60 for the calendar year 2023. This list was developed to compare KAWC's A&G cost per customer charged by the American Water Works Service Company, with the A&G cost per customer charged by the other service companies.

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Witness: Michael Adams

19. Refer to Adams Direct Testimony, page 8, lines 2-3. Provide the supporting documentation or basis for the conclusory statement therein, that "Outside service providers generally bill for every hour worked."

Response:

For profit service providers typically provide services based upon the firm's current hourly billing rates. If a service is not provided on a fixed price basis, the provider would most likely bill all time expended on a project at the individual's actual billing rates, including overtime.

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Witness: Michael Adams

20. Refer to Adams Direct Testimony, Report, Table 7. Identify the water companies that are investor-owned utilities. If none of them are, explain why these utilities were considered comparable to Kentucky-American.

Response:

None of the water companies listed in Table 7 of the report are investor-owned water companies. In Kentucky, there are only 5[1] investor-owned water companies which does not provide a large enough sample size against which KAWC costs/per customer can be compared. Consequently, non-investor owned water companies serving customers in Kentucky were considered for inclusion in the proxy group. The companies were considered comparable to KAWC because, similar to KAWC, the companies serve customers within the same jurisdiction as KAWC and would be subject to similar regulatory oversight as KAWC. Further, only water companies with a total number of customers of 6,000 or more were considered.

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[1] KY Public Service Commission - Utility Type Summary

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Witness: Michael Adams

21. Refer to Adams Direct Testimony, Report, Table 25.

    a. Identify the percentage of calls attributed to with American Water Works Company (American Water) that are related to Kentucky-American's service or related to Kentucky-American.

    b. Identify the inputs for the percentage attributed to American Water's average calls per customers.

Response:

a. In 2024, 4% of calls American Water received were related to Kentucky-American.
b. Please see the chart below, the Clearing and National calls were allocated between all affiliates. As such, 55,911 calls out of the 1,354,222 calls received in 2024 were related to Kentucky-American or allocated from the clearing and national buckets based on KAWC's proportion share.

Company	Calls Answered
Clearing	8,919
National	54,327
Kentucky	51,046
Total	1,354,222

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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Dominic DeGrazia

22. Refer to the Direct Testimony of Dominic Degrazia, (Degrazia Direct Testimony), Exhibit DD-3. Provide the workpapers used to create Exhibit DD-3 in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

Response:

Please refer to KAW_R_PSCDR2_NUM022_070725_Attachment.

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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Dominic DeGrazia

23. Refer to the Degrazia Direct Testimony, page 18, lines 19-21. Provide the support for a two-year regulatory expense amortization period as opposed to a three-year regulatory expense amortization period.

Response:

The Company is requesting a two-year amortization timeframe to align with the amount of time since its last rate case filing.

KENTUCKY-AMERICAN WATER COMPANY
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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Dominic DeGrazia

24. Kentucky-American has filed a joint application with American Water, Nexus Regulated Utilities, LLC (Nexus), and Water Service Company of Kentucky, Inc. (Water Service) (collectively, Joint Applicants) in Case No. 2025-00171,[3] for approval of (1) Nexus's sale of its equity and ownership interest in Water Service to American Water; (2) American Water's acquisition of Nexus's equity and ownership interest in Water Service; and (3) the merger of Water Service into Kentucky-American and Kentucky-American's assumption of all Water Service's assets, rights and obligations, including its water systems in Bell and Clinton Counties, Kentucky.

a. Explain how the proposed merger will affect the proposed rates in Kentucky-American's application.

b. If the proposed merger is approved by the Commission, explain whether the current Water Service Kentucky customers will be subject to the proposed rates in this application.

c. If the rates proposed in this application will not be affected by the proposed merger, describe the timeframe in which Kentucky-American expects the current Water Service customers to fall under Kentucky-American's tariff rates.

Response:

a. The proposed transaction currently before the Commission in Case No. 2025-00171 has no impact on the proposed rates in Kentucky-American's rate case application 2025-00122.

b. If the proposed merger is approved by the Commission, current Water Service Kentucky customers will not be subject to the proposed rates in this application. Kentucky American plans for the Water Service Kentucky customers to fall under Kentucky-American's base rates in Kentucky-American's next rate case proceeding, the timing of which has not been determined.

c. Please refer to the response to part b.

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[3] Case No. 2025-00171, *Electronic Application of American Water Works Company, Kentucky American Water Company, Nexus Regulated Utilities, LLC, and Water Service Company of Kentucky for Approval of the Transfer of Control of Water Service Company of Kentucky* (filed June 2, 2025).

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COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Max McClellan

25. Confirm that Kentucky-American is not proposing to revise any of its Nonrecurring Charges or Tap-On Fees from what is listed in its current tariff. If not confirmed, explain.

Response:

Kentucky American Water is not proposing to revise any of its miscellaneous fees, including tap-on fees, from what is listed in its current tariff.